UNUSUAL AND RARE PSYCHOLOGICAL DISORDERS

A Handbook for Clinical Practice and Research

EDITED BY

Brian A. Sharpless

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"It's often the case that we can learn more from exceptions to the established order of things than from generally accepted principles, and this fascinating book proves that old adage once again. With substantial implications for classification and nosology of psychopathology, as well as for clinical practice, readers will be intrigued to learn about Jerusalem syndrome, exploding head syndrome, as well as somewhat more familiar syndromes such as isolated sleep paralysis. The fact that isolated sleep paralysis, to take one example, was misconstrued for so many years as evidence of abduction by aliens should be enough to convince all clinicians and students of psychopathology to become aware of the clinical presentations in this valuable and compelling book."
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MANY FASCINATING DISORDERS are either omitted from current diagnostic systems or rarely covered during graduate/medical training. *Unusual and Rare Psychological Disorders* synthesizes the scientific and clinical literatures for 21 of these lesser-known but important conditions. The coverage is broad, ranging from exploding head syndrome and koro to body integrity identity disorder and persistent genital arousal disorder. Chapters follow a uniform structure and collect not only the historical and research bases for each syndrome, but also provide practical guidance for assessment, differential diagnosis, and treatment. This unique and engaging volume will not only be a useful resource for researchers and clinicians who already possess expertise in the more well-known manifestations of psychopathology, but it will also be of interest to students and trainees in the mental health professions.

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Ataques de Nervios

ROBERTO LEWIS-FERNÁNDEZ AND IRENE LÓPEZ ■

CLINICAL VIGNETTES

A 33-year-old Puerto Rican woman born in the United States is brought to an emergency room following a suicide attempt. She found out that day that her fiancé was murdered in a drug-related incident in Puerto Rico. Upon hearing the news, she brooded for several hours. Then, suddenly, she cried out and attempted to drink a bottle of bleach. When her brother knocked the bottle away, she fell to the ground, shaking, screaming, and crying. She recalled nothing that happened after she first cried out. Prior to the incident she had no previous psychiatric history (Lewis-Fernández, 2014).

A 35-year-old divorced Dominican woman was evaluated for facial pain. A week before, she learned that her ex-husband had remarried in the Dominican Republic. During the next few days, she became increasingly agitated and developed insomnia and anorexia. During her evaluation, she started screaming and alternated between being mute and mumbling unintelligibly in both Spanish and English. She was admitted to the inpatient psychiatric unit where, at one point, she ate plastic flowers from a vase and reported hearing her daughter's voice telling her to kill herself (Oquendo, Horwath, & Martínez, 1992).

What do these cases have in common? In each instance an ataque de nervios, *or "attack of nerves," had occurred following intense familial stress. Each episode, however, was precipitated by a distinct type of stressor. Further, their association with psychopathology also differs. In this chapter, we discuss this cultural concept of distress common among Latinos and show how, depending on the context, its relationship with psychopathology can vary, ranging from a normative response to stress to a marker of severe psychopathology. First, we provide an overview of the historical and cultural context in which ataque has been described, review its role in current diagnostic systems, and discuss its symptomatology and epidemiology. We end by reviewing the various means available to assess and treat ataque and by providing recommendations for future research.*

HISTORICAL AND CULTURAL CONTEXT

Studied for over half a century, *ataque de nervios* is one of the best-assessed cultural concepts of distress. It first appeared in the U.S. mental health literature in the 1950s, reported by U.S. military psychiatrists stationed in Puerto Rico. Initially identified by the problematic label of "Puerto Rican Syndrome," episodes of ataques were described as "spectacular" and "bizarre" "seizures" that occurred among recently inducted male recruits in response to the stressors associated with weapons training and combat courses (Fernández-Marina, 1961; Mehlman, 1961; Rothenberg, 1964; Rubio, Urdaneta, & Doyle, 1955). A gamut of reactions was associated with the "Puerto Rican Syndrome" label, including a partial loss of consciousness, convulsions, sudden verbal and physical outbursts, crying, and "pseudo-suicidal" attempts (see Table 17.1). In keeping with the psychoanalytic theory of the time, these investigators attributed ataques to specific indigenous child-rearing practices that allegedly predisposed sufferers to the hysterical discharge of aggressive drives. The power relationships embodied in the military, and the colonial situation represented by the presence of the U.S. armed forces in Puerto Rico, usually were left unanalyzed in these discussions.

Work since the 1970s by Latino mental health professionals and medical anthropologists working in Latino communities began to apply a sociocultural (in addition to a clinical) perspective to understanding ataques (Abad & Boyce, 1979; De La Cancela, Guarnaccia, & Carrillo, 1986; Guarnaccia, De La Cancela, & Carrillo, 1989; Lewis-Fernández, 1998; Lewis-Fernández & Aggarwal, 2015). Latino mental health professionals argued that ataque was a culturally recognized and sanctioned expression of strong emotion that should be understood as a form of communication about family relationships. Women's manifestations of ataques, in particular, were seen as a means of protesting the effects of economic disenfranchisement and male domination on their own and their relatives' lives. This indirect and relatively accepted form of resistance substituted for more direct and challenging types of protest.

