

# Dissociation in the aftermath of psychotraumatization

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**UNIVERSITY OF  
RIJEKA FACULTY  
OF MEDICINE**

**INTEGRATED UNDERGRADUATE AND GRADUATE UNIVERSITY  
STUDY OF MEDICINE IN ENGLISH**

**Sophie Pump**

**DISSOCIATION IN THE  
AFTERMATH OF  
PSYCHOTRAUMATIZATION**

**GRADUATION THESIS**

**Rijeka, 2023**

SVEUČILIŠTE U RIJECI - MEDICINSKI FAKULTET | UNIVERSITY OF RIJEKA - FACULTY OF MEDICINE

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The graduation thesis contains 20 pages, 2 figures, 0 tables, 11 references.

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## **List of abbreviations and acronyms**

1. DSM-5 - American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders 5<sup>th</sup> edition
2. ICD-11 - International classification of diseases 11<sup>th</sup> edition
3. PTSD – posttraumatic stress disorder
4. DID – dissociative identity disorder
5. WHO – World Health Organization

## 1. Introduction

Dissociation as a symptom in individuals with mental disorders has been subject to many years of discussion and a wide range of possible definitions. Dissociation is a key component of numerous disorders, which are diagnostically summarized into the dissociative disorders. Currently, the 5<sup>th</sup> edition of the American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders describes dissociative disorders to be “characterized by a disruption of and/or discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, and behavior”. However, dissociation and dissociative symptoms can also be associated with trauma- or stressor-related disorders.

Furthermore, dissociative symptoms are described to be experienced as

“a) unbidden intrusions into awareness and behavior, with accompanying losses of continuity in subjective experience (i.e., "positive" dissociative symptoms such as fragmentation of identity, depersonalization, and derealization)

and/or

b) inability to access information or to control mental functions that normally are readily amenable to access or control (i.e., "negative" dissociative symptoms such as amnesia.”).

The DSM-5 lists the following disorders as dissociative disorders: dissociative identity disorder, dissociative amnesia, depersonalization/derealization disorder and other specified or unspecified dissociative disorder. (1)

Only now, with the current edition of the DSM, has the definition of dissociative disorders and dissociative symptoms become this clearly defined. The clear definition does not only make it easier for clinicians with less experience, to recognize the complexity and variety of dissociative disorders, but it also adds another layer of understanding to the symptoms of Trauma- and Stressor-related disorders. Although a popular topic of many historical figures of psychiatry and psychotherapy, trauma- and stressor-related disorders remain one of the most complex fields of psychiatry to this day. This is due to many reasons, including the diversity of causative events and precipitating factors, as well as the heterogenicity of symptoms in trauma-patients – dissociation being one of them.

Another classification system, although not as popular among psychiatrists as the DSM, is the current edition of the International classification of diseases, currently in the 11<sup>th</sup> revision. The definition of the ICD-11 describes dissociative disorders to be “characterized by involuntary disruption or discontinuity in the normal integration of one or more of the following: identity, sensations, perceptions, affects, thoughts, memories, control over bodily movements, or behavior. Disruption or discontinuity may be complete, but is more commonly partial, and can vary from day to day or even from hour to hour. Experiences that are part of an accepted cultural, religious, or spiritual practice should not be viewed as symptoms of Dissociative Disorders.”. It also differs from the DSM-5 regarding the classification of dissociative disorders. Namely, the ICD-11 lists the following dissociative disorders: dissociative neurological symptom disorder, dissociative amnesia, trance disorder, possession trance disorder, dissociative identity disorder, partial dissociative identity disorder, depersonalization-derealization disorder and other specified dissociative disorders. (2)

The consensus amongst psychiatrists is that the ICD-11 is better suited for the classification of somatic diseases and falls short on certain aspects of psychiatric disorders, which often cannot be as easily categorized. Thus, in the following, I chose to focus only on the disorders with dissociative aspects mentioned in the DSM-5.

## **2. Aims and Objectives**

The aim of this review is to provide an overview of the dissociative disorders mentioned in the DSM-5, as well as posttraumatic stress disorder, acute stress disorder and borderline personality disorder, which also show dissociative phenomenology and give a brief description of current theories on how the traumatic etiologies play into the pattern of disease. Additionally, there is a brief section on the dissociative disorders mentioned in the ICD-11, which are not classified in the DSM-5. The content about dissociative disorders is mostly built upon the framework of the DSM-5 classification system, with different source material regarding trauma and its impact on psychiatric development. It is necessary to state that this thesis aims to act as a review of sources and give an overview of existing theories rather than state new scientific advances on the matter.

## **3. History of dissociation**

Few psychiatric fields have been explored by such large numbers of scientists, doctors, and intellectuals as the field of psychological trauma. This is one of the main reasons why summarizing the history of said field within a few paragraphs of a scientific paper is



bordering the impossible. Still, to enable a better understanding of the complexity of today's definition of dissociation and trauma, I find it necessary to at least attempt to give an overview of the first and later most impactful discussions surrounding dissociation.

