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EVALUATION OF DISSOCIATION THROUGHOUT THE LIFESPAN

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In the past 20 years, the study of dissociation has flourished partly because of the research on the links between traumatic events and dissociation. Epidemiological studies have shown that dissociative symptoms and disorders are not uncommon. The nonspecialist in this area needs a guide to the extensive literature on the evaluation of dissociation across the lifespan to choose the most appropriate form of evaluation. The authors provide summaries of various types of assessment for dissociation in infants, children, teens, and adults. The techniques they review include structured interviews, specialized questionnaires, and scales on more general instruments, along with their psychometric properties. A good evaluation of dissociation can guide diagnosis, help focus treatment, and provide a measure of treatment efficacy.

All that is left of me is this horrid, lingering awareness that knows there is no longer any solid configuration of me. . . . It is a true horror. It's the making of a haunted ghost (Spalding Gray, 1999, as cited in Duke, 2004).

In the past 20 years, the study of dissociative processes has flourished after a decades-long period of marginalization (Spiegel & Cardeña, 1991). In no small part, this outcome has been an effect of the development of valid and reliable assessment tools. The trauma practitioner should be particularly interested in the substantiated robust relationship between exposure to trauma and both acute and chronic dissociative phenomena (Cardeña, Butler, & Spiegel, 2003). This conclusion is based on, among others, the following sources of evidence:

1. association of various dissociative phenomena, including alterations in memory, perception, and a sense of detachment with exposure to trauma (e.g., Spiegel & Cardeña, 1991);
2. frequent comorbidity of posttraumatic and dissociative symptomatology (Van der Kolk, McFarlane, & Weisaeth, 1996);
3. high hypnotizability among patients with posttraumatic symptomatology (e.g., Spiegel, Hunt, & Dondershine, 1988);
4. history of severe trauma among patients with dissociative disorders (DDs; e.g., Coons, 1994);
5. a "dose" relationship between severity of exposure to trauma and acute dissociation (Koopman, Classen, & Spiegel, 1996);
6. high correlations between dissociation and PTSD subscales (e.g., Gold & Cardeña, 1998);
7. and dissociation around the time of trauma (peritraumatic dissociation) as a strong predictor of chronic posttraumatic pathology

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among adults (Ozer, Best, & Lipsey, 2003) and children (Saxe, 2002).

In the case of some types of severe trauma such as rape, acute dissociative reactions seem to be more the norm than the exception (cf. Dancu, Riggs, Hearst-Ikeda, Shoyer, & Foa, 1996). Thus, it is essential that the clinician working with clients exposed to trauma and similar severe disruptions becomes knowledgeable about valid forms of assessment and the conceptual framework underlying the DDs (Cardeña & Gleaves, 2003; Michelson & Ray, 1996). The literature on the evaluation of dissociative phenomena and disorders is considerable, but it lacks integration because authors tend to focus on a specific diagnosis (e.g., dissociative identity disorder or DID; Armstrong, 1996), instrument (e.g., Steinberg, 1993), or age range (e.g., childhood; Silberg, 1998). In this article, we briefly discuss the "domain of dissociation" (Cardeña, 1994) and then review the wide range of assessment techniques available for adults and minors, to help clinicians and researchers choose the appropriate procedure.

The *Diagnostic and Statistical Manual of Mental Disorders* (*DSM–IV*) describes the DDs as being characterized by a "disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment" (American Psychiatric Association, 1994, p. 477). This disruption should be distressing and/or impair basic areas of functioning and should not be caused by a general medical condition or the direct effect of a psychoactive substance. Dissociation as a descriptive, rather than explanatory, concept mainly subsumes two categories of psychological processes (Cardeña, 1994). The first category, *compartmentalization*, refers to the lack of integration of psychological processes that should ordinarily be accessible to conscious awareness. Two examples of compartmentalization are amnesia for personal information and the experience of semi-independent identities in dissociative identity disorder. The second set of psychological processes consists of *alterations of consciousness* in which aspects of the individual or the environment are experienced as unreal or experientially detached from the self, with reality testing remaining intact. Out-of-body and derealization experiences are examples of this type of dissociation.

