CHAPTER 5

Culture, Ethnicity, and Psychopathology

Jeanne L. Tsai, James N. Butcher, Ricardo F. Muñoz, and Kelly Vitousek

For decades, transcultural psychiatrists, cross-cultural psychologists, clinical psychologists, medical anthropologists, and others have been interested in answering the following questions: Are mental disorders that are observed in Western cultural contexts also seen in other cultural contexts? Does culture influence the expression and meaning of symptoms? Are there disorders that exist only in specific cultural contexts? Does the social and psychological impact of mental illness vary across cultural contexts? And how should clinicians treat individuals of cultural backgrounds different from their own?

Scientists and clinicians have been very interested in answering these questions for several reasons. Cultural studies of psychopathology distinguish among aspects of mental illness that generalize across cultures, that are culture-specific, and that are unique to the individual. These studies advance our knowledge about human disease and dysfunction. Most studies in psychology and psychiatry have focused primarily on White populations of European descent and assume that what is true for White European samples is true for other cultural groups. However, cross-cultural studies have demonstrated that this is not the case. For instance, cross-cultural studies of depression have revealed that feelings of guilt and self-reproach are more frequently associated with depression in Western than in non-Western cultural contexts (Sartorius, Jablensky, Gulbinat, & Ernberg, 1980). Thus, these symptoms may not be universal aspects of depression.

Cultural studies of psychopathology are also important because they elucidate the subjective experience or meaning of mental illness. For example, Estroff (1989) argues that the disorganizing symptoms of schizophrenia may be experienced more negatively in cultures that view the self as stable than in cultures that view the self as dynamic. Understanding cultural influences on psychopathological processes and the meanings of mental illness is critical for accurately diagnosing and effectively treating culturally diverse clinical populations. This becomes increasingly urgent as our society becomes more global and multicultural.

Jeanne L. Tsai • Department of Psychology, Stanford University, Stanford, California 94305. **James N. Butcher** • Department of Psychology, University of Minnesota, Minneapolis, Minnesota 55455-0344. **Ricardo F. Muñoz** • Department of Psychiatry, University of California, San Francisco, California 94143. **Kelly Vitousek** • Department of Psychology, University of Hawaii, Honolulu, Hawaii 96822.

Comprehensive Handbook of Psychopathology (Third Edition), edited by Patricia B. Sutker and Henry E. Adams. Kluwer Academic / Plenum Publishers, New York, 2001.

Defining "Culture," "Ethnicity," and "Psychopathology"

Culture has been defined in a variety of ways. Anthony Marsella, a leading expert in cross-cultural psychology, provides one of the most comprehensive definitions:

> At an external level, culture is represented in various artifacts, architectural and expressive forms, institutions, and role and behavioral patterns. But culture is also represented internally, in the values, attitudes, beliefs, cognitive styles, and patterns of consciousness of an individual. As such, it is the primary mediator or filter for interacting with the world; it is the lens by which we experience and define reality and orient ourselves to others, the unknown, and to our subjective experience. (Marsella, 1987, p. 381)

Ethnicity is the "culture" of a specific ethnic group or the segment of a larger society that views itself and is viewed by others as different from the majority culture in language, religion, customs, beliefs, values, physical characteristics, and/or ancestral homeland. Members of an ethnic group "participate in shared activities built around their (real or mythical) common origin and culture" (Yinger, 1986, p. 22). In this chapter, the term "culture" subsumes "ethnicity."

In general, cross-cultural studies of psychopathology have operationalized "culture" poorly. Most studies use national status as a proxy for culture and race as a proxy for ethnicity. As a result, these studies overlook the tremendous variation within national and racial groups and the similarity among national and racial groups in values, beliefs, and other cultural variables that may influence aspects of psychopathology. Few investigators explicitly identify or measure the cultural variables that presumably explain differences between cultural groups.

Psychopathology is the study of abnormal behavior (Davison & Neale, 1994). However, even in Western clinical psychology and psychiatry, it is difficult to define what constitutes "abnormal" behavior. Davison & Neale (1994) propose that "abnormal behavior" is statistically infrequent, violates cultural or societal norms, creates personal distress and suffering, impairs the individual functionally, and is an unexpected response to environmental cues. In general, cross-cultural studies of psychopathology have relied on Western classification systems such as the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition (DSM-IV) (American Psychiatric Association, 1994) or the International Classification of Diseases (ICD-10) (World Health Organization, 1992) to define abnormal behavior. The problems with this approach will be discussed later in the chapter.

