Research on Culture-Bound Syndromes: New Directions

Peter J. Guarnaccia, Ph.D., and Lloyd H. Rogler, Ph.D.

The unprecedented inclusion of culture-bound syndromes in DSM-IV provides the opportunity for highlighting the need to study such syndromes and the occasion for developing a research agenda to study them. The growing ethnic and cultural diversity of the U.S. population presents a challenge to the mental health field to develop truly cross-cultural approaches to mental health research and services. In this article, the authors provide a critique of previous analyses of the relationship between culture-bound syndromes and psychiatric diagnoses. They highlight the problems in previous classificatory exercises, which tend to focus on subsuming the culture-bound syndromes into psychiatric categories and fail to fully investigate these syndromes on their own terms. A detailed research program based on four key questions is presented both to understand culture-bound syndromes within their cultural context and to analyze the relationship between these syndromes and psychiatric disorders. Results of over a decade of research on ataques de nervios, a Latino-Caribbean cultural syndrome, are used to illustrate this research program. The four questions focus on the nature of the phenomenon, the social-cultural location of sufferers, the relationship of culture-bound syndromes to psychiatric disorders, and the social and psychiatric history of the syndrome in the life course of the sufferer.

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The unprecedented inclusion of culture-bound syndromes in DSM-IV provides the opportunity for highlighting the need to study such syndromes and the occasion for developing a research agenda to study them. DSM-IV contains symptomatic descriptions of 25 culture-bound syndromes, such as amok, latah, and koro, developed by the National Institute of Mental Health Group on Culture and Diagnosis (1). The definition of culture-bound syndrome written by the Group on Culture and Diagnosis, which appears in the introduction to the Glossary of Culture-Bound Syndromes in appendix I of DSM-IV (p. 844), is as follows:

> The term *culture-bound syndrome* denotes recurrent, locality-specific patterns of aberrant behavior and troubling experience that may or may not be linked to a particular *DSM-IV* diagnostic category. Many of these patterns are indigenously considered to be "illnesses," or at least afflictions, and most have local names . . . . culture-bound syndromes are generally limited to specific societies or culture areas and are localized, folk, diagnostic categories that frame coherent meanings for certain repetitive, patterned, and troubling sets of experiences and observations.

Received June 3, 1998; revision received March 29, 1999; accepted April 19, 1999. From Rutgers University; and Fordham University, Bronx, N.Y. Address reprint requests to Dr. Guarnaccia, Institute for Health, Health Care Policy and Aging Research, Rutgers, The State University of New Jersey, 30 College Ave., New Brunswick, NJ 08901-1293; gortch@rci.rutgers.edu (e-mail).

There are two major reasons for focusing research on culture-bound syndromes. The first is the increasing cultural diversity of persons seeking mental health care, which reflects the increasing cultural diversity of American society (2–4). Immigrants bring with them their own indigenous patterns and conceptions of mental illness, some of which are structured into cultural syndromes. Clinicians who serve an increasingly culturally diverse population need to know more about such syndromes (5).

The second reason for focusing research on culture-bound syndromes is that the editions of DSM have become international documents (6). Editions of the manual before DSM-IV included little material that reflected the scope of cross-cultural diversity of psychiatric problems. The inclusion of the Glossary of Culture-Bound Syndromes, as well as other cultural enhancements to DSM-IV (7, 8), increases the manual's cross-cultural usefulness at home and abroad, provided it is supplemented by the implementation of programmatic research.

A COMPREHENSIVE RESEARCH PROGRAM ON THE CULTURE-BOUND SYNDROMES TO REPLACE CLASSIFICATORY EXERCISES

It is striking to read Yap's call for a more systematic program of research on the culture-bound syndromes

written over 20 years ago (9, p. 86), for such a programmatic effort is still lacking:

> Whether or not there are new psychiatric illnesses to be found in folk cultures or non-metropolitan populations is a question that first requires semantic resolution. Undoubtedly there are in certain cultures clinical manifestations quite unlike these described in standard psychiatric textbooks, which historically are based on the experiences of western psychiatrists. In this sense illnesses presenting so strangely may be regarded as new. However, each of the same textbooks also espouses a system of diseases classification that by its own logic is meant to be final and exhaustive. From this point of view, no more new illnesses are to be discovered, and any strange clinical condition can only be a variation of something already recognized and described. Two problems then arise: firstly, how much do we know about the culture-bound syndromes for us to be able to fit them into standard classification; and secondly, whether such a standard and exhaustive classification in fact exists.