Various psychological functions can be dissociated, including the sense of self and/or the environment (e.g., depersonalization), emotions (e.g., emotionally expressive behaviors without the associated subjective feeling), physical sensations and agency (e.g., conversion symptoms), memory (e.g., dissociative amnesia), and identity (e.g., dissociative identity disorder; Butler, Duran, Jasiukaitis, Koopman, & Spiegel, 1996; Cardeña, 1997). Janet (1907/1965) also made a useful distinction between positive symptoms (exaggerations or additions to normal processes such as medically unexplainable somesthesias) and negative symptoms (diminution of normal processes, such as lack of memory for personal information). The clinician should bear in mind that dissociative experiences are not necessarily pathological (Cardeña, Lynn, & Krippner, 2000; Nijenhuis, 2000); they are only maladaptive when they become chronic, recurrent, and uncontrollable and when they produce dysfunction and/or distress. Functionality should always be assessed in the context of the norms appropriate for the person's culture. Below, we review evaluation methods for the DDs in adults and minors. Most instruments can be copied and used freely. URL links and primary references to most of them are provided below.

Adults

General Interviews

There are two structured interviews specifically for the DDs: the Structured Clinical Interview for the Dissociative Disorders (SCID–D) and the Dissociative Disorders Interview Schedule (DDIS). A meta-analysis showed that, as compared with the DDIS, the SCID–D has a higher threshold for diagnosing DDs (Friedl, Draijer, & de Jonge, 2000). The SCID–D (Steinberg, 1993) is often the most sophisticated instrument for the assessment of DDs and evaluates the incidence (past and present) of amnesia, depersonalization, derealization, identity confusion, identity alteration, and associated phenomena, such as abrupt changes of mood and internal voices. It contains queries on psychiatric history and consists of approximately 150–260 questions, depending on the answers from the person. Administration of the interview may require more than an hour, and its author recommends previous training. The SCID–D has very good psychometric properties (Steinberg, Cicchetti, Buchanan, Hall, & Rounsaville, 1993) and can be

administered to adolescents (Carrion & Steiner, 1999) as well as adults. It has been used in the diagnosis of DDs, somatoform disorders (Bowman & Coons, 2000), PTSD (Bremner, Steinberg, Southwick, Johnson, & Charney, 1993), and other disorders.

The DDIS is a structured interview that evaluates diagnostic criteria for DDs, somatization disorders, borderline personality, and depression. It also measures symptoms of schizophrenia, substance abuse, early abuse history, and symptoms associated with the DDs. The interview contains 132 questions, requires about 30–45 min to administer, and can be copied directly from www.rossinst.com/dddquest.htm. Ross et al. (1989) analyzed the psychometric characteristics of the first version of the DDIS; although the interrater reliability was not very high (.68), it had good sensitivity and specificity for severe DDs. The DDIS has been used to evaluate DDs (Scroppo, Drob, Weinberger, & Eagle, 1998) and other diagnoses, including schizophrenia, panic attacks (Ross et al., 1989), and conversion disorder (Litwin & Cardeña, 2000).

Loewenstein (1991) has offered a semistructured interview and a description of characteristic responses and behaviors of DD clients. Among the areas he covers are amnesia (i.e., periods in daily life that cannot be recalled, an autobiographical history with gaps, unexplainable loss of certain abilities), autohypnotic phenomena (spontaneous "trance"), and posttraumatic, somatoform, and emotional symptoms.

Overall, the SCID–D may be the ideal option, provided that the interviewer has the time and training to conduct it. The DDIS has the advantage of free access, although its reported lower threshold in the diagnosis of DDs should be borne in mind by the clinician. In any case, the interview proposed by Loewenstein (1991), although not as systematic or researched as the other two, deserves a careful reading for the various descriptions of dissociative phenomena during the interview.

General Questionnaires

Questionnaires about dissociative experiences and behaviors are intended to serve as screening instruments. They are not designed to establish a diagnosis of DDs but serve instead as a general indicator of the dissociative traits of a person. They may therefore suggest the need for a more detailed clinical evaluation.