Theoretical Perspectives

Scholars differ in the degree to which they believe that abnormal behavior is similar across cultural contexts. Traditionally, theoretical perspectives were cast as either "culture-specific" or "universal." Culture-specific perspectives maintain that because cultures define what is "normal" and "abnormal" and because cultures change over time, what constitutes "abnormal behavior" can be defined only by members of a particular cultural group at a particular time in history (Draguns, 1977). Thus, abnormal behavior is culturally relative. Most proponents of culture-specific approaches endorse the use of "emic" methods, or tools and instruments that are specific to the culture of interest, to study the cultural aspects of psychopathology.

Universal perspectives, however, view particular behaviors as "abnormal," regardless of cultural context and historical time. According to this perspective, Western conceptions of abnormal behavior are applicable to other cultural contexts. Proponents of universal perspectives use "etic" methods, or tools and instruments that presumably can be applied in different cultural contexts and, therefore, allow cross-cultural comparisons. The tools and instruments used in "etic" studies are typically developed in Western cultural contexts and translated into the language of the culture of study (Segall, Lonner, & Berry, 1998).

Most current views of psychopathology rarely assume either the "culture-specific" or the "universal" stances in their extreme forms. Instead, current perspectives acknowledge that both cultural similarities and cultural differences exist. However, they vary in what they consider the defining aspect of mental illness, which influences the degree to which they hypothesize cultural variation in mental illness.

Cultural Idioms of Distress

One prevailing viewpoint, the *cultural idioms of distress* perspective, posited by Arthur Kleinman, Byron Good, Janis Jenkins (1991) and other medical anthropologists, suggests that mental ill-

ness cannot be separated from its sociocultural context. As stated by Draguns (1982), a particular symptom only becomes an indicator of distress in its "transaction with the environment." From this standpoint, what matters is not whether specific symptoms exist across cultures, but whether the *meaning* and *subjective experience* of and the *social response* to these symptoms are similar across cultures (Jenkins, Kleinman, & Good, 1991; Krause, 1989).

Biomedical Approach

In contrast, the *biomedical* perspective, shared primarily by mainstream psychiatrists and psychologists, views the cause of mental disorders as physical dysfunction, such as biochemical or anatomical defects (Rosenhan & Seligman, 1989, p. 47). From this standpoint, internal *symptoms* are the defining aspects of mental illness. Culture may influence the content of specific symptoms (e.g., the religious content of hallucinations) and patients' beliefs about the origins of mental illness (e.g., spiritual vs. biological causes), but the core symptoms of a specific disorder and their impact on psychological functioning are assumed to be similar across cultures.

Variation Across Different Types of Mental Disorders

Marsella (1987) offers a slightly different perspective that accounts for variation among mental disorders. He proposes that the least cultural variation occurs in mental disorders that are the most biologically based, such as severe neurological disease, and the most cultural variation occurs in mental disorders that most closely resemble "normal" behavior (and therefore, are presumably the least biologically based). Thus, he classifies disorders in the following way (from the least to the most culturally variable): severe neurological disease, minor neurological disease, functional psychotic disorders, neurotic disorders, and minor transient states. According to Marsella (1987), disorders such as schizophrenia would vary less across cultures than unipolar depression or general anxiety disorder. Although this perspective appears to explain much of the current empirical findings, it is limited by our incomplete knowledge of the "biological" aspects of various mental disorders. Thus, it is unclear whether specific neurotic disorders such as depression are indeed less biological than psychotic disorders such as schizophrenia.

Findings from the empirical literature do not entirely confirm or disconfirm any of these theoretical perspectives. Instead, empirical findings support different aspects of each theoretical perspective. Before turning to the empirical literature on culture and psychopathology, we discuss one of the most challenging issues in the cross-cultural study of psychopathology—assessment.