Yap clearly laid out the challenge. However, it is striking to see the narrowness of much of the writing since Yap, which assumes that the major goal is to fit the culture-bound syndromes into the standard classification systems without fully investigating them on their own terms.

Thus, the classification of culture-bound syndromes into professional diagnostic categories usually is based on a perception of their predominant symptoms. But the issue itself of identifying predominance of symptoms is problematic, as can be illustrated in the cases of koro and latah. The koro case provides an example of shifting diagnostic classifications because of changing decisions about which symptoms are predominant. For example, Bernstein and Gaw (10) first categorized koro as a somatoform disorder on the basis of the perception of the afflicted person's intense preoccupation with a somatic concern—the retraction of the penis. More recently, Levine and Gaw (11) categorized koro as an anxiety disorder and noted that others have associated koro with panic disorder. The penis appears to recede from the diagnostic agenda! The issue is even more difficult, as shown in a discussion of actual cases of koro, which applies diagnoses from the dissociative, somatoform, anxiety, and sexual disorders sections of DSM-III-R to koro (12). Problems arise when decisions are based on generalized, prototypical descriptions of the syndrome that are then associated with the textbook criteria of a psychiatric diagnosis. No grouping of "predominant" symptoms has decisively solved the classification problem.

One set of debates focuses on the relationship between the culture-bound syndromes and psychiatric disorders according to predominant symptom. However, a debate about latah, summarized in the collection by Simons and Hughes (13), focuses on which theoretical perspective should prevail. Simons (14) argued that the predominant feature of latah is the neurophysiological startle reflex, culturally elaborated into latah in Malaysia. Kenny (15), on the other hand, located the genesis of latah in the difficult social status of being an older woman past childbearing age and related this social status to violations of Malaysian norms emphasizing order, self-control, and courtesy. Simons privileged psychobiological explanation; Kenny privileged cultural meaning. Simons disaggregated latah into its symptoms, de-emphasized the sociocultural context, privileged the startle reflex as the predominant symptom, and then diminished the identity of latah as a culturally specific category. Kenny, in contrast, so focused on the cultural uniqueness of the latah experience that comparisons with other frames of explanation are difficult. Both writers are skilled at argument, and since there are no external decision-making rules, it is difficult to resolve the issue within their own terms. We believe a more integrative research approach would see the cultural configuration of latah as building on the biology of the startle reflex within its sociocultural context, the purpose being to understand why older women in Malaysia are particularly at risk and how culture leads to the elaboration of this reflex into a cultural syndrome.

The analyses of koro, discussed previously, are a reflection of the usual reductionistic treatment of culture-bound syndromes in general. But they also are an interesting, inadvertent reflection of broader processes that have occurred in the evolution of DSM, in particular, its evolution starting with DSM-III. A recent publication (16), which formulates five propositions about the DSM evolution, can be used to illuminate the point. Two of the five propositions present a set of structural concepts applicable to the changing lives of individual diagnostic categories in DSM's historical changes. The first proposition focuses on the process of differentiation within the illness, the second on how the differentiated elements are "obliterated by incorporation" by being subsumed into another illness. Koro, following the customary analyses of culture-bound syndromes, was disaggregated into "predominant symptoms," then subsumed into one or another DSM category. The neo-Kraepelinian orientation of psychiatry was extended to the treatment of the culture-bound syndromes. We believe that for purposes of research measurements, it is important to disaggregate the symptoms of a category, even when not making assumptions about which symptoms are "predominant." However, the next step customarily taken, "obliteration by incorporation" into another category, or its equivalent, the subsuming of the culture-bound syndrome into a familiar psychiatric illness, often is methodologically questionable. This questionability is what DSM-IV intended with the phrase that culture-bound syndromes "may or may not be linked to a particular DSM-IV diagnostic category" (p. 844).

