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The Study of Dissociative Identity Disorder: Etiology, Cognitive Ability and Treatment

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Abstract: This paper provides an overview of Dissociative Identity Disorder (DID), its etiology, cognitive aspects, and treatment options. It explains the concept of dissociation and dissociative disorders, leading to the specific focus on DID. The etiology section discusses the multifaceted nature of DID, including biological factors like genetic vulnerabilities and neurobiological abnormalities. Psychological factors, particularly trauma and maladaptive schemas, and social factors, including societal influences and media portrayals, are also explored. This paper delves into cognitive abilities and their impact on individuals with the disorder. Like the relationship between sleep disturbances, trauma, dissociation, and cognitive abilities in individuals with DID and post-traumatic stress disorder (PTSD). The last part focuses on its treatment approaches, the holistic treatment approach that includes symptom reduction, engagement with traumatic memories, and integration and rehabilitation. Psychotherapy, such as cognitive behavioral therapy and eye movement desensitization and reprocessing, is the primary treatment modality, while medication may be used. This work also discusses the need for further research. It discusses potential connections between childhood trauma and cognitive strategies, the role of DID in enhancing aggression and self-protection abilities, and the impact of comorbid PTSD on treatment outcomes. By addressing these research gaps, more effective treatments for DID can be developed.

Keywords: Dissociative Identity Disorder, etiology, cognitive ability, treatment

1. Introduction

First of all, to understand the concept of dissociative identity disorder, it's necessary to learn about dissociation.

Dissociating is the experience of detaching from reality. Dissociation can cause unpleasant feelings like being cut off from reality, having intense concentration, or daydreaming. In this state, the complete integration of consciousness, identity, memory, and perception is no longer present. Dissociation, which usually happens as a result of stress or trauma, may be an indication of a dissociative disorder or another mental health issue [1].

Then, the knowledge of dissociative disorders is also indispensable.

Discontinuity and dissociation from one's thoughts, memories, environment, activities, and identity are traits of mental illnesses known as dissociative disorders. Dissociative disorders cause

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people to flee reality uncontrollably, which makes it difficult for them to go about their daily lives. Dissociative disorders are often the result of trauma and are used to numb painful memories. The symptoms, which can include anything from amnesia to alternate identities, can vary depending on the type of dissociation disorder patients have. Stressful circumstances may momentarily worsen symptoms and make them more obvious [2].

Finally, there comes Dissociative Identity Disorder.

The mental health issue known as Dissociative Identity Disorder is one of many. Split personality disorder or multiple personality disorder were previous names for the condition.

Dissociative identity disorder (DID) patients have two or more distinct personalities. A person's behavior is influenced by these identities at various times. DID can lead to memory lapses and other issues [3].

Medication and long-term psychotherapy are the main DID treatments. Although the illness cannot be treated with specific medication, pharmaceuticals meant to treat periods of depression, anxiety, or psychoses may be somewhat beneficial.

For DID therapy, there are two different kinds as the most common choice. They are Psychotherapy and Hypnotherapy.

Psychotherapy aims at deconstructing different personalities and uniting them into one without the use of medical means.

Hypnotherapy is a type of psychotherapy used to bring changes in the patient while in a state of sleep, or unconsciousness.

And for medication, there 4 main types of medication to be used.

These include antidepressants (used to treat depression), such as fluoxetine, and anti-anxiety medications (used to treat panic attacks). (Examples include clonazepam and lorazepam) Tranquilizers (Used to lessen tense and anxious states.)(For example, chlordiazepoxide) and mood stabilizers (medical treatments that control variations in mood). (Examples: Valproic acid, lithium)

2. DID Etiology

2.1. Biological Factors

Dissociative Identity Disorder (DID), formerly known as multiple personality disorder, is a complex and controversial mental health condition characterized by the presence of two or more distinct identities or personality states that recurrently take control of an individual's behavior. The etiology of DID is multifaceted and involves a combination of biological, psychological, and social factors.

Several studies have suggested that individuals with DID may have certain biological vulnerabilities that predispose them to the disorder. These may include genetic factors, neurobiological abnormalities, or alterations in the brain's structure and function. For instance, a study by Reinders et al. identified specific brain biomarkers that could aid in the diagnosis of DID [4]. This study found that different identity states may be associated with distinct patterns of brain activation, suggesting a neurobiological basis for the disorder.

Recent research has also explored the role of working memory in DID. A study published in 2022 found that working memory performance varied depending on the identity state in individuals with DID, providing further evidence of the biological underpinnings of the disorder (Dissociative identity state-dependent working memory in dissociative identity disorder: a controlled functional magnetic resonance imaging study [5].

