

## DOES A DISSOCIATIVE PSYCHOPATHOLOGICAL DIMENSION EXIST? A REVIEW ON DISSOCIATIVE PROCESSES AND SYMPTOMS IN DEVELOPMENTAL TRAUMA SPECTRUM DISORDERS

Benedetto Farina and Giovanni Liotti

### Abstract

For about a century clinical observations suggested the association between dissociative symptoms and developmental trauma. Retrospective and prospective studies confirmed that dissociation is the central pathogenic process of developmental trauma. Dissociative processes generate dissociative symptoms likely to dominate some clinical pictures such as Dissociative Disorders or Borderline Personality Disorder, or also surface, in different proportions, in practically all DSM-IV diagnostic categories as an index of negative outcome. This paper aims to review some crucial issues on dissociative phenomena and processes originated from traumatic experiences in childhood. The article also purposes the existence of a traumatic-dissociative psychopathological dimension, its clinical meaning and the treatment strategies to overcome the difficulties it causes during psychotherapy.

**Key words:** dissociative symptoms, developmental trauma, dissociative disorders, borderline personality disorder, traumatic-dissociative psychopathological dimension

---

**Declaration of interest:** none

---

Benedetto Farina\*\*\* and Giovanni Liotti\*\*\*

\*Università Europea di Roma

\*\* Centro Clinico De Sanctis

\*\*\*Associazione di Psicologia Cognitiva, Roma

### Corresponding author:

Benedetto Farina

benfarina@gmail.com

### Introduction

The term dissociation, in psychopathology, is essentially used to define three different though related concepts: 1) a diagnostic category, *Dissociative Disorders* (DD) of the ICD-10 and DSM-IV; 2) a group of symptoms, *dissociative symptoms* such as amnesia or derealization; 3) some pathogenic processes caused by traumatic experiences interfering with the integration of mental functions.

For about a century, a vast and expanding body of scientific literature posited that dissociative disorders and dissociative symptoms were associated with traumatic experiences, in particular of the relational type occurring in childhood, for which the expression *developmental trauma* was proposed (Carlson et al. 2009, Dalenberg et al. 2012, Herman 1992a, Lanius et al. 2010a, Van der Kolk 2005, Van der Kolk et al. 2005).

Effectively retrospective and prospective studies and also clinical observation repeatedly confirmed that dissociation is the central pathogenic mechanism rather than a peripheral feature of trauma related disorders (Sar 2011).

The clinical and empirical evidence let to consider that dissociative pathogenic processes of developmental trauma generate dissociative symptoms likely to dominate some clinical pictures (e.g. Dissociative Disorders or Borderline Personality Disorder) (Meares

2012, Sar 2011). In the same time dissociation and a personal history of developmental trauma may also surface, in different proportions, in practically all DSM-IV diagnostic categories as an index of the serious condition of a patient and negative outcome (Dalenberg et al. 2012). This lead to hypothesize that dissociative process and symptoms related to childhood trauma could be viewed not only as features of specific disorders but also as a psychopathological dimension with negative outcome.

The present article aims to review some crucial points about dissociative phenomena and processes, as well as of the traumatic development they originate from. The article also purposes the existence of a traumatic-dissociative psychopathological dimension, its clinical meaning and the treatment strategies to overcome the difficulties it causes during psychotherapy.

### The dissociative dimension

Although dissociative phenomena may occur in all clinical pictures, they are generally more frequent in some diagnostic categories, typically featuring a traumatic etiopathogenesis, such as DD, borderline personality disorder (BPD), post-traumatic stress disorder (PTSD) and some somatoform disorders (SD) (Classen et al. 2006, Haaland e Landro 2009, Lanius et al. 2010a, Meares 2012, Sar et al. 2004, Stein et al. 2012).

Dissociative manifestations seem to characterize patients' subgroups with traumatic developmental experiences and low response to treatment also of other disorders, without any *primary* association with a traumatic etiopathogenetic course. Some empirical controlled data supporting this hypothesis are available for schizophrenia (Chen et al. 2010, Giesbrecht e Mercklebach 2008, Liotti e Gumley 2008, Ross 2009, Sar et al. 2010), for several personality disorders (Modestin et al. 1996), mood disorders, eating disorders (Gleaves e Eberenz 1995, La Mela et al. 2010) and anxiety disorders (Belli et al. 2012, Cloitre et al. 2010, Rufer et al. 2006a, Stein et al. 2012).

The following issues have led some scholars to hypothesize that traumatic-based dissociation should also be considered a psychopathological dimension: a) the proliferation of dissociative phenomena in the most diverse diagnostic cases; b) their association with traumatic developmental experiences; c) the specific therapeutic difficulties they imply. It is hypothesized and partially demonstrated that this *dissociative* or *traumatic-dissociative dimension* when associated with other disorders worsen their prognosis (Amaral do Espirito Santo e Pio-Abreu 2007, Amdur e Liberzon 1996, Bremner e Brett 1997, Briere et al. 2010, Cloitre et al. 2009, Cloitre et al. 2010, Lanius et al. 2010a, Rufer et al. 2006a, Rufer et al. 2006b, Sar et al. 2010, Spitzer et al. 2007, Van der Hart e Nijenhuis 2009, Waller et al. 2001).

## Dissociation: a functional dis-integration

There is no unanimous agreement on the meaning of the term "dissociation". However, contemporary clinicians and researchers seem to agree on a common element: dissociation is the loss of the ability of the mind to integrate some of its higher functions (Dutra et al. 2009, Waller et al. 1996). According to the DSM-IV, the essential feature of Dissociative Disorders (DD) is the (*disruption*) "*of the functions, usually integrated, of the consciousness, memory, identity or perception of the environment*" (APA 2000). Similarly, according to the ICD-10: "*the common issue shared by dissociative disorders is the partial or total loss of normal integration between the memories of the past, the awareness of the identity, immediate sensations and control of body movements*" (WHO 1992). This common concept stems directly from the concept of *désagrégation* (disaggregation) introduced by Pierre Janet at the turn of the past century. The term was used by Janet to indicate a disorder of the integrative capacity leading to a mental fragmentation over several levels: from a deficit in the field of consciousness to an impairment of the very unity of the subject's personality (Van der Hart et al. 2006)<sup>1</sup>. Contrary to the defense mechanism hypothesis of Freud, according to Janet dissociation implied a disconnection of the normally overlapping and integrated functional levels of the mental functions due to a *structural collapse*. This structural collapse induced by the violent emotions caused by traumatic experiences (Van der Hart e Dorahy 2006). Over the last twenty years, Janet's theories, after being buried by Freudian psychoanalysis (Ellenberger 1970), have recovered their status, especially in the psychoanalytic world, as the most important bases to understand psychological