One of the first historical figures of psychiatry who put down a basis for the many theories about dissociation to be built on was Pierre Janet (1859-1947). Although a large piece of his work has been lost to time and the rivalry between him and his contemporaries, nowadays, many of his theories have been re-discovered and found new appreciation. He was one of the first clinicians to define and underline that the concept of Hysteria, which was considered to be one of the most common psychiatric diseases of his time, does not describe just one disease but a multitude of disorders and symptoms. Namely, hysteria was described by him to be a combination of disorders such as PTSD, somatoform dissociation, dissociative disorders, chronic and complex trauma disorder, borderline and histrionic personality disorder. Janet was not the first to understand the concepts of these different disorders, but it was the link between hysteria and trauma that was groundbreaking in his work. (3)

“Hysteria is a form of mental depression characterized by the retraction of the field of personal consciousness and a tendency to the dissociation and emancipation of the system of ideas and functions that constitute personality.” (Janet, 1907).

When comparing Janet's work to that of Sigmund Freud, who was only 3 years his superior, there are fundamental differences between the two, with Freud's theories being the more widely accepted for decades, but Janet's writings being the ones we use as framework for the definition of dissociation today. Regarding the terminology, Janet already used the word dissociation in his works, whereas Freud mostly referred to repression. Technically, these two may refer to similar concepts, however their standing in the clinical picture of traumatized patients is different. Freud considered repression to be the main etiology of hysteria, with it being the result of shame linked to unresolved sexual desire. For Janet, it was clear from his early works that he understood dissociation to be a result of trauma and a symptom of hysteria, rather than being its cause.

Pertaining to the role of dissociation and repression in the clinical picture, Elizabeth Howell well describes how the two approaches differ in respect to their concepts of defense. In Freud's description of repression, it is clear that it acts as an active defense for the patients. A defense against shameful wishes or experiences, that they actively try to block out of their consciousness, thus leading to the symptoms of dissociation. For Janet, dissociation holds both active and passive aspects. The patients suffer from the inability to access certain parts of

their memory, which can be considered a passive defense, and they also actively avoid re-experiencing earlier traumatic memories. (3)

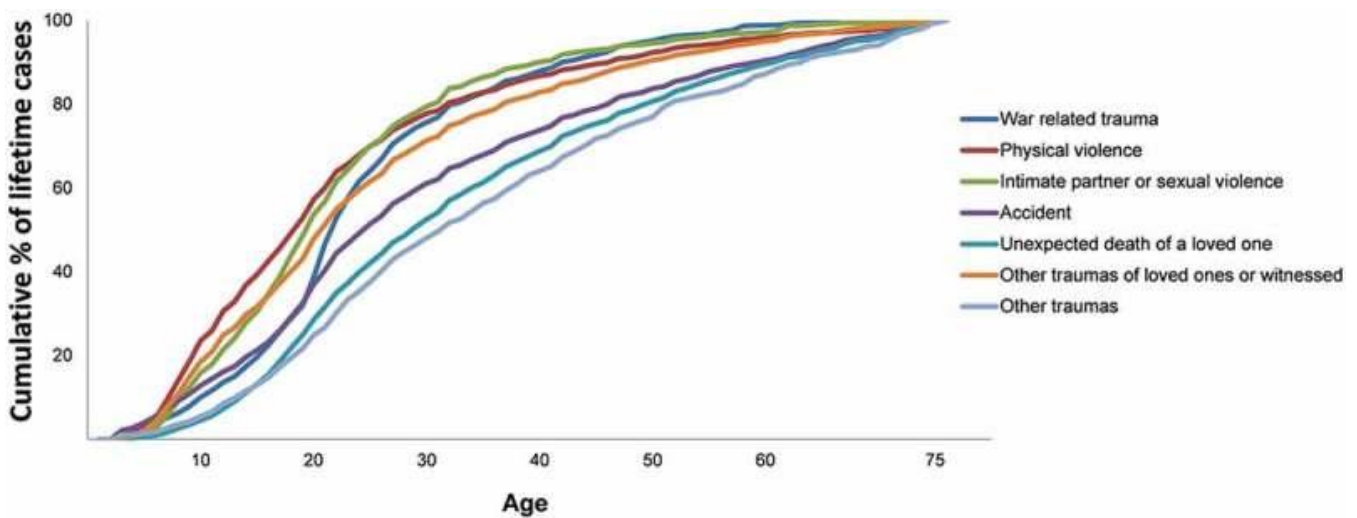
When comparing the two theories to the current definition of dissociation, it is obvious that Janet's works stood the test of time, rather than those of Freud. In a way however, Freud was the more popular clinician at the time where these theories were developed, which lead many clinicians to favor his works over those of Janet. It is only now that we slowly start to recognize Janet's works for what they truly are.

The first time that dissociative disorders found their way into the clinical classification systems was with the publication of the DSM-III. Here, dissociative disorders were separated from hysteria and subcategorized into psychogenic amnesia, psychogenic fugue, multiple personality, and depersonalization disorder, as well as atypical dissociative disorder. Each of which had their own clinical picture with dissociative aspects being part of it. This differentiation within the dissociative disorders was mostly kept for the newer adaptations of the DSM, with only the multiple personality disorder being re-named into dissociative identity disorder in the revised version of the DSM-IV (4) (5)

#### **4. Dissociation and trauma**

After a quick introduction into the history of dissociation, it is necessary to talk about the second pillar of this thesis' content: trauma. Trauma as an etiological factor for psychiatric disorders has gained more attention from the public in recent years than ever before. It is a popular research topic and found its way into various media, being portrayed and analyzed by clinicians as well as non-clinicians. Trauma is defined by the classification systems ICD-11 and DSM-5 as an event, which involved exposure to death, threatened death, actual or threatened serious injury or actual or threatened sexual violence. The WHO world mental health survey, which was published in 2017 stated that of 68 894 participants from 24 countries, 70.4% experienced lifetime traumas. The median age-of-occurrence varied depending on the type of trauma, with intimate partner of sexual violence trauma data rising

around the age of 17, war-related trauma and traumas that happen to other people at age 20 and accidents, unexpected deaths of loved-ones or other traumas at age 24-31. (7)