Without a doubt, the most frequently used questionnaire is the Dissociative Experiences Scale (DES). It possesses excellent reliability and validity indices (Bernstein & Putnam, 1986). The original version consisted of 28 items, each one with a graph scale of 0–100. The authors simplified its format in 1993, using a numerical scale from 0 to 100 in 10-point intervals (Carlson & Putnam, 1993). The psychometric properties of this version are comparable to those of the original (Ellason, Ross, Mayran, & Sainton, 1994). A meta-analysis of more than 100 studies with the DES showed that it has very high convergent and predictive validity of DD diagnosis, although its specificity is not very high (Van Ijzendoorn & Schuengel, 1996), so the evaluator should be careful to distinguish specific dissociative symptomatology from more general distress. DES cutoff points for the presence of DDs have been proposed (e.g., 30; Carlson et al., 1993), and the DES has been translated into various languages.

The patterns of response generated by the DES have been investigated as one means of attempting to understand the nature of dissociation. Various factor analyses of the DES have shown solutions with one, three, or four factors in clinical and general samples. A confirmatory factor analysis suggests that the best solution may consist of three factors: amnesia, depersonalization, and absorption (Stockdale, Gridley, Balogh, & Holtgraves, 2002). A related issue is whether dissociation, as measured by the DES, should be considered as a continuous dimension (i.e., distributed across the population) or as a taxon (a statistically derived category thought to represent the presence of an underlying trait). Waller, Putnam, and Carlson (1996) proposed the second option and indicated that 8 of 28 DES items compose a taxon that serves to differentiate pathological dissociation (forms of amnesia and depersonalization) from the dissociation typically found in varying degrees throughout the population (typically absorption experiences). Pathological dissociation items are known as DES-T and the probability of belonging to the taxon is calculated through a formula found at www.issd.org/DES_Taxon.xls. (Note that it is incorrect to use a simple average of the scores of the eight items to determine the probability of belonging to the taxon.) Studies have shown that the DES-T can identify pathological dissociation in the eating disorders (Waller, Ohanian, Meyer, Everill, & Rouse, 2001) and in those who suffered early

abuse and have a clinical diagnosis (Allen, Fultz, Huntoon, & Brethour, 2002). However, the DES-T may have limitations. Simeon, Knutelska, Dorthy, Guralnik, and Schmeidler (2003) observed that only two thirds of their patients with the clinical diagnosis of depersonalization also qualified under the DES-T taxon. Leavitt (1999) found the DES-T useful only in the most extreme forms of pathological dissociation, and Watson (2003) reported that in a nonclinical sample, the DES-T did not show test–retest stability. It seems that the DES-T requires additional research with different clinical and nonclinical groups before it can be unambiguously established as a valid indicator of DDs.

An alternative format of the DES, the DDS, requests that respondents compare the frequency of their dissociative phenomena with that of other persons (Wright & Loftus, 2000). The benefits of this response format over the original DES have not been established. A perhaps more promising modification, the Curious Experiences Survey (CES; Goldberg, 1999), includes three additional items to evaluate lack of corporal control and other alterations of consciousness. The CES is less redundant and easier to read than the DES (in an attempt to reduce the correlation between IQ and DES scores) and uses a response format of 5 points instead of 11.

Mayer and Farmer (2003) corroborated the good psychometric properties of the CES and developed their own instrument, the 35-item Scale of Dissociative Activities (SODAS), with the purpose of correcting perceived inadequacies in other questionnaires and providing more items dealing with nonpathological forms of dissociation. The authors of the SODAS report that it has good reliability and validity and correlated it with data obtained through random sampling of the respondents' dissociative experiences as they went through their normal activities. This experiential sampling methodology (ESM) provides very good ecological validity. However, with very few exceptions (e.g., Easterlin & Cardeña, 1998–1999; Loewenstein, Hamilton, Alagna, & Reid, 1987), it has not been used in the study of DD or consciousness. Because vast information has already accumulated on the DES, it would be important to establish the extent to which previous results on the DES extend to the CES and the SODAS.

The Dissociation Experiences Questionnaire (DIS-Q) consists of 63 items, including most of the items of the DES. The authors have used it in epidemiological investigations in Europe and have found that it possesses good reliability and validity (Vanderlinden, Van Dyck, Vandereycken, Vertommen, & Verkes, 1993). The DIS-Q would be a good choice for the clinician or researcher who might want to have additional specific information on dissociative phenomena not covered by the DES.