trauma and dissociation (Meares 1999). An example of the popularity of Janet's concepts among contemporary scholars can be found in Meares words: "...dissociation is the manifestation of a subtle disorganization in brain functioning, generated by the overwhelming effect of the emotions associated with the traumatic event. In this case, it is not a defense" (Meares 2000). More recently the psychoanalyst Elizabeth Howell stated that "Janet is the most important theoretician who laid the basic concepts for the study of dissociation" (Howell 2005). A simple and evocative test of the dissociating effect of strong emotions is described on the pages of the American Journal of Psychiatry of 1994, when some Stanford University scholars reported the psychological reactions of 18 journalists who witnessed the execution of a multiple murderer. Over half of them recalled that, at the moment of the execution, they felt estranged or detached from other people, that objects around them looked unreal and dreamlike, and that they lost the sense of time. A third felt estranged from themselves, detached from their thoughts and far from their body sensations and experienced mental confusion and space-time disorientation (Freinkel et al. 1994).

## Hughlings Jackson's contribution to understanding dissociation

Janet's theses, as well as most current models explaining dissociative processes, are based on the concept of the organization of mental functions hypothesized at the end of the 19<sup>th</sup> century by the neurologist John Hughlings Jackson (Meares 1999, Schore 2009). Jackson's work had a significant influence on Janet's and Freud's ideas, on psychopathology at the beginning of the 20<sup>th</sup> century, as well as on the most recent concepts of normal and pathological mental functioning (Berntson e Cacioppo 2008, Farina et al. 2005, Porges 2001, Siegel 1999).

The essential core of Jackson's work is that the mind, rooted in the body's natural world, consists of a hierarchical organization of several functions reflecting the evolutionary development of the specie and integrates increasingly complex, mutually coordinated levels. Each level modulates and is coordinated with the lower levels, building their representations and, "at the highest levels, the mind represents itself integrating the activity of its lower level components" (Ey 1975). Through its self-representation, the mind produces the consciousness, expressed at its "*highest levels*" (in Jackson's words), through works and functions such as William James's *Self* and Janet's *personal synthesis*, i.e., the ability to interpret in a unified and consistent way, the parts of one's own body and the memories of the self (Meares 2012). We may postulate that the mind self-representation coincides, at least partly and in some aspects, with the modern concepts of mentalization and meta-cognition, also impaired by traumatic development (Allen et al. 2008, Fonagy et al. 2002, Fonagy e Target 2008, Liotti e Prunetti 2010). The modernity of Jackson's concept of the mind is also confirmed by its evolutionary and relational nature. Ey highlighted that: "Jackson was able to imagine and present a hierarchized structured model of the central nervous system which is not so much the model of the spine architecture, but rather a model of the autonomy of relational life ontogenesis (...)" (Ey 1975).

This *naturalistic* and *relational* position partly anticipates the theories of modern psychology and psychiatry and is clearly reflected in the Attachment Theory, in its contribution to the understanding of

<sup>1</sup> In order to keep the meaning of integration inversion intact, the terms *dis-integration* or disaggregation would be more appropriate, but, in order to conform to the current scientific literature, we shall continue to use the term dissociation.

the intersubjective nature of dissociation based on the concept of *disorganized attachment* (Liotti 2009) covered in the following paragraphs.

According to the theories originated from Jackson and Janet, dissociation consists of the loss of integration between hierarchical levels. The consequences of this dis-integration have two manifestations: on the one hand the absence of the integration function (e.g., the loss of the sense of self-unity, depersonalization), on the other, the uncontrolled surfacing of the previously integrated lower functions (e.g., involuntary surfacing of a traumatic memory, or sudden loss of affect control) (Meares 2012).

## Detachment and Compartmentalization

Recently a group of scholars from the universities of London, Cambridge, Manchester and Sheffield proposed a different classification of dissociative phenomena, overlapping several aspects of Jackson's and Janet's (Brown 2006, Holmes et al. 2005). These British scholars hypothesized that dissociation can be expressed in two different forms: detachment and compartmentalization phenomena. The former correspond to the experiences of detachment from the self and reality and consist of symptoms such as depersonalization, derealization, emotional numbing, *déjà vu* and out-of-body experiences. These experiences are typically triggered by overwhelming emotions caused by life-threatening experiences (Lanius et al. 2010a). The latter stem from the compartmentalization of normally integrated functions such as memory, identity, body schema and image as well as affect and voluntary movements control, and correspond to symptoms such as dissociative amnesia, surfacing of traumatic memories, somatoform dissociation (conversion symptoms, pseudo-neurological syndromes, acute psychogenic pains, dysmorphophobia), distorted emotional and identity unity control (alternation of multiple personalities) (Holmes et al. 2005, Nijenhuis e Van der Hart 2011). Compartmentalization symptoms (as opposed to detachment symptoms, experienced by everybody in extreme situations) are typically a consequence of traumatic development and seem to modify the very structure of the personality. (Chu 2010, Classen et al. 2006, Lanius et al. 2010a, Liotti and Farina 2011). This is why some authors proposed to group compartmentalization phenomena under the expression *structural dissociation of the personality* (Nijenhuis e Van der Hart 2011, Van der Hart et al. 2006).

According to most contemporary scholars, the loss of integration caused by dissociative state in fact, encompass not only the state of consciousness and self-consciousness, but also affect and impulse control, post-traumatic emotional numbing, body scheme and image, the ability to reflect on one's own mental states as well as others', a consistent view of the self and autobiographical narratives. (Carlson et al. 2009, Chu 2010, Lanius et al. 2010a, Lanius et al. 2010b, Liotti e Prunetti 2010, Van der Hart et al. 2006, Van der Kolk et al. 2005).

## Dissociation and trauma

In psychopathology, trauma is an unbearable and inescapable life-threatening experience in the face of which a person is powerless (Herman 1992b, Krystal 1988, Van der Kolk 1996). The relationship between dissociation and trauma is not confirmed only by

epidemiological studies and the clinical experience associating these two phenomena for over a century, but also by the disconnection and dis-integration produced, by definition, by trauma (Meares 2012, Schore 2009). This expression, in fact, originates from the metaphorical extension of a medical term meaning wounds featuring functional discontinuity and fragmentation.