Recent research has examined the relationship of ataque to psychiatric disorders and the epidemiology of ataque in Puerto Rico and the United States (Guarnaccia, 1993; Guarnaccia et al., 2009; Interian et al., 2005; Lewis-Fernández, Guarnaccia et al., 2002; López, Ramírez, Guarnaccia, Canino, & Bird, 2011; López et al., 2009). It also has situated ataque in relation to other cultural concepts of distress common among Latinos, such as *nervios* (Guarnaccia, Lewis-Fernández, & Rivera Marano, 2003; Guarnaccia, Rivera, Franco, & Neighbors, 1996; Lewis-Fernández et al., 2010) and described the relationship among ataque, traumatic exposure, dissociative capacity, and anxiety sensitivity (Cintrón, Carter, & Sbrocco, 2005; Hinton, Chong, Pollack, Barlow, & McNally, 2008; Lewis-Fernández, Garrido-Castillo et al., 2002; Lewis-Fernández et al., 2010). Ataque is now understood as a form of communication—an *idiom of distress*—regarding a person's reaction to adversity. It relies on dissociative and somatic expressions that are patterned by cultural understandings of what constitutes appropriate or transgressive emotions

Table 17.1. ATTEMPTS AT CATEGORIZING THE SYMPTOMS OF *ATAQUE DE NERVIOS*

Reference	Symptoms
Rubio et al. (1955)	**Presentation Occurs in One of Five Reactions:** *1.* **Reaction #1:** (15.3%): Partial loss of consciousness, convulsions, hyperventilation, moaning, profuse salivation, aggression to self or others (e.g., biting, scratching) *2.* **Reaction #2:** (24.8%): Sudden outbursts of verbal and physical hostility, with destructiveness and assaultiveness, expression of persecutory trends, hyperactivity *3.* **Reaction #3:** (11.4%): Infantile emotionality and behavior. Sobbing and crying, dependency on others *4.* **Reaction #4:** (9.4%): Pseudosuicidal attempts (superficial scratches on wrists, forearm, and chest by razor blades, pens, and pins; ingestion of rat poison or disinfectants; attempted hangings) *5.* **Reaction #5:** (39.1%): Mild dissociation, inability to concentrate, forgetfulness, loss of interest in personal appearance, preoccupation, flat affect.
Mehlman (1961)	Extreme fright, agitation, violence, mutism, pseudoepilepsy, bizarre detached uncommunicative violent attitudes, self-mutilation, psychotic behaviors (including coprophagia and catatonic posturing), foaming at the mouth, with subsequent amnesia and confusion.
Guarnaccia, Rubio-Stipec, & Canino (1989)	Chest pain, temporary blindness, paralysis, fainting, unconsciousness, unusual spells, shortness of breath, rapid and pronounced heart beat, dizziness, weakness, sickly for most of life, crying spells, shouting uncontrollably, trembling, becoming physically and verbally aggressive
Guarnaccia et al. (1996)	**Affective dimension:** Screaming, crying, anxiety, depression, fear, anguish, anger **Bodily sensations:** Trembling, palpitations, dyspnea, chest pain, chills, headache, aphonia, upset stomach, fatigue, weakness, hypoesthesia in parts of the body, sweaty hands, convulsions, seizures **Action dimension:** Aggression toward self, wanting to die, suicide attempts, suicidal ideation; aggression toward others or things; inability to eat or sleep **Alterations in consciousness:** fainting, loss of consciousness, dizziness, sense of going crazy, amnesia, hallucinations, many thoughts or memories
Febo San Miguel et al. (2006)	**Externalizing:** Feeling angry, crying, screaming, falls/convulsions, aggression, breaking things, suicidal thoughts, fainting, losing consciousness, amnesia **Internalizing:** Nervous, frightened, trembling, pronounced and rapid heart beat, headache, suffocation, dyspnea, afraid of going crazy, dizziness
Lewis-Fernández, Guarnaccia, & Ruiz (2009)	*1.* Exposure to a frequently sudden, stressful stimulus, typically eliciting feelings of fear, grief, or anger, and involving a person close to the subject, such as a spouse, child, family member, or friend. Severity of the trigger ranges from mild–moderate (i.e., marital argument, disclosure of migration plans) to extreme (i.e., physical or sexual abuse, acute bereavement). *2.* Initiation of the episode immediately upon exposure to the stimulus, or after a period of brooding or emotional "shock." *3.* Once the acute attack begins, rapid evolution of an intense affective storm characterized by a primary affect usually congruent with the stimulus (such as anger, fear, grief) and a sense of loss of control (*emotional expressions*). *4.* These are accompanied by all, or some, of the following: *a. bodily sensations*: trembling, chest tightness, headache, difficulty breathing, heart palpitations, heat in the chest, paresthesias of diverse location, difficulty moving limbs, fainting, blurred vision, or dizziness (*mareos*). *b.* behaviors (*action dimension*): shouting, crying, swearing, moaning, breaking objects, striking out at others or at self, attempting to harm self with nearest implement, falling to the ground, shaking with convulsive movements, or lying "as if dead." *5.* Cessation may be abrupt or gradual, but it is usually rapid, and often results from the ministration of others, involving expressions of concern, prayers, or use of rubbing alcohol (*alcoholado*). There is return of ordinary consciousness and reported exhaustion. *6.* The attack is frequently followed by partial or total amnesia for the events of the episode, as well as descriptions of the following for the acute attack: loss of consciousness, depersonalization, mind going blank, and/or general unawareness of surroundings (*alterations in consciousness*). Some ataques, however, exhibit no alterations in consciousness.
DSM-IV (APA, 1994) and DSM-5 (APA, 2013)	Symptoms of intense emotional upset, including acute anxiety, anger or grief, screaming and shouting uncontrollably; attacks of crying, trembling, heat in the chest rising into the head; and becoming verbally and physically aggressive. Dissociative experiences (e.g., depersonalization, derealization, amnesia), seizure-like or fainting episodes, and suicidal gestures are prominent in some *ataques* but absent in others.

