Dissociative disorders in children – literature review

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ABSTRACT
Dissociative disorders (DD) are mental disorders that involve experiencing a disconnection and lack of continuity between thoughts, memories, surroundings, actions, and identity. Transient dissociative episodes are a common phenomenon during childhood that generally decrease during adolescence to relatively low levels in adults. There is strong evidence that traumatic events play a key role in the development of dissociation, but non-abusive and genetic factors are also considered. In the article, we discuss a few complementary theoretical models of the origin of DD that view them from attachment theory, affect theory, or developmental perspectives. Diagnosing DD among children is especially hard because of their frequent co-occurrence with other disorders, their broad differential diagnosis spectrum, and the fact that symptoms may be unnoticed for a long time. Treatment guidelines are mainly based on experts’ opinions, so appropriate studies on children are necessary.

KEY WORDS:
children and adolescents, DID, dissociative disorders, trauma spectrum disorders.

INTRODUCTION
Dissociative disorders (DD) are mental disorders that involve disruptions or breakdowns of memory, thoughts, awareness, identity, or perception [1]. The eleventh revision of the International Classification of Diseases lists DD as dissociative neurological symptom disorder, dissociative amnesia, dissociative amnesia with dissociative fugue, trance disorder, possession trance disorder, dissociative identity disorder, partial dissociative identity disorder, and depersonalization-derealization disorder [2]. The dissociative disorders listed in the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) are as follows: dissociative identity disorder, dissociative amnesia, depersonalization-derealization disorder, other specified dissociative disorder, and unspecified dissociative disorder (UDD) [3]. People with DD use it as a defence mechanism, trying to escape reality in ways that are involuntary and unhealthy and cause problems with functioning in everyday life [1, 4]. Dissociative disorders can develop as a reaction to psychological trauma or may be preceded by the use of psychoactive substances (for example depersonalization-derealization disorder) [1]. So at risk groups of DD such as foster children, adopted children and other children with complex developmental history of trauma should raise particular concerns [1].

Major childhood dissociative disorder – dissociative identity disorder (DID) was first described more than 150 years ago. However, many paediatric professionals are still not familiar with, or are sceptical about, the existence of DD in children [5]. That may be due to the fact that children exhibit a range of normative dissociative behaviour, such as imaginary companionship, that decreases with age [5, 6]. Nevertheless, such situations associated with histories of late adoption or other known early developmental trauma should lead the paediatrician to suspicion.
Gender does not appear to influence dissociative capacity [7]. Some paediatricians are also unaware of the role that traumatically induced dissociative processes can play in the behavioural disturbances manifested by maltreated children.

The protective functions provided by dissociation include: escape from the constraints of reality, cathartic discharge of certain feelings, analgesia, and resolution of irreconcilable conflicts [7, 8].

Early childhood traumatic experiences in particular are commonly associated with pathologically increased levels of dissociation in adults [9], so it is important to raise physicians’ awareness of these disorders and their impact on children’s development. Paediatricians who suspect DD in children should refer them to psychologists, child psychiatrists, and psychotherapists specialising in psychotraumatology.

MATERIAL AND METHODS

A PubMed search was conducted using the keywords “dissociative disorder in children”, “trauma spectrum disorders” and “dissociative identity disorder in children”. The reference lists of the found studies were also reviewed. A total of 107 papers were found, from which 41 were selected as sources for the following discussion. In the selection of publications important factors were: the number of patients who formed the study group, the year of publication and the number of citations. Studies not available in English were excluded. In addition, DSM-5 was used as a major source of information regarding diagnosis.

AETIOLOGY

A view that dissociation is a way of coping with fear or other extreme emotions is widely accepted and a causal link with trauma experiences has strong empirical support [10]. Types of situations that may cause a child to dissociate include physical, sexual, or emotional abuse; chronic neglect; witnessing family violence or street violence; violent or repeated loss of loved ones; being cared for by frightened or frightening parents; suffering physical injury, painful medical conditions and procedures; being in or witnessing a natural disaster or frightening and painful accidents; experiencing repeated separation from the person who takes care of the child and gives him emotional support; and severe and chronic bullying. Therefore, the paediatrician should take a detailed personal and social history [11]. However, a majority of traumatised children do not develop DD [12]. Some children may have an inborn propensity for dissociative strategies, perhaps due to fantasy-proneness, hypnotizability, or interpersonal sensitivity [13]. Some research suggests a genetic component. For instance, Yaylaci found that adolescents who had at least one copy of the CATT hap-

lotype of the FKBP5 gene did not develop dissociative symptoms, while those who had no copy presented more symptoms if the traumatic experience was more chronic and started in infancy [14].