Some recent theories postulate that traumatic experiences overwhelm a person defense ability, take over the usual fight or flight defensive responses supported by the adrenergic arousal of the sympathetic system (typical physiological reaction to fear) with an archaic brainstem vagal response, developed to provide protection under inescapable life-threatening circumstances (Schore 2009). The activation of this vagal response causes cataplectic immobility and the shutdown of higher brain connections in order to protect persons from inevitable pain and provide them with the last desperate defense through a state of feigned death (Porges 1997, Porges 2001). According to several scholars, the activation of this archaic defense system causes a disconnection between the various functional levels of the mind (especially between Jackson's *highest levels*, producing the dissociative symptoms of detachment), prevents the integration of the traumatic event in the psychological life and causes the discontinuity and the fragmentation of consciousness and memory (Nijenhuis et al. 1998, Putnam 1997, Schore 2009). Another hypothesis developed on the basis of the research conducted using neuroimaging techniques, claims that the pathogenetic process causing detachment consists of an excessive modulation of the brain cortex on the limbic system, i.e., the dis-integration has a top-down rather than a bottom-up origin (Lanius et al. 2010a). In any case, both hypotheses, which, in our opinion are not incompatible and could be related to two different stages of the dissociative process, lead to a failed functional integration between the mind hierarchical levels.

We can consider that repeated recourse to dissociative processes of detachment during development, due to recurring conditions of unbearable threat, together with other pathogenetic mechanisms associated with the triggering of neuroendocrine stress or epigenetic responses (Braun e Bock 2011, De Bellis 2010, Labonte et al. 2012), may permanently hinder a person's integrative capacity, causing compartmentalization symptom and structural dissociation of the personality (Liotti and Farina 2011, Meares 2012, Van der Hart et al. 2006).

From a cognitive standpoint, another feature of the dis-integrating power of traumatic experience is the difficulty or the impossibility to ascribe a unitary and coherent meaning thereto. Because of their dissociative nature, traumatic experiences cannot be placed within the orderly system of memories, and cannot integrate with the other information and meanings generally available to a person and constituting his or her sense of self, identity, or, to use Pierre Janet's definition, *personal synthesis* (Liotti 2006, Liotti and Farina 2011, Van der Hart et al. 2006). Other times a dissociative state breaks down the memory of a traumatic event in its various components (somatic, sensory, cognitive, emotional), preventing a unitary storage thereof.

Lastly, several experimental tests show that other traumatic pathogenetic processes, in addition to causing detached states, neurobiological damage and cognitive inconsistency, impair a person's integrative capacity and cause the fragmentation of the behavioral strategies mental activities, autobiographic and procedural memories, as well as of the sense of self (Schore 2009).



These depend partly from genetic predispositions and their interactions with the environment (epigenetic), partly from the neuropathogenic effects of hormones and of intense and continued stress biologic mediators on brain structures (Andersen et al. 2008, De Bellis 2005, 2010, Labonte et al. 2012, Lanius et al. 2010b). Clinical and neurobiological studies show, in fact, that the negative effect of childhood traumatic experiences typically manifests on the mental functions most heavily dependent on the development and functioning of large associative networks (such as the state of consciousness and self-consciousness), or from the integration of different brain areas (such as emotional control and autobiographic memory) (Chu 2010, Lanius et al. 2010b, Teicher et al. 2010, Tononi e Koch 2008). These functions normally reach full development after birth and are protected and facilitated by relational experiences of care and protection in childhood (Bob e Svetlak 2010, Carlson et al. 2009, Schore 2009)<sup>2</sup>.

The pathogenetic mechanisms described above may produce, in addition to the typical dissociative symptoms, a broad range of psychopathological changes likely to complicate several clinical pictures. Emotional states and personal meanings, dissociated from the memories of the events producing them, may cause, in adulthood, circular sudden intense emotions with chaotic and incongruous manifestations, such as uncontrollable phobias and anxiety attacks, unjustified bouts of anger, dramatic and malevolent interpretations. Metacognitive skills, poorly developed because of early traumatic relational experiences, may be impaired even more by the aforementioned problematic mental states (Fonagy e Target 2008, Liotti e Prunetti 2010). Furthermore, these manifestations of distress may negatively affect the already frequent negative self-representations and the weak interpersonal relations.

Bessel van der Kolk said it effectively: “*the body keeps the score*”, that is, trauma leaves its mark in the body too (Van der Kolk 1994). In fact, the dis-integration of psychological functions associated with trauma usually causes also somatoform disorders: somatizations, dysmorphism, pseudo-neurologic symptoms (motor paralyses, sensitive functions deficit, pseudo-epileptic seizures), painful syndromes without organic damage, sexual dysfunctions (Brown et al. 2007, Farina et al. 2011, in print, Harden 1997, Nijenhuis 2009, Nijenhuis et al. 2003, Sar et al. 2004, Spinhoven et al. 2004). It has been hypothesized that the mechanisms causing somatoform dissociation may depend on a poor body arousal regulation during chaotic and dysregulated emotional states, and on the compartmentalization of body-related mental representations (body scheme), as well as on the trauma-related dramatically negative meanings of the body image (Fisher e Ogden 2009, Ogden et al. 2006). This is why, since the 80's, trauma scholars have increasingly focused on therapeutic techniques aimed at regulating the neurovegetative functions distorted by traumatic development and focused on somatoform symptoms and on the negative beliefs about the body (Fisher e Ogden 2009, Ogden et al. 2006, Van der Kolk 1994).

<sup>2</sup> Recently, some neuroimaging studies have shown that developmental trauma neurologic wounds depend, *among other things*, by the time period of their occurrence (infancy, childhood, adolescence) (Andersen et al. 2008).

## Attachment disorganization, early relational trauma and traumatic development: the hidden epidemic

Serious parental neglect or maltreatment and abuse in childhood, especially when perpetrated by attachment figures (AF), are traumatic experiences since they lead children to repeatedly experience overwhelming inescapable threats. In fact, when children are deprived of the parents' or other AFs' essential protection, or when their presence becomes a source of alarm and danger rather than protection, a situation of *fear without solution* (Main e Hesse 1990) and, therefore, of repeated traumatic experience ensues. The fear without solution, caused by the interaction with a seriously neglectful, maltreating, dissociated or simply frightened parent, prevents children from coherently organize their normal attachment behaviors (Liotti 1994/2005, Main e Hesse 1990). Dissociative pathogenetic processes support of attachment disorganization in childhood and adulthood and their facilitation of disorders and symptoms in the dissociative dimension have been hypothesized and partly demonstrated empirically (Classen et al. 2006, Dutra et al. 2009, Liotti 1992, 2004, 2009, Lyons-Ruth e Jacobvitz 2008, Main e Hesse 1990, Ogawa et al. 1997, Schore 2009).