2.2. Psychological Factors

Psychological theories of DID emphasize the role of trauma, particularly severe, chronic childhood abuse or neglect. According to the posttraumatic model, DID is a complex form of post-traumatic

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stress disorder (PTSD), where dissociation serves as a defense mechanism against overwhelming traumatic experiences. This model suggests that the distinct identities or personality states in DID represent different ways of coping with or escaping from traumatic memories.

A study by Huntjens et al. proposed a schema therapy approach for treating DID [6]. This approach is based on the idea that individuals with DID have maladaptive schemas - or patterns of thought and behavior - that are linked to their traumatic experiences. Schema therapy aims to help individuals identify and change these maladaptive schemas, thereby reducing their symptoms of DID.

2.3. Social Factors

The sociocognitive model proposes that DID is a socially constructed disorder influenced by cultural and societal factors. This model suggests that the symptoms of DID are learned behaviors shaped by various influences, including media portrayals of the disorder, suggestive therapeutic techniques, or societal expectations and beliefs about the nature of self and identity.

3. DID Cognition

Cognitive ability refers to a person's ability to process thoughts, and it is based on the skills the brain uses to acquire knowledge, information, and reasoning. They have more to do with people's mechanisms of learning, memory, problem-solving, etc., than with actual knowledge. Cognitive ability mainly refers to the ability to remember, speak, and learn new information, and people's brains usually learn new skills during early childhood and form their own unique opinions and worldviews. When speaking or writing, cognitive abilities can be affected by old age and illness, which can cause memory loss and difficulty coming up with the right words (drawing a blank). For example, multiple sclerosis (MS) eventually leads to memory loss, inability to grasp new concepts or information, and decreased verbal fluency. Humans tend to be born with high cognitive abilities, so almost everyone has the ability to learn or remember. In a test similar to measuring IQ, patients may be required to complete a series of tasks or questions that assess different cognitive abilities, such as level of consciousness, memory, etc. Early childhood is the period when the brain is most easily adapted to people related to the human environment.

Based on a prior study done in a non-clinical sleeplessness group caused to nightmares, Van Der Kloet et al. In the DID patient group, the PTSD group, and the healthy control group, the idea that sleep predicted dissociative symptoms was investigated. However, the only difference between DID and PTSD patients in the end results was how they perceived the severity of the symptoms. The best indicator of being in the DID group was a high score for irregular sleep experiences. The cognitive capacities of the PTSD group were much inferior. In addition, both diagnostic groups (the DID group and the PTSD group) had higher scores for fantasy tendencies, cognitive impairment, and sleep disturbances than the healthy control group.

The effects of sleep disorders, trauma, dissociation, and fantasy tendencies on cognitive ability were investigated in the repeated and expanded study of sleep, trauma, fantasy, and cognition in dissociative disorder, post-traumatic stress disorder, and healthy controls. The sleep disturbances experienced by three reference subject groups—those with dissociative identity disorder (DID), those with post-traumatic stress disorder (PTSD), and matched healthy controls—were assessed and compared seen in each group, as well as childhood and admitted trauma, sharp form and somatoform dissociative symptoms, and fantastical tendencies, and cognitive abilities were assessed using working memory tasks. As a result of the experiment, when controlling for the reference's traumatic experience, sleep disorders did not predict the correlation between dissociative symptoms and traumatic economy and the correlation between heavy rain and fantastical tendencies. Across the reference groups, working memory performance was comparable, and fanciful inclinations failed to

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differentiate between DID and PTSD. However, when healthy reference subjects were included, fantastical tendencies were found to be a weak predictor of dissociation symptoms. This is in stark contrast to the ideas proposed by Van Der Kloet et al. [7].

Working memory abilities similar to cognition were found in this study in a healthy control group with DID, post-traumatic stress disorder. There have been two theories put forth to explain this finding: either people with dissociative identity disorder have learned ways to compensate for cognitive deficiencies that make them hard to recognize, or the inconsistent results from one study to the next may be caused by the fact that other studies on dissociative identity disorder did not account for the type of personality status of the participants.

4. DID Treatment

4.1. Psychotherapeutic Treatment of People with DID

The International Society for the Study of Dissociation (ISSD) asserts that split-personality disorders, including dissociative identity disorder and associated disorders, must be treated holistically [8].

In order to aid the therapist in treating dissociative identity disorder, the International Society for the Study of Dissociation (ISSD) has published some simple guidelines. According to the following structure, dissociative identity disorder is treated: "(1) symptom reduction and safety stabilization, (2) direct and in-depth engagement with traumatic memories, and (3) learn integration and rehabilitation" [8].

The key therapeutic concerns that surface during the treatment phases is defined by these phases, even though they are delivered during the treatment phases. A traumatic incident can cause strong emotions, as was previously mentioned. As a result, those with dissociative identity disorder are more likely to act in ways that could be harmful to both themselves and other people.

As a result, the therapy should focus on the violent tendencies that DID patients exhibit. Additionally, victims should receive behavioral or cognitive treatment to assist them in learning impulse control. Additionally, therapists must be aware that some patients are not willing to synchronize their personalities.