Assessing Psychopathology Across Cultures

To study mental illness across cultures, one must first be able to identify and then classify mental illness in different cultural contexts (see later section for assessment in clinical treatment). This is one of the most challenging aspects of studying psychopathology across cultures. The most widely used nosological systems were developed in Europe (ICD-9) and North America (DSM-IV) and have been criticized for their Western cultural assumptions (Fabrega, 1989). These systems are fraught with shortcomings, even when applied in Western settings. Low reliability, poor validity, and high rates of comorbidity (i.e., the co-occurrence of presumably distinct disorders) are of highest concern (Butcher, 1982; Clark, Watson, & Reynolds, 1995; Krueger, Caspi, Moffitt, & Silva, 1998).

Additional challenges arise when these systems are used with non-Western cultural and ethnic groups. First, because these systems rely primarily on clinical diagnosis, they may obscure cultural differences and/or similarities in specific symptoms. Thus, cultural differences in prevalence rates of clinical depression, for example, may belie cultural differences in the specific symptoms of depression, such as depressed mood, loss of energy, and sleep problems. Second, behavior that is defined as "abnormal" by these Western classification systems may fall well within the realm of normal behavior in other cultural contexts. In Puerto Rico, for instance, dissociative states are considered normal aspects of religious and spiritual practices, whereas in many Western contexts, they are considered symptoms of mental illness (Lewis-Fernandez, 1998). Third, abnormal behaviors in non-Western cultural contexts may be excluded in

these classification systems. In an attempt to address this last issue, DSM-IV (American Psychiatric Association, 1994) includes an appendix that lists "culture-bound syndromes," or disorders that occur in specific cultural settings only. For example, "koro" is a disorder primarily found in parts of Southern Asia (Taiwan, Indonesia, Malayasia, Borneo, and Southern China) in which males harbor an "obsessive fear that their penises will withdraw into their abdomens." More recently, specific disorders found primarily in Western cultures have also been considered "culturally bound." They include "anorexia nervosa," in which individuals (typically females) have an obsessive concern with their weight, and "multiple personality disorder," in which one person is thought to have multiple personalities that assume control over that person's behavior (Takahashi, 1990).

Although the inclusion of "culturally bound syndromes" into the DSM-IV has been hailed as a major step toward acknowledging the influence of culture on psychopathology, it has also encountered much criticism (Hughes, 1998). This debate will be discussed at greater length later in the chapter. Despite these problems, Western classification systems are widely used in cultural studies of psychopathology due to the lack of alternative non-Western classification systems.

Researchers have employed different methods for assessing psychopathology across cultures. These include self-report inventories (e.g., rating scales, personality instruments) and interview schedules (e.g, structured vs. open-ended).

Self-Report Inventories

Most self-report inventories of psychopathology were developed in Western cultural contexts. These are often translated into another language and adapted in ways that increase their cultural relevance for use in non-Western cultural contexts. These instruments include the Beck Depression Inventory, which has been translated for use with Chinese, Vietnamese, Latino, Hmong and other cultural groups and the Minnesota Multiphasic Personality Inventory (MMPI), which has been translated more than 150 times, validated in numerous cross-cultural settings, and used in more than 46 countries. Recently, the MMPI was revised to assess a broader range of problems, to contain more contemporary items, and to include norms that are more appropriate for cross-cultural comparisons (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989). This version of the MMPI, the MMPI-2 (for adults), has already been translated into more than 26 languages. The MMPI-A (for adolescents) has also been translated into more than a dozen languages.

The Issue of Equivalence. The main problem with using Western instruments to assess psychopathology in other cultural contexts is their *equivalence* (i.e., the extent to which a word, concept, scale, or norm structure can be considered relevant and applicable to cultural groups other than those for which the instrument was developed) (Marsella, 1987). For example, *linguistic equivalence* is achieved when a specific term is the same across languages. Tanaka-Matusmi and Marsella (1976) demonstrated the lack of linguistic equivalence between the words "depression" and "yuutsu" (the Japanese translation of "depression") by having Americans and Japanese list words that they associated with the terms. Whereas Americans associated depression with being "blue," "sad," "down," in "despair," and "dejected," Japanese associated depression with the "mountains," "rain," "storms," and the "dark." *Conceptual equivalence* is achieved when constructs assume the same meaning across cultures. An example of the lack of conceptual equivalence also comes from American-Japanese comparisons: "dependency" in American culture is considered a negative attribute; in Japan, it is the cultural ideal for interpersonal relationships (Doi, 1973). Other forms of equivalence are *psychometric* and *psychological equivalence*, which demonstrate that the psychometric properties of translated instruments are similar and that the items assume the same significance and meaning across languages respectively (Butcher, Coelho, & Tsai, in press).