If the interpersonal threatening conditions in care relationships, indicated also with concepts such as *traumatic attachment*, *complex trauma* or simply as *early relational trauma*, repeatedly occur during pregnancy and adolescence (or if they are not associated with specific protection factors), they determine a traumatic development and, as we have seen, may cause disorders in the dissociative dimension and a broad psychopathological and physical vulnerability (Carlson et al. 2009, Chu e Dill 1990, Classen et al. 2006, Cloitre et al. 2006, Felitti 2009, Lanius et al. 2010b, Liotti 1994/2005, Schore 2009).

In addition to fostering the dissociative dimension, attachment disorganization and early relational trauma may cause other developmental distortions. If, normally, early attachment relationships may provide the basis for the construction of stable and positive representations of a person's self and worth, sense of empowerment, self-confidence and trust, traumatic relational experiences may seriously distort these meaning structures, leading to negative and fragmented images of the self and others, generating a deep feeling of powerlessness and mistrust in other people, preventing the construction of the therapeutic alliance and negatively affecting therapy outcome (Carlson et al. 2009, Fonagy e Target 2008, Liotti 1994/2005).

Recent epidemiologic studies highlight the size of the problem associated with traumatic development and its clinical consequences. According to the US Department of Health, 1.06% of US children suffers from maltreatment and abuse; 60% of them suffers from neglect, 13% from multiple maltreatments, 10% from physical abuse and 7% from sexual abuse (Fairbank e Fairbank 2009). The conclusions of a large epidemiologic study published in 2010 in the Archives of General Psychiatry show that approximately 44% of the disorders originating in childhood and approximately 30% of those with onset in adulthood have, among their main causal factors, adverse events during development (Green et al. 2010). In particular, the results of a prospective study indicate that neglect and verbal violence in childhood are the traumatic experiences most closely associated with the development of dissociative disorders and symptoms in adulthood (Dutra et al. 2009).

Clinical of traumatic development: dissociation, somatization and affect dysregulation

The 1980 inclusion of Post-Traumatic Stress Disorder (PTSD) in the DSM-III formally reintroduced the relationship between traumatic events and psychic disorders in international diagnostic systems. This relationship was underestimated, when not outright denied (Ellenberger 1970, Herman 1992b). Though clinicians and researchers could finally avail of a diagnostic category covering psychological trauma, they immediately experienced some of its limitations, the most important of which being that PTSD, ideated to describe psychopathological reactions to one or a limited amount of traumatic events, circumscribed in time, is ill-suited to describe the psychopathological forms which are typical manifestations of trauma repeated over time such as traumatic development. At the beginning of the 90's, Judith Herman, in charge of the Boston Trauma Center at Harvard Medical School, suggested to differentiate the diagnosis of stress disorders and introduce a new diagnostic category to describe the complex and fluctuating symptomatology originated from prolonged interpersonal trauma: *complex* Post-Traumatic Stress Disorder (Herman 1992a, 1992b). In the same period, the studies to verify the validity of PTSD symptoms promoted by the American Psychiatric Association for the drafting of the DSM-IV, led some researchers to the same conclusions: complex trauma produces a different clinical picture from that described in PTSD for single traumatic events (Van der Kolk et al. 1996).

These conclusions were summarized in a review article published in 1996 by the American Journal of Psychiatry with an eloquent title, "*Dissociation, Somatization and Affective Dysregulation: the complexity of adaptation to trauma*", claiming that the clinical aspects of complex trauma (i.e., cumulative and interpersonal) differ from those of individual traumatic events for a range of psychopathological distortions likely to spread through the very personality of a person, and for triad of symptoms including dissociative symptoms of the consciousness, somatizations and affect regulation distortions (Van der Kolk et al. 1996).

Despite the evidence from experimental data and repeated clinical observations, the DSM committee

always rejected the introduction of Herman's proposed new diagnosis of *complex PTSD*, later reformulated by van der Kolk and his collaborators as *Disorder of Extreme Stress Not Otherwise Specified* (DESNOS) (Van der Kolk et al. 2005). The main reason for the rejection was that the introduction of this new diagnosis among the DSM categories would cause a problem. Its placement would be uncertain and problematic, being equally suitable for inclusion among anxiety, dissociative, somatoform and personality disorders (Chu 2010, Herman 2009). However, in the PTSD description of the DSM-IV, the mention that, in case of "stressful events of relational nature (e.g., physical and sexual abuse in childhood, domestic violence, hostage or detention conditions, ...)", the clinical picture could feature different manifestations than the typical ones and include: "affect regulation impairment, self-injurious and impulsive behavior, dissociative symptoms, shame, despair, loss of sense of future, feeling irreparably damaged, loss of previously held beliefs, hostility, social withdrawal, constant feeling of threat, impaired relations with others, or a change from the previous personality characteristics" (APA 1994).

The symptoms listed in the DSM-IV are the exact symptoms of complex PTSD, or DESNOS (Tab. 1). Since 2009 a large array of scholars worldwide has been trying to introduce in the DSM-V the diagnosis of complex PTSD for adults, defined as "Developmental Trauma Disorder" among the disorders with onset in childhood and adolescence (Sar 2011).