and behaviors in Latino communities (Guarnaccia et al., 1996; Lewis-Fernández, 1998; Lewis-Fernández & Aggarwal, 2015).

ROLE IN CURRENT DIAGNOSTIC SYSTEMS

Ataque was first included in the mental health nosology in the *Diagnostic and Statistical Manual of Mental Disorders – Fourth edition* (DSM-IV) Glossary of Culture-Bound Syndromes (American Psychiatric Association [APA], 1994). *Culture-bound syndromes* were defined at the time as recurring patterns of distressing behaviors that were thought to be prevalent in and "bound" to particular localities, and which were not necessarily equivalent to any single diagnostic entity. Ataque was described as a cluster of symptoms centered on a sense of loss of control that was common among Caribbean Latinos (APA, 1994). In DSM-5, the concept of *culture-bound syndrome* was substituted by that of *cultural concept of distress*, which highlights the fact that different types of cultural concepts exist—not only syndromes, but also idioms of distress and explanations—and which emphasizes the cultural patterning of *all* expressions of distress, including the DSM categories (APA, 2013).

Although DSM-IV noted the potential association of ataque with several diagnoses, including anxiety, mood, dissociative, and somatoform disorders, it did not clarify how the cultural concept and the diagnoses were related or how the cultural concepts could be used in clinical practice. Moreover, listing the "culture-bound syndromes" in a separate appendix at the back of the book hindered their clinical use (Lewis-Fernández, Guarnaccia, & Ruíz, 2009; López & Ho, 2013). DSM-5 clarified some of these points, noting that cultural concepts represent ways of expressing distress that do not have a one-to-one correspondence with any diagnostic entity; the correspondence is more likely to be one-to-many in either direction:

> *[S]ymptoms or behaviors that might be sorted by DSM-5 into several disorders may be included in a single folk concept, and diverse presentations that might be classified by DSM-5 as variants of a single disorder may be sorted into distinct concepts by an indigenous diagnostic system* (APA, 2013, p.758).

The folk label (e.g., ataque) contributes important information over and above the psychiatric diagnosis, by clarifying symptoms and etiological attributions that could otherwise be confusing and that may, in fact, guide a patient's treatment expectations. Therefore, these cultural expressions should be included in case formulations. Moreover, cultural concepts sometimes apply to a wider range of experiences than diagnoses in terms of severity. This includes presentations that do not meet DSM criteria for any mental disorder. For example, some ataques constitute normative expression of nonpathological distress (e.g., when they occur at funerals), whereas others may be associated with one or more diagnoses.

The DSM-5 entry for ataque lists psychiatric disorders that share phenomenological similarities with this cultural concept of distress (APA, 2013). These include anxiety (e.g., panic, other specified), somatic symptom (e.g., conversion), stressor and trauma-related (other specified) dissociative (other specified), and/or disruptive and impulse control disorders (e.g., intermittent explosive disorder). This list does not include conditions with which ataque is often comorbid, such as major depression and generalized anxiety disorder, but which do not share its paroxysmal character.

Presently, ataque is not included in the 10th edition of the *International Classification of Diseases and Related Health Problems* (ICD-10; World Health Organization [WHO], 1992), nor is it recommended for inclusion in ICD-11. This is primarily due to concerns about its diagnostic criteria. Ataque is, however, a very common syndrome in Latin America and the Caribbean (Razzouk, Nogueira, & de Jesus Mari, 2011).

Ataques are mentioned in the third edition of the *Glosario Cubano de Psiquiatría* (*Cuban Glossary of Psychiatry*; GC-3), which is an adaptation of the ICD-10 (Otero Ojeda et al., 2008; WHO, 1992). In GC-3, ataque is listed (without a specific code) under the dissociative and conversion disorders. It also is mentioned in a section titled, *Syndromes of Difficult Location* under the broader category of *nervios*, another cultural concept of distress. In GC-3, the clinician is cautioned that in certain contexts ataques are culturally normative, although there is passing reference to their association with mood, neurotic, and personality disorders.