*Age-of-onset distributions of trauma exposure in the WMH Surveys.(7)*

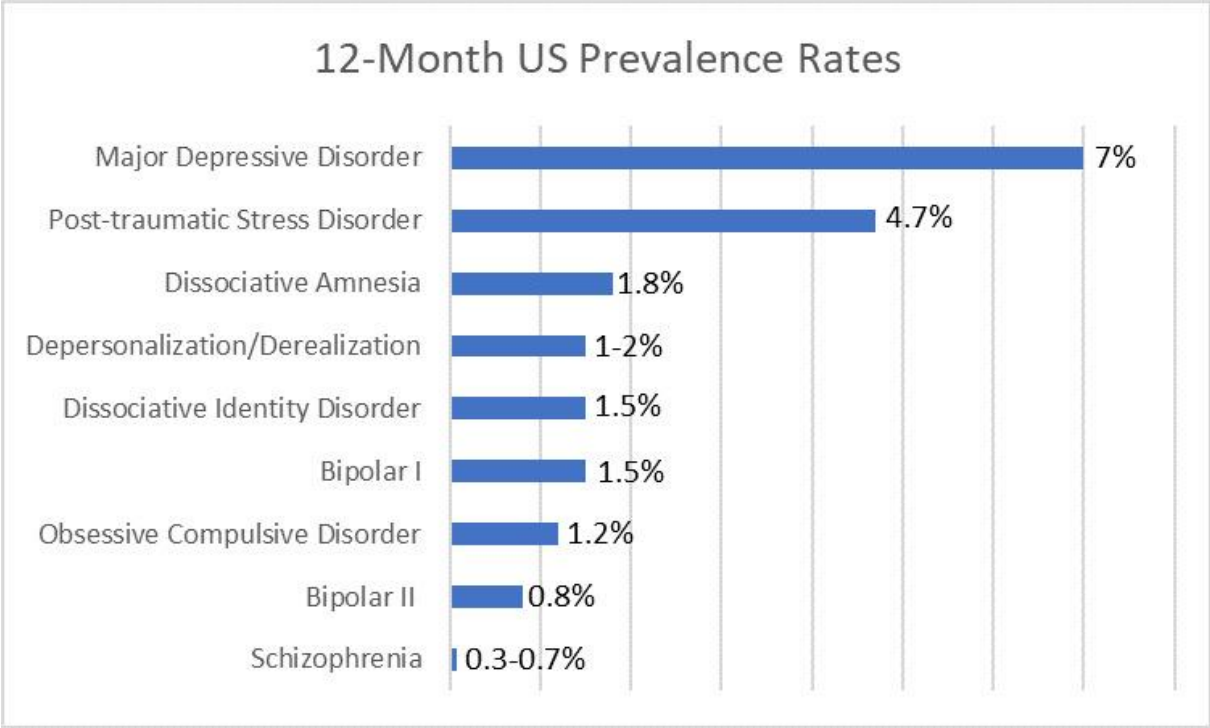
It is necessary at this point to underline the fact that traumatic experiences and the disorders resulting from them are commonly disorders of younger people, or they are at least more likely to ask for clinical help. Not only does this patient group require a very empathetic approach by clinicians in general, but the therapy also must be adapted to personal life factors such as work, social connections and plans for the future, which often leads to a holistic therapeutic approach. This is precisely why the work with traumatized patients is very complex and the clinical pictures may be quite heterogenous.

When relating traumatic experiences to dissociation, no definite connection can be drawn for every patient. Not every trauma leads to any disorder at all and within the disorders, there is a wide spectrum of symptoms, which do not always include dissociation. However, with new spotlight on the topic, the consensus places dissociative disorders in the close vicinity of trauma. Particularly early childhood trauma is recognized to be a major risk factor for the development of a dissociative disorder.(5)

Dissociation exists on a spectrum, spanning from what can be described as daydreaming or highway hypnosis to pathological intrusions of the mind and memory. Almost every person experiences some form of dissociation in their life. The most common and generally benign forms usually take place during phases of extreme concentration, such as intense intellectual work or when driving a car for a long time (thus the term “highway hypnosis”). These forms of dissociation are not of pathological nature and can be attributed to the fluidity of thoughts and the mind. Only when dissociation hinders the patients from attending to their everyday

life or work, do we consider a dissociative disorder. For traumatized patients, dissociation can also act as a defense, when facing trauma or situations similar to trauma. During the traumatic event, their mind wanders away from their surroundings, to protect itself from further destruction. This is why many therapeutic approaches work with re-accessing traumatic memories and guiding the patient through them, while actively encouraging them to feel the emotions that may have been lost to dissociation during the actual event. (3) (6)

Unfortunately, dissociative disorders are among the psychiatric disorders with the longest prevalence, which can be seen in the graphic by the WHO world mental health survey. The 12-months US prevalence of dissociative disorders is up to 46% and when comparing them to other common psychiatric diseases such as schizophrenia or bipolar disorder, it becomes obvious that dissociative disorders have a higher prevalence in patients in general. The WHO states the following about these results:



*Speed of recovery of DSM-IV/CIDI PTSD by trauma category in the WMH Surveys.<sup>1</sup> 'Recovery' was defined as length of time until all symptoms remitted.(7)*

“This wide prevalence rate is attributable to differences in special populations or clinical/non-clinical settings and exceptionally limited clinician training in the assessment of dissociative symptoms that results in misdiagnosis.” (7)

Failure by medical professionals to recognize and diagnose dissociative disorders is a repetitive theme in this thesis. This is not only the result of the prolonged period until a proper definition of dissociation and its aspects was made, but also to the heterogenous picture of those diseases with dissociative components.