Another option, simpler but administered less frequently than the DES, is the Questionnaire of Experiences of Dissociation (QED; 26 items scored as *yes* or *no*). Several analyses (e.g., Riley, 1988) show good reliability and validity. The QED has a high correlation with the DES (.82) and a similar factorial structure (Ray, June, Turaj, & Lundy, 1992). Both classify patients with DDs accurately (Dunn, Ryan, Paolo, & Miller, 1993), although the DES seems to be a bit more effective (Gleaves, Eberenz, Warner, & Fine, 1995). Thus, the QED may be a good choice when conducting research on dissociation in general, but the DES would seem to be preferable when trying to establish actual clinical diagnoses. Sapp and Hitchcock (2001) constructed the General Dissociation Scale (GDS), but it only shows a moderate correlation with the DES ($r = .5$), and it does not seem to have advantages over other, more established, questionnaires.

An instrument with specific diagnostic questions is the Multiscale Dissociation Inventory (MDI), with 30 items that can be answered in 5–10 min. The authors note that the MDI has very good internal consistency and validity (Briere, Weathers, & Runtz, in press). The instrument is not free; information on how to obtain it is found at www.parinc.com/product.cfm?ProductID = 589. The authors of this instrument are very knowledgeable about instrument development and posttraumatic phenomena, but additional research on its properties is necessary before it can be evaluated against more established instruments.

The Multidimensional Inventory of Dissociation (MID; Dell, 2002) is the most comprehensive dissociation questionnaire, with 218 items that compose 23 dissociation and 6 validity scales. There is a program in Excel, Mid Analysis, which scores the questionnaire; it can be obtained from www.ISSD.org or by sending an e-mail to pfdell@aol.com. The MID has very high correlations with the DES, DES-Q, SCID–D, SDQ–20, and QED and shows good internal consistency and excellent predictive capacity for se-

vere DDs (.90; Dell, 2002). Although there are questions as to the benefit of such a comprehensive questionnaire when shorter instruments may have good diagnostic values (e.g., Cardeña, 2001), the addition of validity scales may make the MID very useful when malingering is suspected.

The Perceptual Alteration Scale (PAS), partly based on the MMPI, contains 60 items that emphasize alterations in control and cognition, some of them geared specifically to the eating disorders. It has good reliability (Sanders, 1986) and correlates moderately with the DES (Frischholz et al., 1991). Overall, the DES has been used more often than the PAS, although Simeon et al. (1998) have proposed cutoff scores on the PAS for the diagnosis of depersonalization. Two more scales based on the MMPI have been developed: the Phillips Dissociation Scale (PDS; Phillips, 1994) and the North Carolina Dissociation Index (NCDI; Mann, 1995). However, Hansen and Gold (1997) found serious limitations in the psychometric properties of both scales. Before specific MMPI dissociation subscales had been developed, scores from existing scales of the MMPI were used to classify DID patients, with an accuracy rate of 68% (Coons & Fine, 1990; Coons & Stern, 1986). Some researchers observed that severe dissociation is manifested on the MMPI scales associated with psychoticism (Elhai, Gold, Mateus, & Astaphan, 2001), whereas absorption, the more benign form of dissociation in the DES, has correlated positively with pathology scores on the MMPI (Allen & Coyne, 1995). This result is consistent with the positive correlation found between fantasy proneness and psychopathology as measured by the MMPI and the Rorschach (Lynn & Rhue, 1988). Ellason and Ross (in press) proposed Symptom Checklist 90—Revised (SCL–90–R) indexes to detect DID.

Allen, Coyne, and Console (1997) found that patients with severe trauma disorders who experientially detached from their actions and their self/environment, as measured by the DES, tended to also manifest cognitive distortions and schizotypal features in the Millon Clinical Multiaxial Inventory—III (MCMI–III). Using an earlier version of the MCMI, the MCMI–II, Ellason, Ross, and Fuchs (1995) observed that patients with DID exhibited high avoidance, self-defeating, borderline, and passive-aggressive traits. These results support the notion that DID patients tend to manifest avoidant rather than histrionic features.