In contrast, ataque is included more extensively in the *Guía Latinoamericana de Diagnóstico Psiquiátrico-Versión Revisada* (*Latin American Guide to Psychiatric Diagnosis – Revised Version*; GLADP-VR), the Latin American regional adaption of ICD-10 (APAL, 2012; Saavedra, Mezzich, Otero, & Salloum, 2012). As in GC-3, in GLADP-VR ataque is coded under the dissociative and conversion disorders, but it is also listed separately under a section titled, *Cultural Syndromes Specifically for Latin Americans*. There, ataque is described in some detail and receives its own classification code (F48.8 *Ataques de Nervios*: Puerto Rico). Thus, although ataque is included in DSM-5, GC-3, and GLADP-VR, the manuals vary as to how much the clinician is informed that ataque may represent a nonpathological expression of distress and about the range of disorders with which it shares phenomenological similarities.

SYMPTOMATOLOGY

An *ataque de nervios* is an emotional and behavioral paroxysm that is typically understood to arise directly from the impact on the person's nervous system (*nervios*) as a result of an overwhelming experience—often but not always of traumatic proportions—that causes the person to lose control over his/her emotions and behaviors. The exact symptoms of the emotional fit (Trautman, 1961) may differ from person to person and the primary emotion may be loss, grief, anger, or fear (Lewis-Fernández et al., 2009). In a representative community sample

in Puerto Rico, the most common symptoms of a person's first ataque ($N = 77$) were: nervousness (90%), crying (88%), trembling (77%), palpitations (75%), chest tightness (75%), headache (70%), becoming "hysterical" (69%), fear (65%), losing control (64%), and shortness of breath (61%) (Guarnaccia et al., 1996). More infrequent symptoms, such as suicidal ideation, may indicate greater severity: About 7%–14% of ataques result in suicide attempts during the acute stage of an episode (Guarnaccia et al., 1996; 2009). Although some ataques are similar to panic attacks, careful phenomenological dissection indicated that only 36% fulfilled DSM-IV-TR criteria for panic attack and 17% for panic disorder (Lewis-Fernández, Guarnaccia et al., 2002).

Attempts to categorize the symptoms of ataque are listed in Table 17.1. Qualitative research in Puerto Rico organized ataque along four dimensions—emotional symptoms, bodily symptoms, aggressive symptoms, and alterations in consciousness—all centered on the overarching feeling of losing control (Guarnaccia et al., 1996). Later research grouped ataque symptoms into two nonorthogonal factors that were believed to overlap with internalizing and externalizing disorders (Febo San Miguel et al., 2006). In a clinical sample, two main subtypes of ataque were proposed which were associated with specific symptom profiles. Patients whose ataques were characterized by intense fearfulness, asphyxia, and chest tightness were more likely to receive diagnoses of panic disorder, whereas patients whose ataques were dominated by anger and aggressive behaviors (e.g., breaking things) were more likely to meet criteria for co-occurring mood disorders (Salmán et al., 1998). Ataques, however, should only be considered pathological if symptoms produce long-lasting distress or functional impairment.

PREVALENCE AND ASSOCIATED FEATURES

Ataques occur throughout the lifespan, from early childhood (López et al., 2009), to adolescence (Zayas & Gulbas, 2012), to middle age and beyond (Weingartner, Robison, Fogel, & Gruman, 2002). Demographically, both adults and children have risk factors typically associated with psychopathology. Among adults, ataque was found to be more common in women over the age of 45, with less than a high school education, who were formerly married (i.e., divorced, widowed, or separated) and were out of the labor force (Guarnaccia, Canino, Stipec, & Bravo, 1993; Guarnaccia et al., 2009). Among children, ataque is generally more common in girls, older youth (Guarnaccia, Martinez, Ramírez, & Canino, 2005; López et al., 2009), and children who perceive themselves to be poor (Guarnaccia et al., 2005).

The prevalence of ataque varies depending on the characteristics of the sample and the time frame assessed (Table 17.2). In a representative community sample in Puerto Rico, 16% of respondents reported at least one ataque during their lifetime, making it one of the most frequently reported syndromes on the Island (Guarnaccia et al., 1993). Epidemiological research in the United States indicates a lifetime prevalence of 5%–11% among adult Latinos, with the highest rate among Puerto Ricans (Guarnaccia et al., 2009). Prevalence is substantially higher

in clinical samples, with lifetime estimates of 26%–55% (Alcántara, Abelson, & Gone, 2011; Lewis-Fernández, Guarnaccia, Patel, Lizardi, & Díaz, 2005; Weingartner et al., 2002). Among respondents in a clinic with a high proportion of anxiety disorder patients, 66% of Puerto Ricans and Dominicans reported at least one ataque in the last month (Hinton, Lewis-Fernández, & Pollack, 2009).

In children, prevalence in clinical samples is likewise higher than in representative community samples. Over 25% of children in a representative mental health sample in Puerto Rico reported at least one ataque during their lifetime compared with 9% of a representative community sample (Guarnaccia et al., 2005). Representative samples of Puerto Rican children in San Juan and the South Bronx revealed lower lifetime prevalence rates (5.4% and 4.3%, respectively), although ataque remained one of the most-reported mental health syndromes in the study (López et al., 2009).