There is a tendency for DD to cluster in families, which might be partially explained not only by the genetic component or continuous violence but also by the parents’ dissociative-type behaviours [15]. Furthermore, a study published by Lewis demonstrated that maternal emotion dysregulation and dissociation correlated with children’s dissociation. Therefore, the relationship between non-abusive factors and the development of dissociation in children needs further research [16].

Even if the circumstances mentioned above occur, a chronic ongoing dissociation will not develop when a child has a supportive environment after a traumatic experience. If there is a persistent lack of security, the child is forced to escape from the overwhelming feelings, for example, through dissociation [12]. According to Shore’s works, in the case of chronic distress, the constant release of stress hormones negatively impacts the infant’s right hemisphere, which holds the primary processing for self-awareness and self-identity. Simultaneously there is a shift from a high sympathetic response (hyperarousal) to an extreme parasympathetic response. This leads to dysfunction of the cortical-limbic system, which is the part of the brain crucial for social interactions, sustaining attention, processing pain, and emotional regulation [17, 18].

There are a few conceptual models that provide explanations for the development of dissociation. One of them is a structural dissociation model in which the brain’s adaptive system involved in daily activities and the defensive system involved in self-defence become disconnected from each other during trauma. Continuously severe distress can divide the personality into further fragments [19]. Silberg describes this model as too mechanistic. According to her, dissociation in children and adolescents is best viewed in a developmental context [20]. Putnam’s discrete behavioural state model views the phenomenon from a more developmental perspective. Inspired by the works of Peter Wolff, who identified the basic states of infants observed throughout the day, Putnam theorised the development of dissociation as an inability to shift freely from one state to another. Chronically traumatised infants do not develop connections between the states and the sense of self is not formed [21, 22].

Another important theoretical concept is based on attachment theory, in which disorganised attachment is regarded as a dissociative process [23]. Influenced by Putnam’s insights, Tomkins’ affect theory, and attachment theories, Silberg created an affect avoidance theory. According to this model, so-called ‘affect scripts’ (learned associations between affect, what stimulated them, and behaviours providing useful responses to these affects) develop in a way to avoid overwhelming affects associ-
ated with trauma. Over time, the avoidance patterns also become activated in situations similar to traumatic ones. Thus, instead of promoting the development of a sense of self, affect becomes a signal of avoidance, memory loss, and disorganisation [13].

All models described above present complementary views on the occurrence of dissociation and all of them provide valuable therapeutic directives [12].

**DIAGNOSING DISSOCIATIVE DISORDERS**

Diagnosing DD is done using scales and questionnaires such as the Structured Clinical Interview for DSM-IV Dissociative Disorders or the Dissociative Disorders Interview Schedule (DDIS) and screening tests such as the Dissociative Experiences Scale (DES-II) [24, 25], which includes behavioural observation of dissociative signs during the interview and additional information from family and friends [26, 27].

For the younger population, specific proposed tests are the self-assessment tool Adolescent Dissociative Experiences Scale -II (A-DES) and the Child Dissociative Checklist, which includes observations by an adult regarding a child’s behaviours during the past 12 months on a 20-item list [21]. Other scales used for diagnosing dissociative symptoms in children are the children's version of the response evaluation measure (REM-Y-71), the Child Behaviour Checklist Dissociation Subscale, and the Trauma Symptom Checklist for Children Dissociation Subscale [28].

The first signs of DD, particularly DID, usually appear early in life, sometimes in children as young as three years old, but they may go unnoticed by caregivers and the child. Children exhibit age-related differences in their behaviour, and therefore it is crucial to determine whether a particular behaviour deviates from that of other children of the same age, including levels of dissociation. Many children might simply have problems recalling events from their early lives and lack typical amnesia [21].