#### ***4.1. Neuropathology of dissociation***

The neuropathology of dissociation in relation to trauma still is subject to research, although certain brain areas have been shown to be altered in patients with dissociative disorders or symptoms. Several clinical tools have been used in trials, to visualize differences in patients with and without these disorders, involving magnetic resonance imaging, positron emission tomography and diffusion tensor imaging. Particularly functional magnetic resonance imaging found its use to visualize the activity of the different parts of the brain during trauma or dissociation.

In general, these studies commonly describe some form of disconnection between the limbic system, particularly the amygdala, and the prefrontal and frontal structures of the brain. Additionally, the thalamus, acting as an axis between many neuronal connections in the brain seems to be involved, particularly in states of dissociation. Different disorders have been associated with different hyper- or hypoactivity of these structures, however, for the purpose of this thesis, I will only give a generalized version of the neuropathological happenings for dissociative disorders or disorders with dissociative aspects.

The main functions of the limbic system involve emotional regulation and response to ones surroundings, memory formation and certain vegetative functions. The frontal and prefrontal areas, particularly the cortex, are associated with active perception and cognition. In healthy individuals, these two areas are in constant exchange with each other. Emotions are formed as response to external triggers, behavior can be adapted to the emotions and memories are being formed for future reference. This communicative axis is mostly managed via the functions of the thalamus.

During traumatic events, this communication seems to be interrupted – mostly as a form of protection against overwhelming emotions in a situation of severe danger. The urge and will to survive gain a higher role than the physiological emotional response in the hierarchy of bodily functions. Patients with dissociative disorders or disorders with dissociative aspects, suffer from a long-term disruption in the corticolimbic communication system. This can be seen in imaging techniques that show varying degrees of perfusion of these areas – with the limbic system being overly active during trauma responses in patients with PTSD, or hypoactive in patients with depersonalization disorder. This missing link between the emotional area of the brain with the active cognition, many of the symptoms related to trauma response and dissociation are involuntary and seem to be out of the patients' control. So, to

simplify, a patient suffering from intrusions related to his PTSD, may feel overwhelming emotions without any control over them and without active access to the memory trigger.

Obviously, this is a simplified explanation of the neuropathological processes taking place in the brain in response to trauma and many details of it are still up to scientific debate, but it can be useful in clinical settings, when working with patients and trying to explain symptoms. (8) (9) (10)

## **5. Dissociative disorders according to the DSM-5**

Dissociative disorders are the first that come to mind when thinking about dissociation as a symptom in psychiatric patients. Not every one of these disorders must have had a traumatic event as its origin, but in most cases, they do. That makes them a good place to start, when trying to show the links between trauma and dissociation.

### ***5.1. Dissociative identity disorder***

Dissociative identity disorder is clinically defined as “the presence of two or more distinct personality states or an experience of possession” by the DSM-5. The clinical representation of these personality states or possessions may vary widely, depending on sociocultural aspects as well as patient individuality. Also, the overtness or visibility of the disease can vary, since only the minority of patients with the non-possessive type of DID visibly display alternate identities to the outside. In these patients, the diagnosis may be more difficult to make for clinicians, which is why the DSM-5 classifies two groups of symptoms that are used as criteria for the diagnosis in the patients with non-overt DID. Criterion A describes symptoms that include “sudden alterations or discontinuities in sense of self and sense of agency”, similar to perceptions of depersonalization and a disruption of their active involvement in everyday life. Criterion B states “recurrent dissociative amnesias”, which usually follows one of the episodes of disruption of reality. These patients often report large gaps in their memory, not only regarding their childhood and past life but also in the present.

Etiologically, dissociative identity disorder is directly related to traumatic events, overwhelming experiences and/or abuse occurring in childhood, with the disease being able to manifest at any age, usually triggered by external factors that cause psychological decompensation. The traumatization of these patients is linked to the dissociative aspect of the disease, taking its position on the very end of the spectrum of dissociative disorders. It also encompasses a vast variety of manifestations, which are related to sociocultural aspects, upbringing, and gender of the patients, ranging from seemingly neurological symptoms (e.g.,

non-epileptic seizures or paralyses) to body dysmorphia, hallucinations, or criminal behavior.  
(1)

Various theories about the formation of dissociative identity disorder exist in the clinical world. The consensus for many of them is that patients who experience severe trauma early in childhood later struggle to connect the parts of their mind which experienced the trauma, to the parts of their mind that continued to exist afterwards. There is a before, a during and an after the event and although they coexist, they can't fuse into one. This leads to the development of separate entities of the mind, varying in severity. Some former psychiatric theories also mentioned the possibility of the destruction of an already formed mind into these parts. However, newer approaches prefer the formulation of a failure to fuse over the fragmentation of something that was whole. (3)

According to the DSM-5, over 70% of outpatients with DID have attempted suicide, putting the disease into the top category of psychiatric diseases with suicide risks. Additionally, self-harming or -mutilating behavior is very common in these patients, due to the severe disease burden.