The current approach of reviewing the same set of studies and engaging in classificatory exercises with them does not, from our viewpoint, further our understanding of the culture-bound syndromes. The strategy of trying to find the right classificatory scheme by bas-

ing it on similarity between one or two symptoms of the culture-bound syndrome and of the DSM disorder and privileging the DSM categories as the main organizing structure of relevance to the culture-bound syndromes is not likely to produce new answers to the classificatory question. Currently, there is no evidentiary criterion that permits us to delimit the range of psychiatric diagnoses related to cultural syndromes; there is no rule-based system for relating cultural syndromes to psychiatric diagnosis. In the absence of such standards, it is difficult to make such judgments. The original cultural integrity of the syndrome should be an incessant research preoccupation.

QUESTIONS OUTLINING A COMPREHENSIVE RESEARCH PROGRAM

We propose a program of research that is faithful to the holistic nature of the culture-bound syndromes and at the same time applies the most current research approaches from a number of fields. A series of key questions need to be answered to understand the culture-bound syndromes on their own terms and in relationship to psychiatric disorders. We illustrate the character of the answers with examples from research on ataques de nervios (17–25). The following description of ataques de nervios from the Glossary of Culture-Bound Syndromes in DSM-IV (p. 845) provides an orientation to this syndrome:

> Ataque de nervios [is] an idiom of distress principally reported among Latinos from the Caribbean, but recognized among many Latin American and Latin Mediterranean groups. Commonly reported symptoms include uncontrollable shouting, attacks of crying, trembling . . . and verbal or physical aggression. Dissociative experiences, seizure-like or fainting episodes, and suicidal gestures are prominent in some ataques but absent in others. A general feature of an ataque de nervios is a sense of being out of control. Ataques de nervios frequently occur as a direct result of a stressful event relating to the family (e.g., news of the death of a close relative, a separation or divorce from a spouse, conflicts with a spouse or children, or witnessing an accident involving a family member). People may experience amnesia for what occurred during the ataque de nervios, but they otherwise return rapidly to their usual level of functioning.

Question 1: Nature of the Phenomenon

How do we characterize the culture-bound syndrome within its cultural context? What are the defining features of the phenomenon?

One way to begin studying a culture-bound syndrome is to refer to the research literature in anthropology and psychiatry. The collection by Simons and Hughes (13) provides an organized review of a number of culture-bound syndromes, and the DSM-IV glossary has descriptions of 25 syndromes that cultural experts identified as particularly relevant to psychiatry. In the case of ataque de nervios, 30 years of articles in the psychiatric and anthropological literature are available, although the syndrome often is mislabeled pejoratively as the "Puerto Rican Syndrome" (17).

The salience of a culture-bound syndrome, the quickness and extent of its recognition within a cultural group, is more difficult to establish. Appearance in the literature provides some evidence of a category's salience, but this is not a foolproof standard. For many years, windigo psychosis was cited in the literature on the mental health of American Indians until Marano (26) demonstrated that windigo psychosis never existed. Clinical and epidemiological studies provide a basis for documenting the salience of culture-bound syndromes. Thus, the salience of ataque de nervios to Puerto Rican mental health was actively debated until a question on ataque de nervios was incorporated into an epidemiological study of adult mental health in Puerto Rico (27). In that community study in Puerto Rico, 145 (16%) of the 912 people interviewed reported having had at least one ataque de nervios. Salience was demonstrated by the large proportion of respondents who recognized the syndrome during the interview and who admitted to the experience in their lifetime (18). One consequence was that clinical researchers in Boston and New York began to systematically question their Puerto Rican and Dominican patients about their experience with ataque de nervios (22, 23). In both cases, they found that 75% of their patients in mental health clinics had experienced an ataque de nervios. These results indicate that while ataques de nervios are frequent in the community in Puerto Rico, they are particularly salient among Latino clients of mental health services and should be investigated in clinical assessments and in systematic research as a clinical problem.