Armstrong and Loewenstein (1990) administered a test battery to clients with DID and reported that WAIS–R scores varied according to the presenting identity. Variation in response according to the presenting identity has also been found in personality tests, levels of hypnotizability, and neurophysiological reactions (Cardeña, Pakianathan, & Spiegel, 1989). Armstrong and Loewenstein (1990) also wrote that some plates of the Rorschach evoked traumatic intrusions and inhibition to emotional stimuli. Other researchers have employed the Rorschach in the evaluation of the DDs. Early proposed indicators, however, have not been supported. Those mentioned by Wagner, Allison, and Wagner (1983) were not corroborated by other investigators (Labott, Leavitt, Braun, & Sachs, 1992), and the indicators proposed by Barach (2003) were withdrawn by their author. Instead, Leavitt and Labott (1997) have concluded that dissociative responses are characterized by forms described as seen through a veil, mist, and so forth; unusual responses in which the objects are very distant; and a sense of disorientation in which the Rorschach stimuli are unstable. Splitting responses are manifested by fragmented and/or cut responses. A finding of interest is that undergraduate women asked to simulate DID provided responses on the DES–II consistent with the DDs but did not provide the aforementioned Rorschach indicators (Labott & Wallach, 2002), suggesting that the Rorschach might be of value when malingering or factitious disorders are suspected.

Researchers who used another projective technique, the Thematic Apperception Test (TAT), concluded that responses indicative of the presence of DDs contain great interpersonal distance, traumatic and dissociative content, and absence of positive emotions. The conduct of DD patients during testing included identity switching, "trances," amnesia during the interview, and rejection of plates with intense emotional content (Pica, Beere, Lovinger, & Dush, 2001). In comparison with clients with other diagnoses, those with DID or DDNOS seem to manifest more complex and colorful images, with a separation among different aspects of the drawing (e.g., the colors are not mixed) in the system known as Diagnostic Drawing Series (DDS; Fowler & Ardon, 2002).

If there is limited time and a need to measure other symptoms related to trauma, the Trauma Symptom Checklist, either in its 33- or 40-item versions (TSC–33, TSC–40), might be used. It measures various posttraumatic reactions including dissociation (Briere & Runtz, 1989; Gold & Cardeña, 1998), and professionals can obtain it free of charge at www.johnbriere.com/tsc.htm. A longer (100 items) and more sophisticated version, the Trauma Symptom Inventory, is also available and can be purchased at www.johnbriere.com/tsi.htm.

More Specialized Forms of Evaluation

Evaluation of acute stress disorder and state dissociation. The *DSM–IV* added the diagnosis of acute stress disorder to its nosology (ASD; Cardeña, Lewis-Fernández, Beahr, Pakianathan, & Spiegel, 1996). It can be diagnosed from 2 days to a month after a trauma and requires the presence of dissociative and PTSD-type (reexperiencing, avoidance, and hyperarousal) symptoms and clinical dysfunction. The inclusion of ASD has fostered studies on the role of acute posttraumatic reactions and methods to evaluate them. The first version of the Stanford Acute Stress Reaction Questionnaire (SASRQ) contained a list of many possible psychological reactions experienced after a traumatic event (Cardeña & Spiegel, 1993). After several iterations and psychometric analyses, the current version of the SASRQ contains 30 items that measure all of the ASD diagnostic criteria. It possesses very good reliability and construct, convergent, discriminative, and predictive validity, as evidenced by several published studies in various laboratories (Cardeña, Koopman, Classen, Waelde, & Spiegel, 2000). It has been translated into various languages and can be requested from Etzel Cardeña.

Bryant, Harvey, Dang, and Sackville (1998) designed an interview to evaluate ASD, with 19 items scored dichotomously, that possesses very good diagnostic sensitivity and specificity. The authors also developed a self-report form of the interview (Bryant & Harvey, 1999), which at this point seems to have had limited research use. The SCID–D can be used to evaluate ASD (Steinberg, 1993), but we are unaware of data regarding its properties for the diagnosis of ASD.

The Peritraumatic Dissociation Questionnaire (PDQ) exclusively measures dissociative reactions to traumatic events and contains 10 items. It has self-report and clinician versions. Its authors report good internal consistency and several forms of validity (Marmar, Weiss, & Metzler, 1998). A more elaborate questionnaire of dissociative states is the Clinician-Administered Dissociative States Scale (CADSS), consisting of 19 items to be answered by both the respondent and the clinician. It possesses good interrater reliability and validity as demonstrated by its correlations with the DES and the SCID–D and its capacity to differentiate patients with DDs from other patients (Bremner et al, 1998); it also has predictive validity (Morgan et al., 2001). A scale for dissociation states that apparently has been used in only one publication is the State Scale of Dissociation (SSD; Kruger & Mace, 2002). Its 56 items measure the dissociative state at the moment that the respondent is answering; its authors report several forms of reliability and acceptable validity.