Various techniques have been proposed to establish instrument equivalence. Extensive research on the MMPI-2 has shown that equivalence can be achieved by following specific procedures (Butcher, 1996). These include (1) having independent investigators translate English versions of an instrument into the language of interest; (2) combining these independent translations into one version, based on decisions by a committee of cultural and linguistic experts; (3) conducting a series of translations and back-translations until all item

wordings are accurate; (4) administering the original and translated versions of the instrument to bilinguals to ensure that their responses are captured similarly by both versions; and (5) using methods such as item response theory, factor analysis, and norm development to assess the conceptual equivalence of the scale.

For some investigators, however, these techniques for ensuring equivalence are not at all sufficient. They argue that regardless of the lengths taken to establish equivalence, instruments developed in Western culture are replete with Western cultural assumptions and exclude non-Western processes and phenomena. These investigators prefer emically derived instruments. Unfortunately, truly emic instruments are rare. The Hispanic Stress Inventory (Cervantes, Salgado de Snyder, & Padilla, 1991) and a number of African-American instruments (Jones, 1996) are among the few that exist.

Interviews

Interviews have also been used to assess psychopathology across cultural contexts. Structured clinical interviews such as the Diagnostic Interview Schedule (Robins, Helzer, Croughan, & Ratcliff, 1981) and the Present State Examination (Wing, Cooper, & Sartorius, 1974) have been used widely in cross-cultural studies of mental illness. For example, the latter was used in the World Health Organization's study of schizophrenia across cultures (Jablensky, 1989). Issues of equivalence apply here because these interview schedules were developed in Western cultural contexts. Ethnographic interviews are more open-ended and presumably allow respondents to reveal their cultural conceptions of mental illness. Therefore, they are considered more emic in nature. For example, Krause (1989) conducted ethnographic interviews with ten Punjabi men and women of diverse ages to examine "sinking heart," a syndrome of heart distress that has been compared to Western conceptions of depression, Type A behavior, and stress. Krause asked her respondents questions about the causality, symptomatology, treatment, and consequences of "sinking heart," but also encouraged them to talk about what they considered the important aspects of this illness. Based on her interviews, Krause concluded that although Western conceptions of depression, Type A behavior, and stress overlap with "sinking heart," they do not capture its more subtle physical, cultural, and emotional aspects. For example, "sinking heart" experiences are related to problems in individuals' emotional, sexual, and marital relationships and to conflicts in honor and morality (Krause, 1989).

The primary criticism of ethnographic interviews is that, compared to self-report questionnaires, they are more time- and labor-intensive. As a result, they can be conducted only with small samples. In addition, they are more idiographic (specific to each individual) and do not lend themselves to nomothetic (group) comparisons. Often the lack of standardization in interview format also makes comparisons across ethnographic studies extremely challenging. Thus, critics often question the generalizability of findings from ethnographic interviews.

Multimethod Approaches

The most convincing studies of psychopathology across cultures are those that employ multiple methods and therefore incorporate the strengths of each method. For example, Guarnaccia studied "ataques de nervios" using both ethnographic (Guarnaccia, DeLaCancela, & Carrillo, 1989) and epidemiological methods (Guarnaccia, 1993). From his comprehensive study of four cases of "ataques de nervios," Guarnaccia was able to identify the most meaningful aspect of "ataques de nervios," i.e., their relationship to upsetting or frightening events in the family sphere. In his larger scale epidemiological study, Guarnaccia was able to assess whether these findings generalized to a larger population. He also administered the Diagnostic Interview Schedule/Disaster Supplement (Robins & Smith, 1983) to this population to examine how "ataques de nervios" related to Western psychiatric disorders. Guarnaccia (1993) found that the descriptions of "ataques de nervios" revealed in his case studies generalized to a larger Puerto Rican population. In addition, he found that although the majority of Puerto Ricans who reported an "ataque" also suffered from symptoms of depression and anxiety, "ataque de nervios" could not be easily mapped onto either of these psychiatric disorders. Thus, by using multiple methods, Guarnaccia was able to examine the meaning of "ataque de nervios," its general-

izability across cultural subgroups, and its relationship to Western psychiatric disorders.