Once the salience is documented, the subjective experiences associated with the syndrome, that is, the syndrome's phenomenology, need examination. Questions then focus on the feelings associated with the syndrome, the physical sensations, and the emotions and thoughts of the person while experiencing the syndrome. Needed, too, are data on how the syndrome affects the person's orientation toward time and place, how the syndrome is acted out or performed, and how the person's significant others recognize the suffering associated with the syndrome. The questions in Kleinman's explanatory model (28) proved to be useful in framing clinical ethnographies of people who had experienced ataques de nervios (19). The questions aimed to develop descriptions of the experience of ataque de nervios, to identify the social situations in which they occurred, and to identify help-seeking efforts prompted by the malady. This began a prototypical description of an ataque de nervios, including information about the range in variation of that experience.

A fuller phenomenological portrait can be developed with representative samples of individuals who have experienced a culture-bound syndrome. With such a sample, Guarnaccia and colleagues (21) were able to

identify emotional expressions, bodily sensations, action dimensions, and alterations in consciousness that characterized the phenomenology of ataques de nervios. This is important because a key feature in defining culture-bound syndromes is the full symptom profile of the experience, not just a few predominant symptoms. Such descriptions serve to distinguish the syndrome from other syndromes. The sample study should incorporate elicitations of symptoms by using both open-ended questions and symptom checklists. After such elicitation, an advantage of using more structured approaches, such as symptom checklists, is attaining more reliable measurements of the frequency of symptoms and the range of culture-bound syndrome experiences. Thus, even though seizures and suicidal gestures have been highlighted as hallmark symptoms in earlier articles on ataques de nervios (29, 30), the research indicated that these experiences occurred in only about a third of the cases of ataques de nervios. On the other hand, symptoms of loss of emotional and physical control (screaming uncontrollably, crying uncontrollably, shaking, and heart palpitations) emerged as the most frequent experiences (21).

Another goal is to identify subtypes of symptom patterns within the cultural syndromes through use of statistical techniques such as factor analysis (25). The statistically derived profiles of ataques de nervios fit the ethnographic descriptions: a classic dimension that included the prominent symptoms of screaming and crying uncontrollably, as well as becoming angry and breaking things; a physiologic dimension that included somatic symptoms such as chest tightness, heart palpitations, trembling a great deal, and shortness of breath; a consciousness dimension that incorporated fainting, loss of consciousness, and amnesia; and a dissociative dimension that included derealization, blurring of vision, fears, and suicidal thoughts and gestures. These analyses defined different types of ataque experiences more comprehensively.

Question 2: Location in the Social Context

Who are the people who experience culture-bound syndromes, and what is their social structural location? What situational factors provoke these syndromes?

To characterize a culture-bound syndrome involves identifying the social characteristics of people who suffer from it (31, 32). Social structural factors identify who is at risk for the syndrome. A social profile of sufferers of ataques de nervios emerged clearly from the epidemiological study in Puerto Rico. Women over the age of 45 who had less than a high school education, who had experienced a marital separation or divorce, and who were out of the labor force were much more likely to have experienced an ataque de nervios (18). There was a strong correlation between ataques de nervios and specific social experiences and types of disadvantage.

Context specifies instances that define when the culture-bound syndrome is likely to occur, and the social situations that provoke them need identification. Ataques de nervios are provoked by threats to the subject's local social world, such as the family. In ataques de nervios, threats usually come from losses of family members or family relationships or from occurrences that potentially threaten valued relationships, such as divorce or conflicts with children. A frequent experience that has explosive force is the death of a family member, particularly if it is unexpected. Ataques de nervios are cultural idioms that express suffering and signify a plea for help (socorro in Spanish).