Clinicians dealing with trauma keep pointing at the inadequacy of the current DSM classification and the need for a diagnosis for developmental trauma also for adults. In this respect, in the editorial opening the June 2010 issue of the American Journal of Psychiatry, Chu stated that "for several reasons the DSM-IV and the proposals for the DSM-V cannot deal with the complexity of the clinical reality [of complex trauma, ed.]" (Chu 2010). Chu's reflection stems from the comment to a review article published on the same issue of the journal, where Ruth Lanius and six other leading trauma and dissociation scholars (from the US universities of Atlanta, Baltimore and Stanford and from other universities and research centers in Canada, Germany and the Netherlands) reviewed the

**Table 1.** *Diagnostic Criteria for complex PTSD or DESNOS*

<b>1. Distortions in affect regulation and behavior:</b> a) Distortions in affect regulation; b) Difficulty in anger control; c) Self-injurious behaviors; d) Suicidal behaviors or ideations; e) Difficulty in sexual engagement modulation; f) Excessive proneness to at-risk behaviors (poor self-protection capacity)
<b>2. Consciousness and Attention Disorders:</b> a) Amnesia; b) Transient dissociative episodes, depersonalization
<b>3. Somatizations:</b> a) Digestive system disorders; b) Chronic pain; c) Cardiopulmonary disorders; d) Conversion symptoms e) Sexual dysfunction symptoms
<b>4. Distortions in self-perception:</b> a) Feeling of powerlessness and poor personal effectiveness; b) Feeling of being damaged; c) Excessive sense of guilt and responsibility; d) Pervasive shame; e) Feeling not understood; f) Minimization
<b>5. Distortions in the perception of the perpetrators:</b> a) Tendency to take the perpetrator's perspective; b) Idealization of the perpetrator; c) Fear of harming the perpetrator
<b>6. Relational Disorders:</b> a) Inability or difficulty in trusting others; b) Tendency to re-victimization; c) Tendency to victimize others
<b>7. Distortions of personal meanings:</b> a) Despair and feeling of helplessness; b) Negative self-perception; c) Loss of personal beliefs

(Van der Kolk et al. 2005)

data of the clinical and neurobiological studies over the last few years and proposed to add a “dissociative” subtype for PTSD, related to “chronic psychological, sexual and physical trauma including emotional neglect such as the parents’ psychological unavailability” (Lanius et al. 2010a). The authors of this review, as well as other scholars, claim that the identification of the dissociative subtype for PTSD has important therapeutic implications likely to improve the prognosis of the disorder and that clinicians must be prepared to recognize the signals of the dissociative dimension and use the specific techniques allowing to overcome the obstacles created by the trauma-related dissociative pathogenetic mechanisms.

### Treatment principles for the dissociative-traumatic dimension

The main clinical problem associated with the psychopathological consequences of the dissociative-traumatic dimension is in fact that they concur in complicating treatment, both when they are grouped in a DD or in complex PTSD, and when they are associated to another diagnosis. The sense of mistrust and powerlessness, the traumatic memories related to the care interaction determining the attachment phobia, are obstacles to the construction of the therapeutic alliance necessary for any form of therapy (Kinsler et al. 2009, Liotti et al. 2008, Van der Hart et al. 2006). Distortions in consciousness continuity, identity and memory, as well as the difficulty in affect regulation hinder, when they do not prevent, effective use of therapeutic techniques and strategies developed for the treatment of several disorders, when they are not associated with trauma. Treatment of dissociative patients with developmental trauma disorders is complex and must rest on a multi-phase program, where the first goal is to overcome relational and arousal modulation difficulties (Cloitre et al. 2011, Courtois et al. 2009).

### Conclusions

Some of the theses presented in this article still await final confirmation of the empirical studies, however, it is important to summarize that the clinical observations and the research data have shown for over a century that:

a) Interpersonal traumatic experiences, especially in the early care relationships, determine a specific psychopathological vulnerability caused by dissociative pathogenetic processes.