## ***5.2. Dissociative amnesia***

Dissociative amnesia is the second one of the dissociative disorders classified in the DSM-5. It often occurs together with one of the other dissociative disorders or trauma- and stressor related disorders, but it may also stand alone in certain patient groups. It is classified as “an inability to recall important autobiographical information that 1) should be successfully stored in memory and 2) ordinarily would be readily remembered.”

The pathophysiological difference between permanent amnesia and dissociative amnesia is that there is no neurological damage that hinders the storage or retrieval of memories. This means that dissociative amnesia is always, theoretically, reversible. Dissociative amnesia can be further divided into localized, selective, generalized, systematized or continuous amnesia.

Localized and selective amnesia refer to the loss of memory regarding a certain period of time, where localized amnesia involves complete memory loss of events during that period and selective amnesia refers to partial loss of memory during that set period. Generalized amnesia is rare and refers to the complete loss of the patient's own personal history. It is similar to systematized amnesia, which describes the memory loss of a specific category of personal information, such as family history or past childhood trauma. The last category,



continuous amnesia, involves forgetting new events as they occur, which would define it as an anterograde form of amnesia.

The development of dissociative amnesia may take place immediately after a traumatic event or it can be delayed for days, weeks and months. Generalized amnesia usually develops suddenly, although it is generally rare. Etiologically it is linked to traumatic experiences. According to the DSM-5, “dissociative amnesia is more likely to occur with 1) a greater number of adverse childhood experiences, particularly physical and/or sexual abuse, 2) interpersonal violence and 3) increased severity, frequency and violence of the trauma.” (1)

Since dissociative amnesia often accompanies other dissociative disorders or diseases with traumatic etiologies, it has been subject to many theories of origin. As mentioned before, Sigmund Freud saw dissociation as an active form of defense against shameful memories and desire. Although the shameful aspect of trauma, especially sexual abuse, is still a recognized problem in psychiatric patients, dissociation being an active as well as passive defense (like Janet explained), has been more accepted by clinicians today. Memory loss can act as a form of protection, so everyday functioning can be preserved although the traumatic event has not yet been emotionally processed. This also serves as an anchor for the therapeutic approach in traumatized patients. Although memory loss technically hinders the therapist and the patient from accessing the traumatic memory, it can act as an axis around which the therapy session is built. The patient is given the space to explore their fragmented memory together with the therapist, who can guide and secure the patient. In many cases, memory loss can be at least partially reversed along the course of the treatment, which gives direct feedback about the success of the therapy itself. (3) (8)

### ***5.3. Depersonalization/derealization disorder***

Although not as intensely linked to trauma as the aforementioned disorders, depersonalization/derealization disorder should also be briefly mentioned in this thesis, because of its role amongst dissociative disorders. Depersonalization is classified as the patient feeling detached from or unfamiliar with their own person. These patients describe a palpable distance between themselves and their physical existence. Emotions feel out of reach, actions feel like they are not their own, sometimes they may even describe out-of-body experiences. Derealization also describes a detachment but not from their own self, but the outside world instead. Patients often describe it as feeling like there is a barrier between them and their exterior and they seem to be surrounded by a dullness which dampens their senses and experiences. The symptoms of depersonalization/derealization disorder are rarely found



in individuals over the age of 40 and have their medium peak at around 16 years old. In general, it is considered to be a very common disorder, with around one half of the population being estimated to have experienced an episode of depersonalization or derealization. If this disorder is suspected in older individuals, it is necessary to rule out somatic etiologies of neurological or other nature.

As mentioned before, Depersonalization/derealization disorder is not as tightly linked to traumatic experiences as the other dissociative disorders, although many patients have experienced trauma as well. It is also common for patients who have experienced trauma to exhibit signs of depersonalization or derealization when they talk about the traumatic event. Statements like “It felt like it was happening to someone else, and I was a bystander” or “I would leave my body as it continued to happen” are clear signs of depersonalization in relation to the traumatic event. This, like dissociative amnesia, uses the disorder as a clear defense technique of the mind to deal with the trauma, even as it is happening. (1)

#### ***5.4. Other specified dissociative disorder and Unspecified dissociative disorder***

For the sake of completeness, a quick word about other specified and unspecified dissociative disorders. These diagnoses are used for patients who show signs of a dissociative disorder but do not meet the criteria for a specific diagnosis of one of these disorders. In specified dissociative disorder, there is a tendency toward a certain diagnosis, which is not fully met and in unspecified dissociative disorder, there is no clear tendency, or the clinician chooses not to define which dissociative disorder the patient could lean towards.

These patients often show signs of dissociation to a degree that can be considered pathological, which also puts them in need of treatment. These two entities of dissociative disorders are also often comorbidities of other psychiatric illnesses and may be encountered in other clinical settings, such as primary care. Thus, recognition of dissociative symptoms, even as an isolated issue, is an important skill for clinicians of any specialty, even if a proper diagnosis cannot be made initially.(1)

### **6. Other disorders with dissociative aspects**

For Trauma- and Stressor related disorders, I chose to only focus on those that clinically involve dissociative tendencies in patients, which are part of the primary diagnosis. Again, other disorders can also involve dissociation, however, the following ones contain dissociation in the diagnostic manual and are considered an integral part of diagnosing.