If this occurs, therapists should view personalities as the patient's creative response to trauma rather than problems that need to be solved. Recognizing links between alters and having direct communication with them is one of the greatest methods for treating dissociative identity disorder. In order to facilitate essential conversation among the therapist, alters, and the victim. Therapists must also encourage patients to listen to their personalities [8].

4.2. Medication

According to Sno and Shalken [9], no clinical experiments have been carried out to determine the effectiveness of a range of hypothetical orientations or therapeutic procedures in treating Dissociative Identity Disorder.

The most successful treatments for this illness, according to a study done by a group of psychiatrists with expertise in treating dissociative identity disorder, include personal therapy, anxiolytics, and antidepressants. Drugs like carbamazepine, prazosin, and nutrition are highly helpful in circumstances when dissociative identity disorder causes self-injury.

Ballew, Morgan, and Lippmann conducted a case study on the use of pharmacotherapy in treating Dissociative Identity Disorder [10]. Diazepam's capacity to reduce anxiety, according to the study, may be highly helpful in memory recovery in cases of Dissociative Identity Disorder where memories contain traumatic materials.

In this study, a person with amnesia who is unable to recall his identification or location is given benzodiazepines to aid in memory recovery. The study found that forgetfulness is a side effect of

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Dissociative Identity Disorder and that intravenous diazepam is an effective, safe strategy to take into account for facilitating memory recovery in amnesic individuals.

Drawing any conclusions regarding the suitability of this sort of pharmacological treatment would be quite misleading, though, as the efficiency and satisfactoriness of diazepam have not been established in the treatment of a sufficient number of cases with DID.

According to psychological specialists, drugs should only be used to treat comorbid disorders and secondary characteristics, not dissociative identity disorder.

4.3. Treating DID Using an Integrative Approach

As previously said, the medical community is still divided about the best course of action to take in treating dissociative identity disorder. In light of this, an integrative treatment plan is created to address the numerous detrimental implications of dissociative identity disorder.

Additionally, the therapist should keep an eye on the patients' development to address any adverse effects that may occur while they are receiving treatment.

Different psychosocial approaches can be utilized to address certain issues in the appropriate way. The deliberate use of one technique may impede the successful treatment of dissociative identity disorder, which typically involves managing several disorders individually.

In addition to the integrative individual approach, Kaplan and Sadock [11] contend that knowing somatoform disorder and system theory is crucial for comprehending somatic symptoms and their relationships. Effective treatment for dissociative identity disorder can be achieved with long-term, customized, and scientifically sound psychotherapy.

The majority of these therapies depend on certain criteria and are administered at least once a week. These include resources—personal or familial—support—and impetus. DID therapy may last up to 5 years or even longer, depending on the rate of the patient's recovery.

Numerous approaches can typically be used, including cognitive behavioral therapy, eye movement reduction, reprocessing, and neuro-psychotherapy, among others. However, there must be a clear protocol followed when using these strategies, and modifications should only be made when necessary. As a result, fewer patients will be exposed to potentially harmful traumatic materials and medications [12].

The majority of experts advocate for phase-oriented treatments that follow three separate steps. Stabilization, symptom reduction, and setting of safety criteria comprise the initial step. The second stage entails processing and integrating unpleasant memories.

Integration and rehabilitation of the client are tasks for the last stage. At this point, the patient with dissociative identity disorder needs the most assistance from their family and society as a whole [13].

The use of social support in the treatment of psychological problems is supported by numerous studies. Therefore, after they have achieved stability, those who suffer from dissociative identity disorder should receive all the assistance they require. Group psychotherapy is one of the best ways to accomplish this. The advantages of group therapy include reducing seclusion, which is common among DID patients, giving patients the chance to interact with people of different genders in heterogeneous groups, and replacing secrecy and desolation with the group's more hospitable environment.

Group therapy also provides patients with the opportunity to learn from each other, understand the objective of alters, and give them hope of recovery like other members of the group. Each and every treatment method has its own pros and cons, and therefore, it’s important for therapists to explore viable options and help clients recover fully.

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4.4. Look Forward

The current research trends concentrate on neuro-biological and psycho-biological factors unique to dissociative identity disorder. The evaluation of the differences between alters that may still recall terrible previous events and those that have contained such memories, for instance, was one of the most recent research.

The results of this study demonstrate that different individuals react to traumatic experiences in different ways with regard to their mental state, neurological system, heart rate, and blood flow in the brain [12].

Another recent study on dissociative identity disorder attempted to identify comparable conditions by using the findings of previous studies. The majority of patients with diseases that have been identified as being brought on by stress (such as post-traumatic stress disorder, major depressive disorder, and borderline personality disorder, among others) have demonstrated a decrease in hippocampal volume.