Paediatricians and other medical professionals working with children should pay attention to signs of early developmental trauma and histories of late adoption in groups at significant risk such as foster children, adopted children, and others, as it tends to be helpful in the process of diagnosis. Scales and tests that can help assess the presence of childhood trauma are the Structured Trauma-Related Experiences & Symptoms Screener For Youth, the Child Trauma Screen, and the Childhood Attachment and Relational Trauma Screen and can be used together with characteristic symptoms as an indicator of what direction the paediatrician should take when referring the child for further psychiatric evaluation [29]. It is important to observe children during their daily activities and ask caregivers about times when children are unaware of someone observing their behaviour. Young patients with DD might show signs of a sense of different personalities, calling themselves multiple names other than their birthname or names usually used by caregivers. Sometimes they can be heard speaking in a strange voice and carrying on extended conversations with themselves when no one else is near. Imaginary friends whom they refer to may seem life-like according to their descriptions and might be compelling them to do things that seem out of character. One of the most characteristic signs present in children with DD is re-occurring trance-like states in which children stare into space or look as if they have lost contact with their surroundings, after which they have no memory of them happening [5]. Behaviour that might also suggest a dissociative disorder is tantrums of surprising duration and seemingly unprecipitated, related either to the DD itself or to comorbid disorders such as oppositional defiant disorder (ODD) and conduct disorder [30]. Another symptom that can be observed is the inability to remember details of events particularly after being angry, which is associated with dissociative amnesia or dissociative identity disorder.

Symptoms common to all subtypes of DD in all age groups include the inability to access information or to control mental functions that are normally readily amenable to access or control, memory loss and periods of amnesia, identity alteration and confusion, depersonalization, and derealization [27]. Patients might also experience anxiety, delusions, disorientation, suicidal thoughts or self-harm, and embarrassment regarding their condition. In all types of DD basic symptoms are the same for both adults and children, though their presentation might differ slightly.

**DISSOCIATIVE IDENTIT Y DISORDER**

Dissociative identity disorder is characterised by the presence of two or more distinct personality states or an experience of possession and recurrent episodes of amnesia.

The presentation of identity fragmentation may vary with culture, religious background, and surrounding circumstance. Individuals with DID experience recurrent, inexplicable intrusions into their conscious functioning and sense of self, alterations of their sense of self, and odd changes of perception such as depersonalization and/or derealization. Disruption in identity includes noticeable discontinuity in sense of self and sense of agency, accompanied by related alterations in affect, behaviour, consciousness, memory, perception, cognition, and/or senso-ry-motor functioning. The symptoms are not an outcome of substance use or another medical condition and they cause impairment in important areas of functioning.

**DISSOCIATIVE AMNESIA**

Dissociative amnesia is characterised by an inability to recall autobiographical information other than normal
forgetting. It may involve purposeful travel or bewildered wandering and then is recognized as dissociative amnesia with a dissociative fugue, which more commonly constitutes part of DID than existing separately. Amnesia is experienced as an essential feature of dissociative amnesia; individuals may experience localised or selective amnesia or, less frequently, generalised amnesia related to their identity and life history. Dissociative amnesia should not be diagnosed separately if DID criteria are met.

DEPERSONALIZATION-DEREALIZATION DISORDER

Dissociative identity disorder should be differentiated from posttraumatic stress disorder (PTSD), acute stress disorder, epilepsy, pseudoseizures, personality disorders, especially borderline personality disorder, bipolar disorder, schizophrenia, OSDD, major depressive disorder, psychotic disorders, substance-induced disorders, conversion disorder, factitious disorder, and malingering [3, 28, 31, 32].

Dissociative amnesia can also resemble posttraumatic amnesia due to brain injury, seizure disorders, catatonic stupor, and substance-related disorders, or be a part of DID. Depersonalization/derealization disorder should be differentiated from illness anxiety disorder, obsessive-compulsive disorder, other dissociative disorders, anxiety disorder, major depressive disorder, psychotic disorder, substance-induced disorders, and mental disorder due to another mental condition [3, 28].

It is worth remembering that some of the symptoms of DD might be associated with religious and spiritual practices. If there is no other cause of these symptoms than those practices, they should not be included in the diagnostic process [33].

Many individuals with DD, especially dissociative identity disorder, present with at least one comorbid disorder. Most of them are also considered in the differential diagnosis. Dissociative disorders very often co-occur with PTSD, excluding depersonalization/derealization disorder. Other common comorbid disorders are: trauma- and stressor-related disorders, depressive disorders, anxiety disorder, avoidant, borderline, and obsessive-compulsive personality disorder, adjustment disorder, conversion disorder or somatic symptom disorder, eating disorders, substance-related disorders, and sleep disorders [3, 34–36].