#### ***6.1 Posttraumatic Stress disorder***

Posttraumatic stress disorder is another one of the bigger entities in this thesis. With a long history of recognition, the new definition of the disease involves many different symptoms which developed as a response to one or multiple events of traumatic nature. The DSM-5 has clear definitions of what type of trauma are encompassed in the etiology of PTSD, ranging from sexual abuse to war experiences, all of which involved a severe emotional response in the patients. Again, clinicians must deal with a large variety of symptoms in patients suffering from PTSD, which may not immediately be clearly linked to the disorder. For simplicity, I will not recite the whole definition of the PTSD diagnosis, but I will focus on PTSD with dissociative symptoms, which is a subcategory of posttraumatic stress disorder.

The DSM-5 defines a specification of PTSD with dissociative symptoms. These symptoms include depersonalization as well as derealization. When thinking about the nature of PTSD, the link between the traumatic experience and depersonalization/derealization becomes obvious. Patients suffering from the burden of a traumatic experience may use depersonalization or derealization unconsciously to distance themselves from the traumatic event. It also acts as a form of protection for future events that may resemble the trauma of the past or pose some other kind of psychological burden. Another aspect of the dissociative involvement in the disease can be intrusions of the mind like flashbacks, which involve the involuntary remembering of the traumatic event or period. More recent research has shown that the dissociative aspects of PTSD do not have a negative impact on the treatment outcome in these patients. (1) (9)

### ***6.2. Acute stress disorder***

Acute stress disorder, which may precede posttraumatic stress disorder, also involves dissociative symptoms. In acute stress disorder, the symptoms last from 3 days to 1 month after the traumatic event (afterwards, the diagnosis, if the necessary symptoms persist, the diagnosis changes to posttraumatic stress disorder) and patients experience a wide range of symptoms, which may also involve dissociative symptoms. They often describe an altered sense of reality and dissociative amnesia, like patients with PTSD. As mentioned above, the dissociative aspect of acute stress disorder seems to be related to the lack of time to process the experienced event and acts as a form of protection from overwhelming emotions, that the patient was not able to feel during the trauma.

### ***6.3. Borderline personality disorder***

The last one of the disorders with a direct correlation between trauma and dissociation is borderline personality disorder. Although it is not placed within the trauma- and stressor related disorders or the dissociative disorders by the DSM-5 classification system, borderline personality disorder contains several diagnostic features that involve or are related to dissociative symptoms. The DSM-5 describes borderline personality disorder as a disorder characterized by a general instability regarding emotional affect, interpersonal relationships, and self-image, as well as impulsivity in decision-making. The diagnosis is usually made in early adulthood, but the disease may become noticeable also during younger years. It commonly occurs together with dissociative disorders, depression and/or bipolar disorders, substance abuse, PTSD, ADHD, and eating disorders.

Patients with borderline personality disorder often experienced trauma during their childhood – these traumatizing events being abuse, neglect and early parental loss. The etiology of personality disorders is still mostly unknown, however, especially in borderline personality disorder, the correlation between familial risk, occurrence of trauma and the development of this personality disorder is clear. Patients often describe symptoms of dissociative amnesia regarding the traumatizing event, as well as dissociative episodes in their daily life. These patients struggle with their reality as they tend to prevent themselves from reaching goals in their life when they are about to be reached. There is also an immense struggle with the sense of self, which may express itself in forms of depersonalization and derealization, as well as body dysphoria and body image distortions.

Treatment in patients with borderline personality disorder is complex and difficult. This is firstly due to the nature of personality disorders themselves, as they develop early in life and are relatively resistant to therapy. Secondly, the associated diagnoses that may occur additionally to personality disorders encompass a wide range of other symptoms, such as psychotic-like symptoms, dissociation and related symptoms, depressive and bipolar disorders and many more. Also, interpersonal relationships in patients with borderline personality disorder are similarly impacted as they are in patients with PTSD. Dissociation separates the individuals from their own sense of self, especially in depersonalization, which is necessary when forming a relationship of any kind with another person. This also impacts the relationship between the patient and the therapist, which can further interfere with the already difficult treatment of the disorder. That is why the dissociative aspects of borderline personality disorder must not be ignored and treatment of them should not be delayed, when the diagnosis is made. (1) (10) (11)

## **7. Dissociative disorders according to the ICD-11**

Dissociative disorders in the International classification of disease vary from those classified in the DSM-5. Although not as favored by clinicians as the DSM-5, the ICD-11 is still used by some for diagnosing patients in psychiatric settings. Thus, in the following, I will briefly describe some of the disorders classified as dissociative disorders. As already mentioned in the introduction, the ICD-11 overlaps with the DSM-5 with certain disorders, namely dissociative amnesia, dissociative identity disorder (as well as partial DID) and depersonalization-derealization disorder. I will only focus on the disorders which are not classified in the DSM-5, so dissociative neurological symptom disorder, trance disorder and possession trance disorder. (2)

### ***7.1 Dissociative neurological symptom disorder***

According to the ICD-11, the dissociative neurological symptom disorder describes a disorder with cognitive, sensory or motor symptoms that show a disruption of the physiological integration of these functions and can not be related back to other known diseases or medical conditions. These symptoms are listed to be of the following natures: visual disturbance, auditory disturbance, vertigo or dizziness, other sensory disturbances, non-epileptic seizures, speech disturbance, paresis or weakness, gait disturbance, movement disturbance, cognitive symptoms or other specified or unspecified symptoms.