The study examined the relationship between Dissociative Identity Disorder and decreased hippocampal volume using magnetic resonance imaging and volumetric analysis.

According to the study's findings [14], the sampled individuals with dissociative identity disorder had hippocampal volumes that were 19. 2 percent smaller and amygdale volumes that were 31. 6 percent lower than the normal value.

Many academics have attempted to explain how trauma and memory interact in people with dissociative identity disorder [15]. An investigation into the relationship between the brain and the process of changing personalities used magnetic resonance imaging to pinpoint the processes involved.

According to the study's findings, a patient's bilateral hippocampus, along with the right parahippocampal gyrus, right medial temporal lobe, globus pallidus, and substantianigra, are all suppressed throughout the switching process. Nevertheless, research indicates that the right hippocampus generally becomes more active during the process of healing from split personality, with no other parts of the brain showing any subdued activity [15].

The findings of this study contribute to our knowledge of amnesia between alters because the memory-related brain components are either activated or suppressed.

Nowadays, most studies pursue bio-psychosocial approach which links psychological disorders to a complex network and interface of biological, psychological and socio-cultural factors. According to a number of studies, split personalities in people with psychological illnesses shield them from annoying thoughts and painful memories.

Split personalities may have diverse personal memories, which typically enables those with psychological illnesses to hold onto pleasant thoughts and restrain bad ones [16].

Directed forgetting was the subject of additional research, which found that "dissociative patients showed directed forgetting between states, but not within the same identity state" [16].

The study clarifies the mechanisms and operations of various personalities and aids in comprehending how trauma shapes personality development. Changing from one personality to another can help the brain eject harmful traumatic memories [17].

More research is needed to clarify and further explore the nature of Dissociative Identity Disorder despite the fact that many doctors today have a better understanding of it than they had in the past. There is still a huge research gap on this illness that has been left by numerous investigations.

For instance, future clinical studies should investigate the associated risk factors and provide more insight into the role that inherited and environmental factors have in this condition.

It is important to conduct further clinical research to understand the kind of physical and psychological differences that exist among personalities, their causes, and the significance of these

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differences. Psychopharmacological studies should identify the drugs that are most effective at treating this illness.

There should be research on the effects of culture and social environment on the emergence and clinical manifestation of dissociative identity disorder. Future clinical studies for this condition will benefit both the medical community and the victims' families in addition to the victims. Additionally, the discipline of clinical psychology will benefit greatly from these investigations.

5. Discussion

Nowadays, some researchers have more unproven ideas about the relationship between etiology and cognitive ability in DID situations. They show some spark of possibilities to understand the underlying cognition process in DID.

Here are 3 examples:

①Because the etiology of DID in widely recognized studies is often believed to come from childhood trauma events. Can it be caused by a strong and uncontrollable source of cognitive strategy in DID patients?

② Since some DID patients also have antisocial personality disorders as comorbid ones, and some individuals in this situation exhibit high intelligence and hyperactivity. Is it possible that DID can also be a way to let the patients enhance their aggression and self-protection abilities?

③Will original empiricism be the reason why DID patients with comorbid PTSD suffer from hard cured?

If we can find answers to these questions, we may be a step closer to better and more effective treatment of DID.

6. Conclusion

The origin, cognition, and therapy of Dissociative Identity Disorder (DID) are covered in this article. DID is thought to have a biological, psychological, and social origin. Genetic weaknesses and anomalies in the nervous system are examples of biological causes. Psychological aspects emphasize trauma, particularly severe child maltreatment or abuse, and the function of dissociation as a coping mechanism for traumatic experiences. The condition may be socially constructed and impacted by society and cultural issues, according to social considerations.

The ability to process thoughts and learn is referred to as cognitive ability in the context of cognition. Age, disease, and trauma are a few examples of circumstances that can have an impact on cognitive capacity. Working memory performance in a study of DID patients changed according to the identity state, providing proof of the disorder's biological roots.

The therapy of DID is also covered in this article. The International Society for the Study of Dissociation advocates for a comprehensive strategy that emphasizes symptom management, interaction with traumatic memories, integration, and recovery. The main form of treatment is psychotherapy, which may also include additional modalities like cognitive behavioral therapy and eye movement desensitization and reprocessing. Additionally, comorbid disorders and DID's secondary characteristics may be treated with medication.

In order to fully comprehend the etiology and cognitive processes of DID, more study is necessary, as this paper highlights in its conclusion. It advises looking at how early trauma affects cognitive strategies, how DID may improve self-defense and aggressive skills, and how comorbid PTSD affects treatment outcomes. The solutions to these issues might result in DID treatments that work better.

Finally, here are some words to end this article with regard: Today, even the study of DID is still just a small sapling in the forest of Psychiatry, but with incessant explorations in the future, it will grow into a towering tree with luxuriant leaves.

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