Central Questions Regarding Culture and Psychopathology

Researchers have used the methods described previously to answer some of the central questions about culture and psychopathology: Are mental disorders observed in Western contexts seen in other cultural contexts? Does culture influence the expression and meaning of symptoms? Do "culturally bound" syndromes exist? Does the social and psychological impact of mental illness vary across cultural contexts? And how should clinicians treat individuals of cultural backgrounds different from their own? Significantly more empirical research has been conducted on the occurrence and presentation of mental illness (the first four questions) than on the impact and treatment of mental illness (the last two questions). In the next section, we review some of this research.

Are Mental Disorders Observed in Western Contexts Seen in Other Cultural Contexts?

Emil Kraeplin, the principal founder of psychiatric nosology, was one of the first scholars interested in the occurrence and expression of mental illness across cultures. He hypothesized that cultural differences in incidence and prevalence rates of mental disorders across cultures existed and were related to differences in social conditions and ethnocultural characteristics (e.g., values). Furthermore, he believed that examining such differences would advance our understanding of pathological processes (Jilek, 1995):

> If the characteristics of a people are manifested in its religion and its customs, in its intellectual and artistic achievements, in its political acts and its historical development, then they will also find expression in the frequency and clinical formation of its mental disorders, especially those that emerge from internal conditions. ("Voelkerpsychologie," Kraeplin, 1904, p. 437, as cited in Jilek, 1995)

Kraeplin journeyed to Java to collect data to support his hypothesis. He concluded that several disorders that were prevalent in Europe were absent in Java and that the expressions of affective and schizophrenic disorders were somewhat different in Java from those in the United States. Although he was unable to test this hypothesis directly or in other cultures, investigators since his time have (Jilek, 1995). Most of the existing research on psychopathology across cultures has focused on schizophrenia (and related psychotic disorders), depression (and related affective disorders), anxiety, and substance abuse and dependence.

Investigations of the occurrence of specific mental disorders across cultures are epidemiological. Typically, they use Western classification systems to diagnose mental disorders and then compare the total number of cases of a particular disorder within a specific period (i.e., prevalence) across cultures. A few studies examine the number of *new* cases of a particular disorder within a specific period (i.e., incidence) across cultures, but these studies are relatively rare.

Schizophrenia. The term "schizophrenia" has been used to describe a cluster of symptoms that include delusions; hallucinations; disorganized thought, speech, and/or behavior; restrictions in emotional experience and expression; and lack of goal-directed behavior (American Psychiatric Association, 1994). There is strong evidence of a genetic and biological component in schizophrenia. However, this genetic vulnerability is expressed only under stressful environmental conditions (Gottesman & Moldin, 1997; Gottesman & Bertelsen, 1989). Most of the empirical findings suggest that schizophrenia occurs across cultural contexts at similar annual incidence and lifetime prevalence rates.

The WHO Program of Cross-Cultural Research on Schizophrenia is the most comprehensive of cross-cultural studies of schizophrenia. Conducted from 1967–1986, this research program was comprised of three studies that sampled more than eighteen psychiatric centers in Africa, Asia, Europe, and Latin and North America. More than 3,000 patients were assessed using a standard clinical interview (Present State Examination) and then were reassessed 1, 2, and/or 5 years after the initial screening (Jablensky, 1989). The psychiatric centers included were divided into those that represented "developing" (e.g., Nigeria, India, Taiwan) and those that represented "developed" (e.g., United States, United Kingdom) countries. Across cultural contexts, the lifetime prevalence rate of schizophrenia was a little more than 1% of the population (Jablensky, 1989). Moreover, when schizophrenia was conservatively defined, its an-

nual incidence rates did not statistically differ among the cultures sampled and ranged from 0.7 to 1.4 per 10,000 persons across cultures (Jablensky, 1989). The external correlates of schizophrenia were also similar across cultural groups. Males showed an earlier onset of symptoms than females across the cultural groups; Cetingok, Chu, & Park (1990) found similar sex differences in their study of schizophrenia in Turkish and European-American samples. Schizophrenia was also associated with other cerebral and physical diseases across cultures (Jablensky, 1989). These findings suggest that the core aspects of schizophrenia are minimally shaped by culture.