Question 3: Relationship to Psychiatric Disorder

How is the culture-bound syndrome empirically related to psychiatric disorder?

With knowledge about a culture-bound syndrome, researchers can then address the relationship between the culture-bound syndrome and the more familiar psychiatric disorders, such as those in DSM-IV. We call this the comorbidity question on the assumption that studying the culture-bound syndrome's patterned relationship to psychiatric diagnoses is a more fruitful approach than attempting prematurely to subsume it into the DSM diagnostic categories. Systematic research has identified strong correlations between culture-bound syndromes and criteria for psychiatric disorder, but there is rarely a one-to-one relationship between culture-bound syndrome and psychiatric disorder (33, 34). Hughes and colleagues (35, pp. 996–997) stated this point eloquently:

> The phenomena of the culture-bound syndromes do not constitute discrete, bounded entities that can be directly translated into conventional Western categories. Rather, when examined at a primary level, they interpenetrate established diagnostic entities with symptoms that flood across numerous parts of the DSM nosological structure.

The culture-bound syndromes often coexist with a range of psychiatric disorders, as many psychiatric disorders do with each other (36). The comorbidity question brings culture-bound syndrome research in line with current approaches in psychiatric research.

Research on the comorbid relationship of ataque de nervios to psychiatric disorder shows the importance of the approach advocated here. In the epidemiological study in Puerto Rico, the rates of psychiatric disorder among those reporting an ataque de nervios were very high; 63% of the group with an ataque de nervios met the criteria for a psychiatric diagnosis, compared to 28% of the rest of the sample (18). Overall, those reporting an ataque de nervios in the interview were 3.5 times more likely to meet the criteria for an anxiety disorder and 2.75 times more likely to meet the criteria for an affective disorder than those who had not reported an ataque de nervios. These results indicate that examining ataques de nervios in the context of comorbidity is more fruitful than trying to summarily fit ataques de nervios into a single diagnostic category. Subsequent clinical research with Latino patients has

further identified the comorbidity of ataques de nervios with a range of anxiety and affective disorders (23).

Differences in the symptomatic, emotional, and contextual aspects of cultural syndromes, in turn, may signal different comorbid relationships with psychiatric diagnosis or even the lack of such a relationship. For example, the identification of subtypes of ataque de nervios aided in establishing its relationship to psychiatric disorders: persons who experienced more dissociative phenomena during their ataques, such as passing out or amnesia, were more likely to meet the criteria for a comorbid psychiatric diagnosis (25). In addition, those ataques de nervios characterized by intense fearfulness and feelings of asphyxia and chest tightness were associated with panic disorder, whereas those in which anger and aggressive behavior were prominent were associated with affective disorders (24). These studies provide an empirical basis for uncovering specific linkages between ataques de nervios and psychiatric disorders within the structure of comorbid relationships. Accordingly, the fourth set of questions focuses on the dynamics of comorbid experiences surrounding culture-bound syndromes as the life course of the person unfolds.

Question 4: Social/Psychiatric History of the Syndrome

When the culture-bound syndrome and psychiatric disorders coexist, what is the sequence of onset? How does the life history of the sufferer, particularly the experience of traumatic events, affect the sequence?

These questions derive from recent work demonstrating that mental illnesses cluster with health and social problems (37) and that cumulative social adversities are important risks for psychiatric disorder (38, 39). The research demonstrates the importance of severe life traumas, such as parental deaths and divorces and physical and sexual abuse, in the onset of mental health problems. With answers to such questions, clinicians and researchers can turn to examining how adverse events in the life history of the sufferer relate to the successive appearance of cultural syndromes and psychiatric disorders. When the culture-bound syndrome precedes the onset of disorder, the culture-bound syndrome can identify a vulnerable individual at risk for developing psychiatric problems. Co-occurrence of a culture-bound syndrome and psychiatric disorder may well mark greater severity of both the culture-bound syndrome and the psychiatric disorder. These processes are revealed by current research (23, 24) on the interplay among cultural syndromes, psychiatric disorder, and important life experiences.