The frequency of ataque in community samples ranges considerably. In one study, 28% of adult sufferers had only one ataque in their lifetime, while 13% had two, 21% had three to five, and 23% had six or more; meanwhile 15% were unsure (Lewis-Fernández et al., 2005). The frequency of ataque in clinical samples has also varied greatly (Hinton et al., 2008; Lewis-Fernández, Garrido-Castillo et al., 2002). Among Puerto Rican children with ataque in San Juan and the South Bronx, 61% and 57%, respectively, had one to three episodes in the last year (López et al., 2009). Ataque frequency can be considered a marker of ataque severity and is correlated with anxiety sensitivity and the capacity to dissociate (Hinton et al., 2008; Lewis-Fernández, Garrido-Castillo et al., 2002).

In terms of onset, ataques typically occur immediately after, or within a day of, a stressor: 65%–90% of individuals report having an ataque following a stressful event (Cintrón et al., 2005; Lewis-Fernández, Guarnaccia et al., 2002; Rubens, Felix, Vernberg, & Canino, 2014). Ataques are usually brief; about 33%–67% last less than an hour (Cintrón et al., 2005; Lewis-Fernández, Guarnaccia et al., 2002).

Cessation of an *ataque* can be gradual or abrupt, with sufferers typically reporting amnesia and exhaustion following the experience (Guarnaccia et al., 1996). However, 54%–58% indicated that they felt better and relieved after an episode (Lewis-Fernández, Guarnaccia et al., 2002), in part because they were able to express how they felt (e.g., saying, "*me desahogué*" or "I let it out"). Individuals who reported feeling better following an episode were also less likely to endorse panic disorder symptoms than those who expressed fear after the ataque (Lewis-Fernández, Guarnaccia et al., 2002). Sufferers tended to return to their premorbid level of functioning fairly quickly, usually within moments or days after the attack (Guarnaccia et al., 1996; 2003).

Despite being brief, ataque often is associated with certain long-term consequences. Compared with individuals without ataque, sufferers had higher odds of reporting multiple unexplained neurological symptoms (Interian et al., 2005), of describing their health as only fair or poor (Dienfach, Robison, Tolin, & Blank, 2003; Guarnaccia et al., 1993), and of reporting mental health-related disability and the use of outpatient mental health care (Lewis-Fernández et al., 2009). Similarly, children with ataque were more limited in their activities and reported

Table 17.2. PREVALENCE OF *ATAQUE DE NERVIOS*

Reference	Sample	N	Site	Age	Ethnicity	Prevalence
Guarnaccia, Rubio-Stipec, & Canino (1989)	Representative Community	1,513	Puerto Rico	Over 17 years	Puerto Rican	23%
Guarnaccia et al. (1993)	Representative Community	912	Puerto Rico	Over 17 years	Puerto Rican	16%
Weingartner et al. (2002)	Clinical	303	Northeastern United States	Over 17 years	Puerto Rican	26%
Lewis-Fernández, Garrido-Castillo et al. (2002)	Clinical	37	Northeastern United States	Over 17 years	Puerto Rican	43.2%
Lewis-Fernández et al. (2005)	Consecutive Clinical	186	Puerto Rico & Northeastern United States	Over 17 years	89 Island Puerto Rican 97 Mainland Puerto Rican	55.1% Island 51.5% Mainland
Guarnaccia et al. (2005)	Representative Community & Clinical	2,653	Puerto Rico	4–17 years	1,897 Community: Puerto Rican 767 Clinical: Puerto Rican	9% community 26% clinical
Hinton et al. (2008)	Clinical	70	Lowell, MA	Over 17 years	Puerto Rican	66% had 1 + *ataque* in last month
Hinton et al. (2009)	Clinical	140	Lowell, MA	Over 17 years	119 Puerto Rican 21 Dominican	66% had 1 + *ataque* in last month
López et al. (2009)	Representative Community	2,491	San Juan, Puerto Rico & the South Bronx, NY	5–13 years	1,353 Island Puerto Rican 1,138 Mainland Puerto Rican	5.4% in San Juan 4.3% in South Bronx
Guarnaccia et al. (2009)	Representative Community	2,554	Coterminous United States	Over 17 years	868 Mexican 577 Cuban 495 Puerto Rican 614 Other Latino	10.9% Puerto Rican 6.2% Cuban 6.0% Mexican 5.4% Other Latino
Alcántara et al. (2011)	Community	82	Midwestern United States	Over 17 years	Mexican American	41.5%

NOTE: All prevalence rates are lifetime unless otherwise noted. Presence of *ataque* was assessed differently across studies. Methods ranged from asking participants whether they had ever had an ataque to meeting a pre-established cutoff out of a list of symptoms.

more somatic concerns than those without ataque. In particular, they were more likely to report asthma, headaches, or epilepsy/seizures, and had more stomachaches than their peers (López et al., 2011).