Exceptions to the WHO findings, however, have been observed. For example, higher incidence rates of schizophrenia were found among British Afro-Caribbean immigrant groups (for review, see Jarvis, 1998). Schizophrenia occurs six to eight times more frequently among British Afro-Caribbean immigrant groups than in the native White British population. Several studies suggest that these differences are not due to misdiagnosis (Jarvis, 1998). Therefore, Jarvis (1998) argues that schizophrenia is not biologically based and, instead, results from environmental stresses such as migration, broken family structure, socioeconomic disadvantage, and racism. Future research must assess whether this is the case.

Affective Disorders. There are several types of affective disorders, but unipolar and bipolar depression are the most distinct. Unipolar depression refers to a constellation of affective and vegetative symptoms that include depressed mood, loss of interest and pleasure in activities, fatigue, agitated movement, sleep problems, and changes in appetite and weight. Other symptoms associated with unipolar depression in Western contexts include feelings of worthlessness and thoughts of death. Bipolar depression describes manic symptoms such as grandiosity, flight of ideas, pressured speech, and irritability; often these manic states are interrupted by episodes of unipolar depression. Unlike unipolar depression, there is evidence that bipolar disorder has a strong genetic component (Egeland, 1994). The bulk of the research findings suggest that unipolar and bipolar depression occur across cultures, but at varying prevalence rates.

Bipolar Depression. Epidemiological studies conducted in the United States did not find ethnic differences in lifetime prevalence rates of bipolar depression. For example, in the Epidemiological Catchment Area Study (ECA) of 18,000+ adults in five U.S. communities, lifetime prevalence rates of one type of bipolar disorder for White American, African-American, and Hispanic groups were 0.8, 1.0, and 0.7%, respectively (Weissman et al., 1991). Moreover, there were no significant sex differences in lifetime prevalence rates of bipolar depression across the three ethnic groups. More recently, findings from the National Comorbidity Survey (NCS) (Kessler et al., 1994), a study of psychiatric disorders in a national probability sample of 8,090 respondents including African-American, White American, and Hispanic groups, also suggest that prevalence rates of bipolar depression do not differ by ethnicity or sex.

Unipolar Depression. Lifetime prevalence rates of unipolar depression, however, differ among ethnic and cultural groups. For example, in the ECA study, lifetime prevalence rates of unipolar depression were higher for White Americans (5.1%) than for African-Americans (3.1%) and Hispanics (4.4%). Moreover, prevalence rates were higher for women than for men (Weissman et al., 1991) across the three ethnic groups. Findings from the NCS also suggest that African-Americans have significantly lower prevalence rates of depressive disorders than White Americans, even after controlling for differences in income and education. Contrary to the ECA findings, Hispanic groups in the NCS study had significantly higher rates of unipolar depression than non-Hispanic White Americans and African-Americans (Kessler et al., 1994). There are a variety of possible explanations for the discrepancy in findings between the ECA and NCS studies. For instance, the stresses and life circumstances encountered by Hispanic groups may have increased during the two periods. It is also possible that the studies included Hispanic samples that varied in their generational status, acculturation levels, and specific Hispanic heritage (e.g., Cuban vs. Puerto Rican).

In fact, differences in prevalence rates have been found among specific Hispanic groups. For instance, Moscicki et al. (1987) analyzed the Hispanic Health and Nutrition Examination Survey (H-HANES) data and found that the prevalence rates for unipolar depression (in parentheses) varied for Cuban males (1.4%), Cuban females (2.9%), Mexican males (1.0%), Mexican females (3.6%), Puerto Rican males (3.4%), and Puerto Rican females (7.4%). Within the same subgroup, differ-

ences were reported based on the length of the stay in the United States and the generational level. In a study of Mexican immigrants and Mexican-Americans in California, Vega and colleagues (1998) found that unipolar depression levels were lowest for recent immigrants (3.2%), were higher for those who had been in the United States thirteen years or more (7.9%), and were highest for those born in the United States (14.4%). The rates of the last group did not differ significantly from those reported for the entire NCS sample (17.2%).