b) Dissociative symptoms and processes dominate some clinical pictures, variably occur in practically all diagnostic categories and represent an index of negative prognosis and resistance to conventional therapies.

For these reasons we consider it useful for clinicians (including those who are not specifically involved with traumatic or dissociative disorders) to have the tools to recognize and face the consequences of the dissociative-traumatic dimension (Bryant 2010).

### References

- Allen JG, Fonagy P, Bateman AW (2008). *Mentalizing in clinical practice*. American Psychiatric Publishing, Arlington.
- Amaral do Espirito Santo HM, Pio-Abreu JL (2007). Dissociative disorders and other psychopathological groups: exploring the differences through the Somatoform Dissociation Questionnaire (SDQ-20). *Revista Brasileira de Psiquiatria* 29, 4, 354-358.
- Amdur RL, Liberzon I (1996). Dimensionality of dissociation in subjects with PTSD *Dissociation* 9, 2, 118-124.
- Andersen SL, Tomada A, Vincow ES, Valente E, Polcari A, Teicher MH (2008). Preliminary evidence for sensitive periods in the effect of childhood sexual abuse on regional brain development. *Journal Neuropsychiatry Clinical Neuroscience* 20, 3, 292-301.
- APA (1994). *Diagnostic and Statistical Manual of Mental Disorders IV* (4th ed.). American Psychiatric Association, Washington DC.
- APA (2000). *Diagnostic and Statistical Manual of Mental Disorders IV-TR* (4th ed.). American Psychiatric Association, Washington DC.
- Belli H, Ural C, Vardar MK, Yesilyurt S, Oncu F (2012). Dissociative symptoms and dissociative disorder comorbidity in patients with obsessive-compulsive disorder. *Comprehensive Psychiatry* 53, 7, 975-980.
- Berntson GG, Cacioppo JT (2008). *The neuroevolution of motivation*. In Shah J, Gardner W (Eds.), *Handbook of motivation science* (pp. 188-200). Guilford Press, New York.
- Bob P, Svetlak M (2011). Dissociative states and neural complexity. *Brain and Cognition* 75, 2, 188-195.
- Braun K, Bock J (2011). The experience-dependent maturation of prefronto-limbic circuits and the origin of developmental psychopathology: implications for the pathogenesis and therapy of behavioural disorders. *Development Medicine Child Neurology* 53, 4, 14-18.
- Bremner JD, Brett E (1997). Trauma-related dissociative states and longterm psychopathology in posttraumatic stress disorder. *Journal Trauma Stress* 10, 1, 37-49.
- Briere J, Hodges M, Godbout N (2010). Traumatic stress, affect dysregulation, and dysfunctional avoidance: a structural equation model. *Journal Trauma Stress* 23, 6, 767-774.
- Brown RJ (2006). Different types of “dissociation” have different psychological mechanisms. *Journal Trauma Dissociation* 7, 4, 7-28.
- Brown RJ, Cardena E, Nijenhuis E, Sar V, Van der Hart O (2007). Should conversion disorder be reclassified as a dissociative disorder in DSM V? *Psychosomatics* 48, 5, 369-378.
- Bryant RA (2010). The complexity of complex PTSD. *American Journal of Psychiatry* 167, 8, 879-881.
- Carlson EA, Yates TM, Sroufe LA (2009). *Dissociation and the Development of the Self*. In Dell P, O’Neil JA (Eds.), *Dissociation and Dissociative Disorders: DSM-V and beyond*. Routledge, New York.
- Chen LP, Murad MH, Paras ML, Colbenson KM, Sattler AL, Goranson EN, Elamin MB, Seime RJ, Shinozaki G, Prokop LJ, Ziraqzadeh A (2010). Sexual abuse and lifetime diagnosis of psychiatric disorders: systematic review and meta-analysis. *Mayo Clinic Proceedings* 85, 7, 618-629.
- Chu JA (2010). Posttraumatic stress disorder: Beyond DSM-IV. *American Journal of Psychiatry* 167, 6, 615-617.
- Chu JA, Dill DL (1990). Dissociative symptoms in relation to childhood physical and sexual abuse. *American Journal of Psychiatry* 147, 7, 887-892.
- Classen CC, Pain C, Field NP, Woods P (2006). Posttraumatic personality disorder: a reformulation of complex posttraumatic stress disorder and borderline personality disorder. *Psychiatric Clinics of North America* 29, 1, 87-112.
- Cloitre M, Cohen LR, Koenen KC (2006). *Treating survivors of Childhood Abuse: Psychotherapy for the interrupted life*. Guilford Press, New York.
- Cloitre M, Courtois CA, Charuvastra A, Carapezza R, Stolbach BC, Green BL (2011). Treatment of complex PTSD: results of the ISTSS expert clinician survey on best practices. *Journal Trauma Stress* 24, 6, 615-627.
- Cloitre M, Stolbach BC, Herman JL, Van der Kolk B, Pynoos R, Wang J, Petkova E (2009). A developmental approach to complex PTSD: childhood and adult cumulative trauma as predictors of symptom complexity. *Journal Trauma Stress* 22,