Unlike in adults, in children and adolescents symptoms of DD might also be confused with behavioural or learning problems common in the younger population, such as attention deficit hyperactivity disorder (ADHD) [34] or ODD [5]. As many comorbid disorders are very often present in patients with DD and are usually diagnosed prior to the suspicion of DD, the diagnostic process usually takes a long time, even years, despite the early onset of the disorder. For this reason, a diagnosis is most often made in adulthood. The diagnosis should not be made if the patient’s condition is better accounted for by substance use disorder, imaginative play in smaller children, or having imaginary friends. Some studies show that in the younger population DD most frequently co-occur with major depressive disorder, PTSD, anxiety disorders, and ADHD [34].

TREATMENT

A model developed for the treatment of adults is also applied to children. It consists of three phases: stabilisation, trauma processing, and integration [37]. Silberg suggests a treatment model organised into the acronym EDUCATE. The first step in this model, which corresponds to the stabilisation phase, is education about trauma and dissociation (E: education) and understanding the motivation why a child is tied to a dissociative strategy (D: dissociation motivation). At this stage, ensuring a child’s safety is a priority. In the next step, a clinician helps the child to (U) understand the hidden parts of the self and (C) claim and embrace the affective experiences and memories associated with the dissociated
states. A in EDUCATE stands for regulation of arousal, affect, and attachment, while T stands for traumatic processing and understanding triggers. The ending stage (E), which overlaps the integration phase, focuses on challenges that the child may encounter in a new life that is different from the traumatic past [20].

Child-parent psychotherapy is an evidence-based method in the treatment of traumatised children, highlighting the importance of the caregiver’s role in the process of a child’s recovery [38]. Nevertheless, a child may be blocked from awareness of parents’ support through the dissociation process. Therefore, Blaustein and Kinniburgh introduced the attachment, self-regulation, competency approach to therapy with an accent on attachment, self-regulation, and competency, the three most important domains in the child’s life that are specifically impacted by exposure to chronic interpersonal trauma [39].

Affect regulation techniques are the core of therapy, which is based on helping a child identify, understand and express emotions, tolerate them, and ultimately learn to interact with the world more effectively. The role of a caregiver is important in this process, as through empathic connection with the child’s whole self, he reinforces the young person’s unified sense of self [20].

More advanced techniques, such as EMDR (eye movement desensitization and reprocessing), can also be used with dissociative children. It aids the trauma processing stage as it does not require a lot of verbal abilities, which are usually underdeveloped in dissociative children [40].

No medication targets dissociation; however, pharmacotherapy may be used to reduce symptoms that interfere with daily functioning or therapeutic interventions. New studies on epigenetically based pharmacotherapy might provide new treatment opportunities [37].

Paediatricians who suspect DD should refer their patients to psychologists, child psychiatrists, and psychotherapists specialising in psychotraumatology. Names of professionals who work in the area of dissociation can be found on the membership list of the International Society for the Study of Trauma and Dissociation (ISSTD). Polish specialists can be found on the website of the Polish Society of Psychotraumatology [11, 41].

CONCLUSIONS

Dissociative disorders in children usually develop as a way to cope with trauma such as long-term physical, sexual, or emotional abuse or, less often, a home environment that is frightening or highly unpredictable. A link between those factors and dissociation should be explored further.

Despite an increase in publications and knowledge about this group of disorders, diagnosing children with DD is usually unsuccessful, and the diagnosis is made in adulthood. This can make the life quality of patients with DD, especially with DID, very low as proper diagnosis and specific treatment are crucial for a patient to function properly in everyday life. Therefore, paediatricians should pay attention to dissociative symptoms, especially in at-risk groups, and refer to a specialist in psychotraumatology when necessary.

It is important to acknowledge that DD very often co-occur with other mental disorders and at the same time some symptoms that might indicate other disorders need to be considered in the differential diagnosis.

Guidelines on treatment for DD are mostly based on experts’ opinions and case studies. Therefore, research on this subject, especially randomised controlled trials, is necessary. The literature on dissociation in children, although growing in recent years, is still small in comparison with the publications related to adults. This situation needs to change, as DD are not rare conditions and cause a lot of suffering that continues into adulthood.

DISCLOSURE

The authors declare no conflict of interest.

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