A clinician or researcher interested in assessing the possibility of an ASD diagnosis and a wide range of acute posttraumatic reactions can choose between the SASRQ and the measures devised by Bryant et al. (1998). If only acute dissociative reactions are of concern, either the PDQ or the CADSS would be a good choice. In any case, the literature supports the need to evaluate dissociation around the time of a traumatic event. If peritraumatic dissociation is severe and does not diminish or disappear days or a few weeks after the traumatic event has ended, it should be considered a serious risk factor for chronic pathology.

Depersonalization. Several scales have been designed specifically to evaluate depersonalization and derealization, which are far more common as clinical symptoms than is usually thought (Cardeña & Gleaves, 2003). Depersonalization is not uncommon in nonclinical samples around the time of trauma (Cardeña & Spiegel, 1993) and may co-occur with symptom patterns such as depression (as exemplified in the quote at the beginning of this article), anxiety, and bingeing behavior, among others. The 28-item Depersonalization-Derealization Inventory (Cox & Swinson, 2002) is for patients with anxiety conditions and offers good reliability and validity. The Cambridge Depersonalisation Scale (Sierra & Berrios, 2000) also has 28 items and measures the frequency and duration of the symptoms. It has very good internal consistency and discriminative validity.

Simeon et al. (1998) have developed a programmatic investigation of depersonalization and have described the psychometric characteristics of two other scales of depersonalization: Dixon's Depersonalization Questionnaire (DDQ) and the Depersonalization Scale (JDS) by Jacobs and Bovasso (1992). The latter has 12 items from Dixon's scale plus 20 additional ones, which measure symptom incidence and prevalence. The JDS has five proposed factors: inauthenticity, self-negation, self-objectification, derealization, and body detachment; its authors concluded that self-objectification may be more closely related to pathology than the others (Jacobs & Bovasso, 1992). Simeon, Guralnik, and Schmeidler (2001) also developed a scale of 6 items for the clinician's evaluation of the intensity and severity of depersonalization. The properties of this instrument are being investigated. Finally, Steinberg has a depersonalization questionnaire on the Internet, although that site does not provide additional information about its psychometric properties. The URL is www.strangerinthemirror.com/questionnaire.html.

For most purposes, the trauma practitioner may do just fine with a general dissociation or ASD measure. However, with clients who may have a chronic and recurrent sense of being disconnected with parts of themselves or the environment or who may often feel in a dreamlike landscape, one of the various depersonalization measures described may help elucidate the inner landscape of the client. Currently, it seems premature to recommend one scale over the other ones. It is advisable to measure not only the presence of depersonalization but its recurrence and severity as well.

Infants, Children, and Adolescents

The history of the study of DDs in children is long and complex (Fine, 1988). Assessment during the early and teen years includes a series of additional problems, including limitations in communication, variations according to cognitive and development stage, and phenomena that are unusual in adults but not in children (e.g., imaginary companions). With respect to a general evaluation, M. Lewis (2002) included a list of psychological instruments for use with children and the age range for which they are valid.

Putnam (1997) and Silberg (1998) have provided very good overviews on the study and evaluation of dissociation during infancy, childhood, and adolescence, along with copies of some of the measures described below. A monograph on DID in childhood edited by D. O. Lewis and Putnam (1996) contains excellent articles on this topic. The diagnosis of Dissociative Disorder of Childhood (DDoC) has been advanced by Peterson and Putnam (1994; see also Silberg, 2000), to account for severe childhood DDs that differ from DID. DDoC is defined as involving periods of amnesia, numbing, unexplainable and abrupt changes of conduct, and several associated problems, such as inappropriate sexual conduct and referring to oneself in the third person. Peterson and Putnam (1994) also described a questionnaire for DDoC consisting of 107 items and queries on other areas such as trauma history. In the following sections, we briefly review the evaluation of dissociation in infancy, childhood, and adolescence, though the distinction between these three developmental epochs is blurry at times.