- 5, 399-408.
- Cloitre M, Stovall-McClough KC, Noonan K, Zorbas P, Cherry S, Jackson CL, Gan W, Petkova E (2010). Treatment for PTSD related to childhood abuse: a randomized controlled trial. *American Journal of Psychiatry* 167, 8, 915-924.
- Courtois C A, Ford JD, Cloitre M (2009). *Best practices in psychotherapy for adults*. In Courtois CA, Ford JD (Eds.), *Treating Complex Traumatic Stress Disorders* (pp. 82-103). The Guilford Press, New York – London.
- Dalenberg CJ, Brand BL, Gleaves DH, Dorahy MJ, Loewenstein RJ, Cardena E, Frewen PA, Carlson EB, Spiegel D (2012). Evaluation of the evidence for the trauma and fantasy models of dissociation. *Psychological Bulletin* 138, 3, 550-588.
- De Bellis MD(2005). The psychobiology of neglect. *Child Maltreatment* 10, 2, 150-172.
- De Bellis MD (2010). *The neurobiology of child neglect*. In Lanius RA, Vermetten E, Pain C (Eds.), *The impact of early relational trauma on health and disease. The hidden epidemic* (2009/05/12 ed., pp. 33-42). Cambridge University Press, Cambridge UK
- Dutra L, Bureau JF, Holmes B, Lyubchik A, Lyons-Ruth K (2009). Quality of early care and childhood trauma: a prospective study of developmental pathways to dissociation. *Journal Nervous and Mental Disease* 197, 6, 383-390.
- Ellenberger HF (1970). *The Discovery of the Unconscious: The History and Evolution of Dynamic Psychiatry*. Basic Books, New York.
- Ey H (1962) Hughlings Jackson's principles and the organo-dynamic concept of psychiatry. *America Journal of Psychiatry* 118, 673–682
- Fairbank JA, Fairbank DW (2009). Epidemiology of child traumatic stress. *Current Psychiatry Report* 11, 4, 289-295.
- Farina B, Ceccarelli M, Di Giannantonio M (2005). Henri Ey's neo-jacksonism and the psychopathology of disintegrated mind. *Psychopathology* 38, 5, 285-290.
- Farina B, Mazzotti E, Pasquini P, Mantione MG (2011). Somatoform and psychoform dissociation among women with orgasmic and sexual pain disorders. *Journal of Trauma Dissociation* 12, 5, 526-534.
- Farina B, Liotti G (2011). La dimensione dissociativa e il trauma dello sviluppo. *Cognitivismo Clinico* 8, 1, 3-17
- Felitti VJ (2009). Adverse childhood experiences and adult health. *Academic Pediatrics* 9, 3, 131-132.
- Fisher J, Ogden P (2009). *Sensorimotor Psychotherapy*. In Courtois CA, Ford JD (Eds.), *Treating Complex Traumatic Stress Disorders*. The Guilford Press, New York – London.
- Fonagy P, Gergely G, Jurist EJ, Target M (2002). *Affect Regulation, Mentalization and the Development of the Self*. Other Press, New York.
- Fonagy P, Target M (2008). *Attachment, trauma, and psychoanalysis*. In Jurist EL, Slade A & Bergner S. (Eds.) *Mind to mind: Infant research, neuroscience, and psychoanalysis*, (pp.15–42). Other Press, New York.
- Freinkel A, Koopman C, Spiegel D (1994). Dissociative symptoms in media eyewitnesses of an execution. *American Journal of Psychiatry* 151, 9, 1335-1339.
- Giesbrecht T, Mercklebach H (2008). *The complex overlap between dissociation and schizotypy*. In Moskowitz A, Schafer I, Dorahy M (Eds.), *Psychosis, trauma and dissociation*, 79-90.: Wiley-Blackwell, Chichester UK.
- Gleaves DH, Eberenz KP (1995). Correlates of dissociative symptoms among women with eating disorders. *Journal of Psychiatric Research* 29, 5, 417-426.
- Green JG, McLaughlin KA, Berglund PA, Gruber MJ, Sampson NA, Zaslavsky AM, Kessler RC (2010). Childhood adversities and adult psychiatric disorders in the national comorbidity survey replication I: associations with first onset of DSM-IV disorders. *Archives General Psychiatry* 67, 2, 113-123.
- Haaland VO, Landro NI (2009). Pathological dissociation and neuropsychological functioning in borderline personality disorder. *Acta Psychiatrica Scandinavica*, 119, 5, 383-392.
- Harden CL (1997). Pseudoseizures and dissociative disorders: a common mechanism involving traumatic experiences. *Seizure* 6, 2, 151-155.
- Herman JL (1992a). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. *Journal of Traumatic Stress* 5, 3, 377-391.
- Herman JL (1992b). *Trauma and recovery: The aftermath of violence from domestic abuse to political terror*. Basic Books, New York.
- Herman JL( 2009). *Treating Complex Traumatic Stress Disorders*. Foreword in Courtois C., Ford JD (Eds.) (pp. xiii-xvii). Guilford Press, New York.
- Holmes EA, Brown RJ, Mansell W, Fearon RP, Hunter EC, Frasquilho F, Oakley DA (2005). Are there two qualitatively distinct forms of dissociation? A review and some clinical implications. *Clinical Psychology Review* 25, 1, 1-23.
- Howell EF, (2005). *The Dissociative Mind*. The Analytic Press, Hillsdale, New York.
- Kinsler PJ, Courtois CA, Frankel AS (2009). *Therapeutic alliance and risk management*. In Courtois CA, Ford JD (Eds.), *Treating Complex Traumatic Stress Disorders* ( pp.183-201). The Guilford Press, New York - London:.
- Krystal H(1988). *Integration and Self-healing: Affect, Trauma, and Alexithymia*. Analytic Press, Hillsdale, New York.
- La Mela C, Maglietta M, Castellini G, Amoroso L, Lucarelli S (2010). Dissociation in eating disorders: relationship between dissociative experiences and binge-eating episodes. *Comprehensive Psychiatry* 51, 4, 393-400.
- Labonte B, Suderman M, Maussion G, Navaro L, Yerko V, Mahar I, Bureau A, Mechawar N, Szyf M, Meaney MJ, Turecki G (2012). Genome-wide epigenetic regulation by early-life trauma. *Archives of General Psychiatry* 69, 7, 722-731.
- Lanius R A, Vermetten E, Loewenstein RJ, Brand B, Schmahl C, Bremner JD, Spiegel D (2010a). Emotion modulation in PTSD: Clinical and neurobiological evidence for a dissociative subtype. *American Journal Psychiatry* 167, 6, 640-647.
- Lanius RA, Vermetten E, Pain C (2010b). *The impact of early relational trauma on health and disease. The hidden epidemic*. Cambridge University Press, Cambridge.
- Liotti G (1992). Disorganized attachment in the etiology of the dissociative disorders. *Dissociation* 5, 196-204.
- Liotti G (1994/2005). *La Dimensione interpersonale della Coscienza* (II Ed. ed.). Carocci, Roma.
- Liotti G (2004). Trauma, dissociation and disorganized attachment: Three strands of a single braid. *Psychotherapy: Theory, research, practice, training* 41, 472-486.
- Liotti G (2006). A model of dissociation based on attachment theory and research. *Journal of Trauma Dissociation* 7, 4, 55-73.
- Liotti G (2009). *Attachment and Dissociation*. In Dell P, O'Neil JA (Eds.), *Dissociation and Dissociative Disorders: DSM-V and beyond*. Routledge, New York.
- Liotti G, Cortina M, Farina B (2008). Attachment theory and multiple integrated treatments of borderline patients. *The Journal of the American Academy of Psychoanalysis and Dynamic Psychiatry* 36, 2, 295-315.
- Liotti G, Farina B (2011). *Sviluppi Traumatici: eziopatogenesi, clinica e terapia della dimensione dissociativa*. Raffaello Cortina, Milano.
- Liotti G, Gumley A (2008). *An attachment perspective in schizophrenia: The role of attachment disorganization and dissociation*. In Moskowitz A, Schafer I, Dorahy M. (Eds.), *Dissociation and Psychosis: Converging Perspectives on a Complex Relationship*. Wiley Press, London.
- Liotti G, Prunetti E (2010). *Metacognitive deficits in trauma-related disorders: contingent on interpersonal motivational contexts?*. In Dimaggio G, Lysaker PH (Eds.), *Metacognition and severe adult mental disorders: From basic research to treatment*. Routledge London.
- Lyons-Ruth K, Jacobvitz D (2008). *Attachment disorganization: Genetic factors, parenting contexts, and developmental*