As with the other dissociative disorders, the etiology of dissociative neurological symptom disorder is commonly related to a traumatic experience. The onset of the disease can be in the early childhood, later in life it becomes rare. Generally, the symptoms have an acute onset and disappear within a 2-week period, however, they often recur. In many cases, the symptoms can be connected to a traumatic event or prior physical injury, which both act as risk factor.

The most common symptoms of dissociative neurological symptom disorder in younger patients are gait disturbances and non-epileptic seizures. The disorder also often coexists with other psychiatric disorders, such as mood disorders or anxiety.

Somatization in psychiatric disorders is a common occurrence. Unfortunately, clinicians often overlook the mind as possible cause for somatic symptoms and tend to over-diagnose these patients with anything but a psychiatric disorder. This may lead to frustration, especially when the therapeutic approach repeatedly fails to succeed.

When comparing the ICD-11 to the DSM-5, the dissociative neurological symptom disorder, could be compared with the somatic symptom disorder. Although not a full equivalent, the

somatic symptom disorder also involves somatic symptoms that are not related to any other known medical condition and may have trauma as an etiology. Clinically, both diagnoses can only be made, when any other conditions are excluded with certainty, because a misdiagnosis can lead to severe complications if a somatic medical condition is overlooked. (1) (2)

### ***7.2 Trance disorder & trance possession disorder***

Trance disorder and trance possession disorder are described to be disorders characterized by altered states of consciousness or loss of sense of identity. In trance possession disorders, this is accompanied by a state of seeming possession by an external entity, which controls the patient's activities. These trance episodes are not the effect of drugs or substances and are not related to cultural or religious traditions. They are characterized by a small repertoire of behaviors which are repeated until the state of trance is over. In possession disorder, the repertoire of behaviors may be larger, but they are seemingly related to the possessing entity.

For a diagnosis, a single event of trance or trance possession is sufficient. Clinically, a difference must be made between episodes of trance and dissociative identity disorder, which may be masked as a trance disorder in the initial phases. It is also important to differentiate states of trance in a pathological context from religious or cultural experience.

Trance disorder and trance possession disorder mostly occur in young adults and has a highly variable course. Some individuals suffer from a single episode, whereas others may encounter recurring events of trance. The trance episodes often occur in close time intervals and may be evoked by emotional stress or frustration.

Etiologically, trance disorder and trance possession disorder may also be related to traumatic events and trance episodes can be triggered by situations similar to the experienced trauma.

(2)

## **8. Discussion**

Over the course of working on this thesis, I came across a few obstacles regarding the works on dissociation in the aftermath of trauma.

Psychiatry to this day remains one of the few medical specialties with the least understanding of pathophysiological backgrounds as well as symptomatic display of the diseases it encompasses. No other specialty struggles as much with diagnosis and recognition as psychiatry does, even though there exists literature to a maximum that is readily available for

clinicians working in the field. The dispute in the beginning of this work that revolved around Pierre Janet and Sigmund Freud is a great visualization of that problem. (3)

Psychiatry is built on communication and exists without any imaging techniques. There is no way to look at a psychiatric disorder and make a diagnosis visually. This means that diagnosing a patient is more demanding than it may be in other medical fields. Unfortunately, medical training for clinicians working in the psychiatric field involves a lot of literature, reading, theories and concepts, that are not always graspable on the first read. This is especially difficult when it comes to working with traumatized patients, who may not be able to express their emotions in a way that is necessary for making a diagnosis, because they themselves are not able to access said emotions. In certain cases, they may not even be able to describe a traumatic event at all due to dissociative amnesia of a kind.

In the current classification systems and diagnostic manuals of the psychiatric field, it has been established that many dissociative disorders are directly and undoubtedly linked to previous trauma. However, the heterogeneity of signs and symptoms in these patients complicates the diagnosis as well as the therapy. Clinicians may lack experience to form a proper diagnosis in patients showing varying degrees of symptoms. The timely recognition of a patient suffering after a traumatic experience can significantly change the therapeutic outcome, but for that, the recognition of dissociative symptoms is key. (5)

## **9. Conclusion**

Current research results and scientific advances show clear evidence that there is a connection between trauma and dissociation. This connection has been described by many clinicians through the years and finally found its way into current classification systems such as the DSM-5 and ICD-11. It has also been proven that dissociation can at least partially be related to alterations in brain chemistry and perfusion, which may lead to big medical advances upon further scientific inspection. The treatment options for dissociation have changed drastically through the years, due to clinical and scientific advances, which made the disorder more graspable for clinicians. However, to this day, many medical professionals struggle to recognize dissociation and dissociative disorder, because of their heterogenous clinical presentation. The treatment of dissociation and dissociative disorders is very demanding and requires a large amount of empathy and flexibility, as well as a lot of patience. Treating patients with a disorder that may involve amnesia or episodes of amnesia, can be challenging, especially for clinicians with less amount of experience. Thus, during anamnestic conversations with patients, the mentioning of traumatic experiences or trauma in general,

should always raise concern for clinicians to consider possible psychiatric disorders which may be masked through dissociation or dissociative amnesia. During the treatment, the return of memories that had been lost to dissociative amnesia can be a direct indicator for treatment success and a well-established therapeutic relationship.