CONCLUSIONS

Understanding the complexity of culture-bound syndromes as expressions of distress requires comprehensive programs of research. We have illustrated how to proceed with such a research program with a series of questions that use as an example studies of ataques de nervios. Research on culture-bound syndromes serves strategically to tighten the integration between cultural and clinical knowledge, while providing insights into issues of diagnostic universality and cultural specificity. We believe that sustained research, based on multiple approaches focusing on the four sets of questions presented here, can increase our understanding of the culture-bound syndromes and their clinical significance.

REFERENCES

1. Mezzich JE, Kleinman A, Fabrega H Jr, Parron DL: Culture and Psychiatric Diagnosis: A DSM-IV Perspective. Washington, DC, American Psychiatric Press, 1996
2. Rogler LH: International migrations: a framework for directing research. Am Psychol 1994; 49:701–708
3. Kleinman A: How is culture important for DSM-IV? in Culture and Psychiatric Diagnosis: A DSM-IV Perspective. Edited by Mezzich JE, Kleinman A, Fabrega H Jr, Parron DL. Washington, DC, American Psychiatric Press, 1996, pp 15–25
4. Guarnaccia PJ: Social stress and psychological distress among Latinos in the United States, in Ethnicity, Immigration, and Psychopathology. Edited by Al-Issa I, Tousignant M. New York, Plenum Press, 1997, pp 71–94
5. Guarnaccia PJ, Rodriguez O: Concepts of culture and their role in the development of culturally competent mental health services. Hispanic J Behavioral Sci 1996; 18:419–443
6. Maser JD, Kaelber C, Weise RE: International use and attitudes toward DSM-III and DSM-III-R: growing consensus in psychiatric classification. J Abnorm Psychol 1991; 100:271–279
7. Lewis-Fernandez R, Kleinman A: Cultural psychiatry: theoretical, clinical, and research issues. Psychiatr Clin North Am 1995; 18:433–448
8. Rogler LH: Framing research on culture in psychiatric diagnosis: the case of the DSM-IV. Psychiatry 1996; 59:145–155
9. Yap PM: Comparative Psychiatry: A Theoretical Framework. Toronto, University of Toronto Press, 1974
10. Bernstein RL, Gaw AC: Koro: proposed classification for DSM-IV. Am J Psychiatry 1990; 147:1670–1674
11. Levine RE, Gaw AC: Culture-bound syndromes. Psychiatr Clin North Am 1995; 18:523–536
12. Hughes CC: Commentary on the genital retraction taxon, in The Culture-Bound Syndromes: Folk Illnesses of Psychiatric and Anthropological Interest. Edited by Simons RC, Hughes CC. Dordrecht, the Netherlands, D Reidel, 1985, pp 193–194
13. Simons RC, Hughes CC (eds): The Culture-Bound Syndromes: Folk Illnesses of Psychiatric and Anthropological Interest. Dordrecht, the Netherlands, D Reidel, 1985
14. Simons RC: The resolution of the latah paradox. Ibid, pp 43–62
15. Kenny MG: Paradox lost: the latah problem revisited. Ibid, pp 63–76
16. Rogler LH: Making sense of historical changes in the Diagnostic and Statistical Manual of Mental Disorders: five propositions. J Health Soc Behav 1997; 38:9–20
17. Guarnaccia PJ: Ataques de nervios in Puerto Rico: culture-bound syndrome or popular illness? Med Anthropol 1993; 15: 157–170
18. Guarnaccia PJ, Canino G, Rubio-Stipec M, Bravo M: The prevalence of ataques de nervios in the Puerto Rico disaster study: the role of culture in psychiatric epidemiology. J Nerv Ment Dis 1993; 181:157–165
19. Guarnaccia PJ, DeLaCancela V, Carrillo E: The multiple meanings of ataques de nervios in the Latino community. Med Anthropol 1989; 11:47–62
20. Guarnaccia PJ, Rubio-Stipec M, Canino G: Ataques de nervios in the Puerto Rico Diagnostic Interview Schedule: the im-