Infancy

In the first years of life, basically only behavioral observations can be used to assess dissociation, although advances in brain imaging may provide an additional resource in the future. One of the most important observations in recent years has been the relationship between disorganized/disoriented attachment style and the development of dissociative phenomena. This line of research is based on the work on attachment by Bowlby (1988) and Ainsworth (Ainsworth, Blehar, Waters, & Wall, 1978), extended to the field of dissociation by Main (e.g., Main & Morgan, 1996), Liotti (1992), and others.

In comparison to other forms of attachment (secure, avoidant, resistant/ambivalent), in disorganized/disoriented attachment, the 1-year-old infant shows disorganized reactions toward the main caretaker's return after a brief absence (the Strange Situation Test of Ainsworth; Ainsworth et al., 1978). The child may react by twirling around or falling, show behavioral freezing and a "glazed" stare, be unresponsive, or show other forms of disorganization. (There is also an Adult Attachment Interview Protocol that can be conducted with the parents of a disorganized infant (Main & Morgan, 1996)). Longitudinal studies commencing at birth provide evidence that disorganized attachment predicts dissociative phenomena later in life (Ogawa, Sroufe, Weifield,

Carlson, & Egeland, 1997). This type of attachment seems to be related to the environment (e.g., abandonment, abuse, other trauma in infancy), rather than to biological variables such as temperament (Carlson, 1998). This conclusion is consistent with a finding that pathological dissociation does not have a genetic component (Waller & Ross, 1997), although another study found opposing results (Jang, Paris, Zweig-Frank, & Livesley, 1998).

Childhood and Adolescence

During this period, children begin to socialize more and widen their communication abilities, which greatly expands the scope of dissociation assessment. Most of the evaluation instruments for childhood are behavior checklists answered by parents, teachers, or clinicians. General checklists include the Child Behavior Checklist (CBC; Achenbach & Edelbrock, 1983), which contains a few dissociation items—such as the child appearing to be confused or dazed, getting hurt frequently, and so forth—and the Child Schedule of the Affective Disorders and Schizophrenia (K-SADS; see Ogawa et al., 1997), which also contains some items evaluating dissociation.

Specific and comprehensive instruments developed subsequently evaluate various types of amnesia, abrupt changes or identity confusion, unexplainable injuries, and so on (Fagan & McMahon, 1984; Kluft, 1984; Peterson, 1991; Putnam, Helmers, & Trickett, 1993). Of these lists, the most influential is the 20-item Child Dissociative Checklist (CDC), for preadolescents. Putnam et al. (1993) found that the CDC has good reliability and discriminant validity for children with and without DDs and reported norms for ages 5–16. However, the CDC is not designed to provide specific diagnoses. The validity and reliability of the CDC has been replicated in several studies, including one that suggests that in girls, the DDs are more associated with anxiety, PTSD symptoms, dream and sexual problems, and somatization; in boys, they are more closely related to behavioral problems (Putnam, Hornstein, & Peterson, 1996).

The Children's Perceptual Alteration Scale (C-PAS) is a 28-item adaptation of the PAS. The C-PAS has shown good split-half reliability and high correlations with measures of psychopathology (Evers-Szostak & Sanders, 1992). However, its low correlation with the CDC in one study (Eisen, Qin, Goodman, & Davis, 2002) calls into question its discriminant validity.

The Bellevue Dissociative Disorders Interview for Children (BDDI-C; D. O. Lewis, 1996) can be administered in a semistructured format and probes several areas: states of consciousness, memory, mood, imagination, hearing, visual and sensory experiences, temperament (aggression), discipline, medical conditions, sexual behaviors, references to oneself as a third person, and personal abilities. The interview can be administered in the context of play therapy (Coons, 1996). Another interview has been reported to be in development, the Kiddie Dissociative Disorder Interview (KDD-C; Chaffin, Lawson, Selby, & Wherry, 1997); its psychometric properties have not been reported.

An interesting technique for assessing dissociation in children is to analyze a narrative stimulated by a sentence completion task. It has been used with children 3–5 years and shows convergent validity with the CDC. Certain themes, such as disruptions of memory, perception and identity, and inconsistency of the parents, have been found to be highly correlated with observations of children's dissociative behavior (Macfie, Cicchetti, & Toth, 2001). In a similar vein, D. O. Lewis (1996) recommended evaluating drawings and writing from school or personal diaries.