THEORIES OF ETIOLOGY

What causes ataque? Early psychoanalytic explanations postulated that ataques were due to an overpowering id and overwhelmed ego (Mehlman, 1961). The explosive nature of the episode was thought to result from excessive physical contact—either because of cramped quarters or because of excessive handling and fondling during childhood. This was believed to have led to libidinal overarousal (Fernández-Marina, 1961; Rothenberg, 1964). In this view, delayed weaning through extended bottle-feeding and use of pacifiers further reduced a child's ability to tolerate frustration (Rothenberg, 1964). The low frustration tolerance, along with heightened sensitivity, eventually led to an ataque.

During the 1970s and 1980s, ataque was examined as a culturally acceptable form of expressing distress (Guarnaccia, De La Cancela, & Carrillo, 1989). Given the centrality of family to many Latinos, disruptions in familial bonds—such as separation, divorce, an argument, or witnessing an accident involving a family member—were identified as precipitants of ataque (Guarnaccia et al., 1993; López & Ho, 2013). In fact, among Puerto Rican children in New York City, ataque was associated with a higher number of stressful life events, including incidents related to family conflict (López et al., 2009).

Other precipitants have been investigated. Natural disasters, such as hurricanes and mudslides, are reliable correlates of ataque (Guarnaccia et al., 1993). Research indicated, however, that exposure to these events, in the context of elevated exposure to other stressors, such as peer violence, did *not* add a statistically significant additional risk for ataque in community samples (Rubens et al., 2014). Violence, particularly in childhood, may thus play a key role in the occurrence of ataque. This is further substantiated by research indicating that children with ataque reported a greater exposure to violence than those without ataque (López et al., 2009).

It is still unclear, however, what role childhood trauma, in particular, may have in predisposing one to ataque. Whereas one study in a clinical sample noted an association between childhood trauma and ataque (Schecter et al., 2000), another did not find this association, in part because of the high level of exposure to trauma across cohorts with and without ataque (Lewis-Fernández, Garrido-Castillo et al., 2002). Trauma may be a necessary but not a sufficient precondition for the occurrence of ataque. Trauma, in turn, may increase anxiety sensitivity and/or dissociative capacity, which are associated with ataque occurrence and severity (Hinton et al., 2008; Lewis-Fernández, Garrido-Castillo et al., 2002).

Although stressors such as these have been implicated in precipitating ataques, other studies have shown that many sufferers do not, or cannot always, identify a precipitating event, suggesting that ataque also may be the result of accumulated

suffering rather than one specific event (Cintrón et al., 2005; Lewis-Fernández, Guarnaccia et al., 2002). A multifactorial model is, therefore, needed to explain the occurrence and frequency of ataques and to contextualize the suffering that is associated with them (De La Cancela et al., 1986).

ASSESSMENT

Ataque has been assessed in various ways. To identify ataque sufferers, scales have been developed by combining items from earlier questionnaires, such as the somatization section of the *Diagnostic Interview Schedule* (Guarnaccia, Rubio-Stipec, & Canino, 1989) and the somatoform section of the *Composite International Diagnostic Interview* (CIDI; Interian et al., 2005). These proxy measures usually were developed for secondary analyses of existing datasets and relied on phenomenological similarities between the items and ethnographic descriptions of ataque. Respondents were scored as positive if they met a symptom cutoff score and had some degree of impairment.

A second wave of epidemiological research incorporated queries about ataque into new data collection efforts, often based on a single question that asked respondents whether they had "ever had an *ataque de nervios*" (Guarnaccia et al., 1993) or on a full CIDI module based on a symptom list derived from epidemiological and clinical research (Guarnaccia et al., 2010). Despite inherent methodological limitations, the single-question approach—sometimes combined with a few additional questions such as "How many *ataques* have you had in your life?"—has been very fruitful (Alcántara et al., 2011; Guarnaccia et al., 1993; Hinton et al., 2008; 2009; Lewis-Fernández et al., 2010; López et al., 2009; Weingartner et al., 2002). Although recall bias is a concern, Latinos tend to know what ataque refers to when asked. For example, when Hispanic American immigrants living in Spain were presented with hypothetical vignettes of individuals experiencing distress based on the DSM-IV description of ataque, they were more likely to identify these cases correctly than were Spanish nationals (Durá-Vila & Hodes, 2012). Recent ataque scales collapsed symptoms into internalizing and externalizing clusters based on epidemiological research. (Febo San Miguel et al., 2006). These clusters were reliable (Cronbach's $\alpha = .83$ and .77, respectively) and moderately correlated ($r = .49$). To date, however, these scales have not been used to screen for ataque, nor have cutoffs been established.

Clinical research in the mid-1990s prepared in-depth clinician-administered interviews based on the ethnographic research that led to the ataque description in DSM-IV. *The Explanatory Model Interview Catalogue* gathered information about the first and a subsequent episode of ataque, apparent precipitants, and family history of the cultural concept (Guarnaccia et al., 1996; Lewis-Fernández, Garrido-Castillo et al., 2002; Lewis-Fernández, Guarnaccia et al., 2002). These interviews were used to characterize the ataque episodes in substantial detail, including comparing them to psychiatric disorders.