pact of cultural categories on psychiatric epidemiology. Cult Med Psychiatry 1989; 13:275–295
21. Guarnaccia PJ, Rivera M, Franco F, Neighbors C: The experiences of ataques de nervios: towards an anthropology of emotions in Puerto Rico. Cult Med Psychiatry 1996; 20:343–367
22. Lewis-Fernandez R: Culture and dissociation: a comparison of ataque de nervios among Puerto Ricans and possession syndrome in India, in Dissociation: Culture, Mind, and Body. Edited by Speigel D. Washington, DC, American Psychiatric Press, 1994, pp 123–167
23. Liebowitz MR, Salmán E, Jusino CM, Garfinkel R, Street L, Cárdenas DL, Silvestre J, Fyer AJ, Carrasco JL, Davies S, Guarnaccia P, Klein DF: Ataques de nervios and panic disorder. Am J Psychiatry 1994; 151:871–875
24. Salman E, Liebowitz MR, Guarnaccia PJ, Jusino CM, Garfinkel R, Street L, Cardenas DL, Silvestre J, Fyer AJ, Carrasco JL, Davies SO, Klein DF: Subtypes of ataques de nervios: the influence of coexisting psychiatric diagnosis. Cult Med Psychiatry 1998; 22:231–244
25. Febo San Miguel VE, Guarnaccia P, Rodriguez Arocho WR: [Definition of ataques de nervios from a cultural perspective: its relation with psychiatric symptomatology, in Puerto Rican Contributions to Social-Community Psychology, vol II.] Edited by Serrano-Garcia I, Figueroa Rodriguez M, Perez Jimenez D. (Spanish) (in press)
26. Marano L: Windigo psychosis: the anatomy of an emic/etic confusion. Current Anthropology 1982; 23:385–412
27. Canino GJ, Bird HR, Shrout PE, Rubio-Stipec M, Bravo M, Martinez R, Sesman M, Guevara LM: The prevalence of specific psychiatric disorders in Puerto Rico. Arch Gen Psychiatry 1987; 44:727–735
28. Kleinman A: Patients and Healers in the Context of Culture. Berkeley, University of California Press, 1980
29. Fernandez-Marina R: The Puerto Rican Syndrome. Psychiatry 1961; 24:79–82
30. Trautman EC: The suicidal fit. Arch Gen Psychiatry 1961; 5: 76–83
31. Rubel AJ: The epidemiology of a folk illness: susto in Hispanic America. Ethnology 1964; 3:268–283
32. Rogler LH, Hollingshead AB: Trapped: Puerto Rican Families and Schizophrenia, 3rd ed. Maplewood, NJ, Waterfront Press, 1985
33. Kleinman A: Social Origins of Distress and Disease: Depression, Neurasthenia and Pain in Modern China. New Haven, Conn, Yale University Press, 1986
34. Kleinman A: Rethinking Psychiatry. New York, Free Press, 1988
35. Hughes CC, Simons RC, Wintrob RM: The “Culture-Bound Syndromes” and DSM-IV, in DSM-IV Sourcebook, vol 3. Edited by Widiger TA, Frances AJ, Pincus HA, Ross R, First MB, Davis W. Washington, DC, American Psychiatric Association, 1997, pp 991–1000
36. Kessler RC, McGonagle KA, Zhao S, Nelson CB, Hughes M, Eshleman S, Wittchen H-U, Kendler KS: Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States: results from the National Comorbidity Survey. Arch Gen Psychiatry 1994; 51:8–19
37. Desjarlais R, Eisenberg L, Good B, Kleinman A: World Mental Health. New York, Oxford University Press, 1995
38. Turner RJ, Lloyd DA: Lifetime traumas and mental health: the significance of cumulative adversity. J Health Soc Behav 1995; 36:360–376
39. Turner RJ, Wheaton B, Lloyd DA: The epidemiology of social stress. Am Sociol Rev 1995; 60:104–125