On a last note, I would like to remind the reader that psychiatry as a field is not only a very complex one from a scientific standpoint but also from a personal one. Therapists and psychiatrists work daily with mentally ill patients, who, in most cases, are not aware of the defense mechanisms and methods they apply in their day-to-day conversations. This is also the case in patients who experienced trauma. Approaching difficult memories and experiences is very draining for the patients but for the clinicians who accompany them as well. They not only have to remain professional in circumstances when they are facing a traumatic experience and a defensive patient, but they have to keep the access to their own emotions open, to remain empathetic in these difficult situations. Thus, during the work with patients suffering from trauma and dissociation, clinicians need to reassess their own emotional state regularly, to provide optimal treatment for their patients and the least amount of emotional turmoil for themselves outside of the professional field.

## **10. Summary**

Dissociation in the aftermath of psychotraumatization is a common disorder in psychiatric patients of any age. It may also accompany disorders and be masked by somatic symptoms with an underlying psychiatric etiology. During the early 20<sup>th</sup> century, first discussions about the etiology of dissociation in the context of hysteria were held amongst clinical figures such as Freud and Janet. Personal debates and clinical favoritism lead to a dismissal of Janets theories for many years, although nowadays, they are considered to be groundbreaking and more relevant than those of his counterpart Sigmund Freud.

Neurologically, dissociation is directly linked to a disturbance in the communication between the limbic system and the cortices of the brain, particularly the frontal and prefrontal cortex. This disturbance may lead to an overstimulation of the center for emotions as a response to a trigger, without the proper connection to the cognitive consciousness, which may lead to a hyper- or hypoarousal without proper awareness of the individual towards its triggers.

The DSM-5 classifies dissociative disorders into dissociative identity disorder, dissociative amnesia, depersonalization/derealization disorder and other specified or unspecified

dissociative disorder. All of these disorders may have a traumatic experience as etiology or etiological factor and patients who have experienced trauma are at risk for developing these disorders. Additionally, the DSM-5 mentions posttraumatic stress disorder, acute stress disorder and borderline personality disorders as disorder with dissociative aspects. They too are based on traumatic events, in borderline personality disorder during childhood, that lead to a disruption of emotional and cognitive continuity.

The ICD-11 varies from the DSM-5 classification, as it lists neurological symptom disorder, trance disorder and trance possession disorder additionally to the disorders mentioned in the DSM-5. These disorders are also related to trauma, with trance and trance possession disorder being closely linked to cultural and religious experiences. Neurological symptom disorder may mask dissociative symptoms and dissociation with somatic symptoms, which can make a clinical diagnosis difficult.



### 13. Sources

- (1) American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Arlington, VA: American Psychiatric Publishing; 2013.
- (2) World Health Organization. ICD-11 - Mortality and Morbidity Statistics [Internet]. Who.int. 2022. Available from: <https://icd.who.int/browse11/l-m/en>
- (3) Howell EF. The Dissociative Mind. Routledge; 2013.
- (4) American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders: DSM-IV-TR. 4th ed. Washington, DC: American Psychiatric Association; 2000.
- (5) Lebois LAM, Ross DA, Kaufman ML. “I Am Not I”: The Neuroscience of Dissociative Identity Disorder. *Biological Psychiatry*. 2022 Feb;91(3):e11–3. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9045405/>
- (6) Kleber RJ. Trauma and Public Mental Health: a Focused Review. *Frontiers in Psychiatry* [Internet]. 2019 Jun 25;10(451). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6603306/>
- (7) Kessler RC, Aguilar-Gaxiola S, Alonso J, Benjet C, Bromet EJ, Cardoso G, et al. Trauma and PTSD in the WHO World Mental Health Surveys. *European Journal of Psychotraumatology* [Internet]. 2017 Oct 27;8(sup5). Available from: [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5632781/#\\_ffn\\_sectitle](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5632781/#_ffn_sectitle)
- (8) Boyer SM, Caplan JE, Edwards LK. Trauma-Related Dissociation and the Dissociative Disorders: Delaware Journal of Public Health [Internet]. 2022 May [cited 2022 Jul 31];8(2):78–84. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9162402/>
- (9) Hoeboer CM, De Kleine RA, Molendijk ML, Schoorl M, Oprel DAC, Mouthaan J, et al. Impact of dissociation on the effectiveness of psychotherapy for post-traumatic stress disorder: meta-analysis. *BJPsych Open*. 2020 May;6(3). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7345665/>
- (10) Krause-Utz A, Frost R, Chatzaki E, Winter D, Schmahl C, Elzinga BM. Dissociation in Borderline Personality Disorder: Recent Experimental, Neurobiological Studies, and Implications for Future Research and Treatment. *Current Psychiatry Reports*. 2021 Apr 28;23(6). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8081699/>
- (11) Krause-Utz A, Frost R, Winter D, Elzinga BM. Dissociation and Alterations in Brain Function and Structure: Implications for Borderline Personality Disorder. *Current Psychiatry Reports*. 2017 Jan;19(1). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5283511/>

## CV

Sophie Pump was born in Bückeberg, Germany on the 22<sup>nd</sup> December in 1995. She started her academic career in Stadthagen, Germany and moved to Offenbach, Germany in 2012 to finish her school in 2015 with the German diploma “Abitur”. Afterwards, she ventured into the medical field during several internships in hospitals in Stadthagen, Minden and Offenbach, where she gained first experiences in medicine. She began her medical studies in October 2017 in Rijeka, Croatia, where she remained until she finished her studies in 2023. During her medical studies, she did more clinical internships, now focusing on the work as a doctor, in hospitals in Lüdenscheid, Hannover, Vehlen and Kandel.



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(Sophie Pump)