DIFFERENTIAL DIAGNOSIS

Not all episodes of ataque are associated with psychopathology (Guarnaccia et al., 1993). Ataque is comorbid, however, with a range of psychological disorders among youth and adults, including mood, anxiety, dissociative, somatoform, stressor and trauma-related, and disruptive disorders (Guarnaccia et al., 1993; 2005; Lewis-Fernández, Garrido-Castillo et al., 2002; Liebowitz et al., 1994; López et al., 2009). But what distinguishes ataque from these disorders?

First, it is important to note that ataque does not correlate exclusively with one particular psychiatric diagnosis and cannot be treated as simply a culturally shaped version of a specific psychiatric disorder. Instead, ataque is a marker of being overwhelmed by adversity, which can be associated with a range of disorders. Second, it is important to distinguish between syndromes that share phenomenological features with ataque—such as transient, ego-dystonic, emotional paroxysms (e.g., panic attacks)—and disorders that are comorbid with ataque. The latter are longer lasting conditions that co-occur with ataque (e.g., mood disorders). Their comorbidity may be due to shared risk factors, or to one condition predisposing to the other—the temporal sequence of their onsets remains to be elucidated (Lewis-Fernández, Guarnaccia et al., 2002). In fact, the comorbidity of ataque is extensive. Among adults in Puerto Rico, ataque sufferers had 4.35 times the odds of meeting criteria for a psychiatric diagnosis compared with those without the cultural syndrome (Guarnaccia et al., 1993). Likewise, Island children with ataques had 4.3 times the odds of any psychiatric disorder when assessed in community settings and 2.3 times the odds in a clinical setting (Guarnaccia et al., 2005).

In terms of paroxysmal conditions resembling ataque, a given ataque episode may meet criteria for one or more of these conditions because of their phenomenological similarities. For example, an ataque may fulfill criteria for panic attack or for acute dissociative reaction (a subtype of other specified dissociative disorder) depending on its symptoms. Both the folk and professional labels should be used in diagnosis and treatment planning, because each contributes useful information. The similarities and differences among ataque and panic attacks and panic disorder have been extensively studied (Lewis-Fernández, Guarnaccia et al., 2002). In epidemiological studies in Puerto Rico, adults and children with ataque had 25–30 times the odds of meeting criteria for panic disorder compared with respondents without ataque (Guarnaccia et al., 1993; 2005). These elevated odds ratios are due to the very low prevalence of panic disorder among respondents who did not report ataque (e.g., 0.4% of adults). This finding indicates that it is rare to find panic disorder in Puerto Rico among community residents who do not identify as suffering from ataque (Lewis-Fernández et al., 2005).

However, the converse is not true; in Puerto Rico only 9% of community-based adults with ataque met criteria for panic disorder (Guarnaccia et al., 1993). Likewise, in clinical samples, most ataque sufferers did not meet criteria for panic disorder (Salmán et al., 1998; Lewis-Fernández, Guarnaccia et al., 2002). Among

66 ataque sufferers attending an anxiety disorders clinic in New York, only 44% reported that their best-remembered ataques met the 10-minute crescendo required by DSM-IV for panic attacks, and only 26% of these ataques were uncued by precipitants; for 65% of respondents, all of their ataques over their lifetime had been cued. Unlike most panic attacks, after an ataque individuals report feeling relief, and may only experience limited avoidance or anticipatory dread (Cintrón et al., 2005). One study, however, found that 80% of best-remembered ataques met DSM-IV criteria for at least one post-episode sequela, such as behavior change related to the attacks (Lewis-Fernández, Guarnaccia et al., 2002). Ataques are also more likely during the day, as opposed to nocturnal panic attacks, and to occur in the company of others.

Two other kinds of paroxysmal conditions share phenomenological similarities with ataque: acute dissociative experiences—such as those receiving a DSM-5 diagnosis of other specified dissociative disorder (APA, 2013)—and sudden suicidal episodes (Trautman, 1961). Severity of ataques, assessed as lifetime number of episodes, is positively and independently related to self-reported dissociative symptoms as measured with the *Dissociative Experiences Scale*, and to clinician-diagnosed dissociative disorders as assessed with the *Structured Clinical Interview for DSM-IV* (Hinton et al., 2008; Lewis-Fernández, Garrido-Castillo et al., 2002; Lewis-Fernández et al., 2010). Regarding suicide, in a nationally representative community sample of diverse U.S. Latino subethnicities (N = 2,554), lifetime history of ataque was independently associated with suicidal ideation (OR = 2.4) after adjusting for multiple covariates. This suggested that the cultural syndrome conveys additional risk beyond recognized risk factors such as psychiatric diagnosis and traumatic exposure (Lewis-Fernández et al., 2009). During ataque episodes, sufferers may make goal-directed or ill-formed attempts at self-harm, increasing the morbidity (and occasional mortality) of the syndrome.

TREATMENT

There is no systematic research on the treatment of ataque. Several case studies have focused on reducing the patient's general level of distress and on establishing trust and rapport rather than on treating the ataque per se (Lewis-Fernández, 1996; Lizardi, Oquendo, & Graves, 2009; Schechter, Kaminer, Grienenberger, & Amat, 2003). One study detailed the assessment and treatment of a parent-child dyad in which the mother was positive for ataque (Schechter et al., 2003). Information regarding the mother's ataque precipitants—and her illness attributions—was used to strengthen the parent-child bond via guided play therapy.