- transformation from infancy to adulthood. In Cassidy J, Shaver P (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (2nd ed., pp. 666-697). Guilford Press, New York.
- Main M, Hesse E (1990). *Parents' Unresolved Traumatic Experiences are related to Infant Disorganized Attachment Status: Is frightened/frightening parental behavior the linking mechanism?* In Greenberg M, Cichetti D, Cummings M (Eds.), *Attachment in the Preschool Years* (pp. 121-160). University of Chicago Press, Chicago.
- Meares R (1999). The contribution of Hughlings Jackson to an understanding of dissociation. *American Journal of Psychiatry* 156, 12, 1850-1855.
- Meares R (2000). *Integration and Self-healing: Affect, Trauma, and Alexithymia*. Analytic Press, Hillsdale, New York.
- Meares R (2012). *A Dissociation Model of Borderline Personality Disorder*. Norton, New York.
- Modestin J, Ebner G, Junghan M, Erni T (1996). Dissociative experiences and dissociative disorders in acute psychiatric inpatients. *Comprehensive Psychiatry* 37, 5, 355-361.
- Nijenhuis ER (2009). *Somatoform Dissociation and Somatoform Dissociative Disorders*. In Dell P, O'Neil JA (Eds.), *Dissociation and Dissociative Disorders: DSM-V and beyond*. Routledge, New York.
- Nijenhuis ER, Spinhoven P, Vanderlinden J, Van Dyck R, Van der Hart O (1998). Somatoform dissociative symptoms as related to animal defensive reactions to predatory imminence and injury. *Journal of Abnormal Psychology* 107, 1, 63-73.
- Nijenhuis ER, Van der Hart O (2011). Dissociation in trauma: a new definition and comparison with previous formulations. *Journal of Trauma Dissociation* 12, 4, 416-445.
- Nijenhuis ER, Van Dyck R, Kuile MM, Mourits MJ, Spinhoven P, Van der Hart O (2003). Evidence for associations among somatoform dissociation, psychological dissociation and reported trauma in patients with chronic pelvic pain. *Journal of Psychosomatic Obstetrics Gynaecology* 24, 2, 87-98.
- Ogawa JR, Sroufe LA, Weinfield NS, Carlson EA, Egeland B (1997). Development and the fragmented self: longitudinal study of dissociative symptomatology in a non-clinical samples. *Development and Psychopathology* 9, 855-879.
- Ogden P, Pain C, Fisher J (2006). A sensorimotor approach to the treatment of trauma and dissociation. *Psychiatric Clinics of North America* 29, 1, 263-279.
- Porges SW (1997). Emotion: an evolutionary by-product of the neural regulation of the autonomic nervous system. *Annals of New York Academy of Sciences* 807, 62-77.
- Porges SW (2001). The polyvagal theory: phylogenetic substrates of a social nervous system. *International Journal of Psychophysiology* 42, 123-146.
- Putnam F (1997). *Dissociation in Children and Adolescents: A Developmental Perspective*. Guilford, New York.
- Ross CA (2009). The Theory of a Dissociative Subtype of Schizophrenia. In Dell P, O'Neil JA (Eds.), *Dissociation and Dissociative Disorders: DSM-V and beyond* (pp. 557-568). Routledge, New York.
- Rufer M, Fricke S, Held D, Cremer J, Hand I (2006a). Dissociation and symptom dimensions of obsessive-compulsive disorder. A replication study. *European Archives of Psychiatry Clinical Neuroscience* 256, 3, 146-150.
- Rufer M, Held D, Cremer J, Fricke S, Moritz S, Peter H, Hand I (2006b). Dissociation as a predictor of cognitive behavior therapy outcome in patients with obsessive-compulsive disorder. *Psychotherapy and Psychosomatics* 75, 1, 40-46.
- Sar V (2011). Developmental trauma, complex PTSD, and the current proposal of DSM-5. *European Journal of Psychotraumatology* 2.
- Sar V, Akyuz G, Kundakci T, Kiziltan E, Dogan O (2004). Childhood trauma, dissociation, and psychiatric comorbidity in patients with conversion disorder. *American Journal of Psychiatry* 161, 12, 2271-2276.
- Sar V, Taycan O, Bolat N, Ozmen M, Duran A, Ozturk E, Ertem-Vehid (2010) Childhood trauma and dissociation in schizophrenia. *Psychopathology* 43, 1, 33-40.
- Schore AN (2009). *Attachment trauma and the Developing of Right Brain: origin of Pathological Dissociation*. In Dell P, O'Neil JA (Eds.), *Dissociation and Dissociative Disorders: DSM-V and beyond*. Routledge, New York.
- Siegel DJ (1999). *The developing mind*. Guilford, New York.
- Spinhoven P, Roelofs K, Moene F, Kuyk J, Nijenhuis E, Hoogduin K, Van Dyck R (2004). Trauma and dissociation in conversion disorder and chronic pelvic pain. *International Journal of Psychiatry in Medicine* 34, 4, 305-318.
- Spitzer C, Barnow S, Freyberger HJ, Grabe HJ (2007). Dissociation predicts symptom-related treatment outcome in short-term inpatient psychotherapy. *Australia and New Zealand Journal of Psychiatry* 41, 8, 682-687.
- Stein DJ, Koenen KC, Friedman MJ, Hill E, McLaughlin KA, Petukhova M, Ruscio AM, Shahly V, Spiegel D, Borges G, Bunting B, Caldas-de-Almeida JM, de Girolamo G, Demyttenaere K, Florescu S, Haro JM, Karam EG, Kovess-Masfety V, Lee S, Matschinger H, Mladenova M, Posada-Villa J, Tachimori H, Viana MC, Kessler RC (2013). Dissociation in Posttraumatic Stress Disorder: Evidence from the World Mental Health Surveys. *Biological Psychiatry* 73, 4, 302-312.
- Teicher MH, Rabi K, Sheu YS, Serafine SB, Andersen SL, Anderson CM, Choi J, Tomoda A (2010). *Neurobiology of childhood trauma and adversity*. In Lanius RA, Vermetten E, Pain C (Eds.), *The impact of early relational trauma on helath and disease. The hidden epidemic*.: Cambridge University Press, Cambridge.
- Tononi G, Koch C, (2008). The neural correlates of consciousness: an update. *Annual New York Academy of Science*, 1124, 239-261.
- Van der Hart O, Dorahy M (2006). Pierre Janet and the concept of dissociation. *American Journal of Psychiatry* 163, 9, 1646.
- Van der Hart O, Nijenhuis E (2009). *Dissociative Disorders*. In Blaney HP, Millon T (Ed.), *Oxford Textbook of Psychopathology*. Oxford University Press, New York (USA)-Oxford (UK).
- Van der Hart O, Nijenhuis E, Steele K (2006). *The Haunted Self: structural dissociation and the treatment of chronic traumatisation*. Norton, New York-London.
- Van der Kolk BA (2005). Developmental Trauma Disorder: Toward a rational diagnosis for children with complex trauma histories. *Psychiatric Annals* 35, 5, 401-408.
- Van der Kolk BA (1994). The body keeps the score: memory and the evolving psychobiology of posttraumatic stress. *Harvard Review of Psychiatry* 1, 5, 253-265.
- Van der Kolk BA (1996). *The complexity of adaptation to trauma: Self-regulation, stimulus discrimination and characterological development*. In Van der Kolk BA, McFarlane AC, Weisaeth L (Eds.), *Traumatic stress: The effects of overwhelming experience on mind, body, and society* (pp. 182-213). Guilford Press, New York.
- Van der Kolk BA, Pelcovitz D, Roth S, Mandel FS, McFarlane A, Herman JL (1996). Dissociation, somatization, and affect dysregulation: the complexity of adaptation of trauma. *American Journal of Psychiatry* 153, 7, 83-93.
- Van der Kolk BA, Roth S, Pelcovitz D, Sunday S, Spinazzola J (2005). Disorders of extreme stress: The empirical foundation of a complex adaptation to trauma. *Journal of Trauma Stress* 18, 5, 389-399.
- Waller G, Ohanian V, Meyer C, Everill J, Rouse H (2001). The utility of dimensional and categorical approaches to understanding dissociation in the eating disorders. *British Journal of Clinical Psychology* 40, 4, 387-397.
- Waller NG, Putnam FW, Carlson EB (1996). Types of dissociation and dissociative types: A taxometric analysis of dissociative experiences. *Psychological Methods* 1, 300-321.
- WHO (1992). *The ICD-10 Classification of Mental and Behavioural Disorders: Clinical descriptions and Diagnostic Guidelines*. World Health Organization, Geneva.