Silberg (1998) described her test battery for children with possible DDs. It includes the Wechsler intelligence test, the Rorschach, the TAT, a sentence completion test, and drawings. The author suggests several indicators of dissociative processes, such as intrusion of traumatic content, defensive use of fantasy, and dichotomization of wrong and good internal representations. The behavior exhibited by dissociative children during testing includes, among others, amnesia for recent experiences, "trance" states such as maintaining a vacant look, severe and unexplainable fluctuations of behavior, and responses indicating conflicts or internal splitting.

The CDC seems to be the checklist of choice for children. It is the most researched questionnaire at this point and includes a number of items from previous checklists. Besides this indirect form of evaluation, it is important to evaluate the child through all or some of the following: the BDDI, drawings, sentence completion tests, and behavior in a battery of tests.

There are several options to evaluate acute and chronic posttraumatic reactions, including disso-

ciation, among children. The Child Stress Disorders Checklist (Saxe et al., 2003) is a list of 36 ASD and PTSD symptoms, completed by an observer, with good internal consistency and validity. A list exclusively of ASD reactions in children is the Acute Stress Checklist for Children (ASC-K) of Kassam-Adams (the reader can contact Kassam-Adams for a copy of the checklist at nlkaphd@mail.med.upenn.edu). Preliminary analyses show good internal consistency and convergent and predictive validity (Kassam-Adams, personal communication, January 16, 2004).

The evaluation techniques mentioned in the adult section have also been used with adolescents, although often they have not been validated on adolescents. A measure specifically designed for adolescents (12–18 years) is the 30-item Adolescent Dissociative Experiences Scales (A-DES). It has good reliability and validity (Armstrong, Putnam, Carlson, Libero, & Smith, 1997) and yields a one-factor solution, based on a sample of 768 adolescents between 11–16 years of age (Farrington, Waller, Smerden, & Faupel, 2001). The Child/Adolescent Dissociation Checklist (CADC) of Reagor, Kasten, and Morelli (1992), with 17 items for ages 3–18, has several items in common with the CDC.

With respect to acute PTSD and dissociative reactions, a mildly modified version of the SASRQ administered to teens 13–18 years of age after 9/11 showed good reliability and validity (Cardeña, Dennis, Winkel, & Skitka, in press).

Conclusions

The trauma practitioner should expect that besides the "traditional" PTSD symptoms (reexperiencing, avoidance, hyperarousal), a very substantial percentage of clients will also present with dissociative phenomena, which may be just as disruptive as the PTSD symptoms. Often, the client may not immediately mention these phenomena because they may be difficult to describe or the person may be wary of seeming to be "crazy," or, in the case of amnesia, the client may forget the amnesia periods themselves. Thus, it is incumbent on the trauma practitioner to become familiar with the concept and domain of dissociation and to measure its presence among patients, some of whom may not mention it initially. The assessment may be informal or, if possible, supplement the interview with any of the various techniques reviewed earlier. Besides helping establish a diagnosis, another advantage of employing a formal evaluation of dissociation is that the technique used may be repeated later to gauge the progress of the client in therapy. The practitioner should make certain to ask whether the client experiences other alterations besides the ones listed on the technique employed. The practitioner should establish whether the dissociative experiences reported are a normal part of the individual's cultural group and whether they produce dysfunction or suffering, no matter how unusual they may be. Ultimately, the detection of dissociative phenomena will continue to depend first and foremost on informed and sensitive clinical interaction and observation and on a clear understanding of dissociative phenomena.

The presentation of dissociative phenomena varies throughout the lifespan, but, fortunately, a number of reliable and valid techniques for assessing them have been developed. During infancy and the first years of childhood, spontaneous reactions with and without the main caretaker present can be observed. In later years, behavioral checklists such as the CDC provide a good indication of the probability of DDs but should be supplemented by actual interactions with and testing of the child. Although other techniques such as drawings and play and narrative techniques have not been researched as much, they may illuminate the inner life of the dissociative child.

In the case of adults, a number of interviews, questionnaires, and classification of behaviors are available. Considering the robust relationship between traumatic events and acute and chronic dissociative phenomena, the trauma practitioner who neglects to evaluate dissociation does so at the risk of the client. As a noted pioneer of psychopathology remarked, dissociation "is no bizarre phenomenon, but in its mild forms, an almost every-day clinical affair" (Prince, 1906–1907, p. 187).

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