General treatment principles may be useful in caring for a person with ataques. Because intolerance of negative affect and arousal symptoms are associated with anxiety severity, clinicians may help sufferers to tolerate these experiences (Hinton et al., 2009). Practices that reduce arousal, such as meditation and breathing exercises (Hinton et al., 2009), may help prevent or reduce future episodes.

One study showed how progressive muscle relaxation, together with cognitive coping and grounding exercises, helped a client manage her ataques (Sánchez & Shellcross, 2012).

At a minimum, clinicians need to ensure the safety of the sufferer during an ataque. Providing support and acknowledging the overwhelming nature of the experience are both vital in helping someone who has experienced an ataque. Culturally sanctioned ways of doing so include the use of rubbing alcohol (Lewis-Fernández et al., 2009) or a tincture of alcohol and herb-infused distilled water known as *agua de florida* (floral water), which not only rallies community support but also likely responds to hidden etiological explanations related to hot-cold concepts of disease—the applied liquids cool the nervous system (Harwood, 1971). In addition, clinicians can support the person's own efforts to return to a state of *control* and *tranquilidad* (equanimity), helping him/her regain a sense of homeostasis after the episode (Lewis-Fernández, 2008; Lewis-Fernández & Aggarwal, 2015). If the ataques are associated with impairment, longer-term treatment could focus on helping clients learn to identify the triggers that precipitate an ataque and to express their emotions in a less explosive manner.

Key to all recommendations is the need for a collaborative treatment approach. It is important for clinicians to understand how the patient views the problem and to use this information to help guide the therapeutic approach (Hinton et al., 2008; Lewis-Fernández, Guarnaccia et al., 2002; Lizardi et al., 2009). The use of standardized cultural assessments, such as the *DSM-5 Cultural Formulation Interview*, could be useful in this regard (Lewis-Fernández et al., 2016). Obtaining a family history could be informative, given that 37.2% and 46.4% of children in community and clinical samples, respectively, have a family history of ataque (Guarnaccia et al., 2005). Integrating family genograms into treatment may help.

Finally, some clients may not view their ataque as a problem. Instead, they may focus primarily on the precipitating stressors rather than the episode itself. This is suggested by data showing that only about one third of community respondents seek help for the ataques themselves (Cintrón et al., 2005). Future work should investigate forms of healing that address the larger structural issues associated with the ataque (De La Cancela et al., 1986). Feminist therapy, for example, may be particularly useful because of its emphasis on social action and empowerment (Rivera-Arzola & Ramos-Grenier, 1997).

RECOMMENDATIONS FOR FUTURE WORK

Many questions remain regarding ataque de nervios. Although there is now substantial information on its prevalence and psychiatric and demographic correlates, we know much less about etiology, predictors, and developmental course. Although stressful life events, such as some forms of traumatic exposure, appear necessary to the emergence of ataques, these are not sufficient, given that a fair

proportion of exposed individuals do not develop ataques. It remains unclear what factors lead to the emergence of the cultural syndrome once the person is exposed to trauma. A multifactorial model of ataque onset must include elements such as gender roles, poverty, anxiety sensitivity, dissociative capacity, family modeling of similar behaviors, and specific cultural understandings of the value of remaining in emotional control, to name a few, which combine to place sufferers at risk of ataque. For example, how do cultural understandings, such as gender roles, get translated into physical symptoms in culturally specific ways?

Further work is needed on potential mechanisms of action that would account for the impact of these predisposing elements. In particular, what distinguishes those who are exposed to stress, and develop ataques, as opposed to those who are exposed but do not develop ataques? If stress is key to the occurrence of an ataque, do the types of stressors differ for men and women? What is the impact of temperamental traits, such as impulsivity, on the risk of ataque and the specific phenomenology of the condition? Additionally, if early trauma can disrupt neural circuitry, what role does culture play in the expression of this dysregulation? How does an inborn or very early capacity for dissociation combine with other risk factors to give rise to highly dissociative episodes? Are there cultural understandings of the self and of how strong emotions should be managed that predispose persons to highly dissociative ataques?

What are the developmental stages of risk that individuals go through? Are there cohort effects—possibly related to evolving cultural characteristics of the society as a whole—that distribute risk unevenly across age cohorts? Are recent generations at a different level of risk than older ones? What social cues predispose to its emergence? For example, what would be the impact of migration into different cultural settings, such as Spain as compared to the United States, on the risk of ataque? Future research also should continue to assess the relation between ataque and other conditions, such as fit-like noninjurious suicidal behavior (Guarnaccia et al., 2009; Trautman, 1961; Zayas & Gulbas, 2010).

Finally, given the risk of recall bias with retrospective studies, it is vital to assess ataques prospectively. Longitudinal research would help clarify the role of specific risk factors and developmental stages. Such study designs would also provide information on how ataques may change over the course of one's life. Prospective designs also allow for systematic treatment studies, which are currently nonexistent. In sum, the study of ataque has progressed rapidly since the mid-20th century, but much remains to be known about this cultural concept of distress.

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