Although the NCS and ECA studies did not include a significant number of Asian-Americans to allow for statistically powerful analyses, findings from other studies demonstrate differences between White and Asian-American prevalence rates of depression. In a study of 1,747 Chinese-Americans in Los Angeles, Takeuchi and colleagues (1998) found that the lifetime prevalence of depression was 6.9%, which was higher than that for White Americans in the ECA study. Other studies also found higher levels of depressive symptomatology among Asian-Americans compared to White Americans. In a San Francisco community sample, Ying (1988) found that Chinese-Americans had higher levels of depressive symptoms as measured by the Center for Epidemiological Studies-Depression Scale (CES-D) than White American community samples. Asian-American college students also reported *higher* levels of depressive symptoms than their White American counterparts (as measured by the Zung Self-Rating Depression Scale [Fugita & Crittenden, 1990] and the Beck Depression Inventory [Okazaki, 1997]). However, because these studies examined reported levels of depressive symptomatology as measured by rating scales, it is unclear whether the groups would have differed in rates of diagnosable clinical depression.

Prevalence rates of unipolar depression also differ across cultures (Jenkins, 1991). For instance, lifetime prevalence rates of unipolar depression are lower in Asian countries than in Western countries. The Taiwan Psychiatric Epidemiological Project found that prevalence rates of depression in Taiwanese samples were significantly lower than those of White Americans in the ECA study (1.14% in Taiwan, compared with 4.9% in ECA) (Hwu et al., 1986). Recent evidence, however, suggests that the magnitude of this Western-Asian cultural difference may be decreasing (Nakane et al., 1991). A variety of explanations have been proposed to explain these cultural differences in prevalence rates of depression. For instance, some propose that because Asian cultures place a greater emphasis on family and other social relationships than Western cultures, the occurrence of depression is rare. Others, however, argue that depressive symptoms occur at similar rates in Asian and Western cultures, but because mental illness is severely stigmatized in Asian cultures, depressive symptoms are rarely diagnosed as such (Kleinman, 1986).

Anxiety Disorders. Anxiety disorders are generally characterized by excessive worry and apprehension about the future (Castillo, 1998). Specific anxiety disorders include obsessive-compulsive disorder, panic disorder, simple phobias, and post-traumatic stress disorder. Compared to schizophrenia and depression, we know little about the way culture influences anxiety disorders (Draguns, 1994; Guarnaccia, 1997). This may be due to the rare occurrence of "pure" anxiety disorders. Because anxiety often co-occurs with other disorders such as depression (Sartorius et al., 1996), it may be obscured by these other disorders.

In general, findings from epidemiological studies suggest that groups that are under significant stress have higher prevalence rates of anxiety disorders. The ECA study (Robins & Regier, 1991) found that generalized anxiety disorder was more common among females than males, among individuals of lower income than of higher income, and among African-Americans than White Americans when panic and depression were excluded (Blazer et al., 1991). In a separate analysis of the Los Angeles ECA data, however, Karno and colleagues (1989) found that Mexican-Americans had *lower* rates of generalized anxiety disorder than White Americans. The Mexican American Prevalence and Services Survey (MAPSS) (Vega et al., 1998) found further differences in prevalence rates for anxiety disorder among specific Mexican-American groups. The lowest rates of "any anxiety disorder" were found for recent Mexican immigrants (7.6%); a higher rate was found for immigrants who lived in the United States for 13 years or more (17.1%), and the highest rate was found for U.S.-born Mexicans (24.1%), which was similar to the rate for the entire NCS sample (25.0%). Vega and colleagues (1998) propose that traditional aspects of Mexican culture may protect individuals from these disorders.

Although the NCS study also found sex differ-

differences in
instance, some
tures place a
ıer social rela-
occurrence of
er, argue that
milar rates in
ecause mental
Asian cultures,
gnosed as such

ɔrders are gen-
worry and ap-
lo, 1998). Spe-
ive-compulsive
bias, and post-
ed to schizo-
ittle about the
isorders (Dra-
ıis may be due
iety disorders.
vith other dis-
s et al., 1996),
disorders.
idemiological
under signifi-
ates of anxiety
& Regier, 1991)
rder was more
s, among indi-
ıigher income,
White Ameri-
were excluded
ınalysis of the
Karno and col-
an-Americans
iety disorder
an American
APSS) (Vega
ces in preva-
nong specific
west rates of
nd for recent
gher rate was
in the United
ınd the highest
icans (24.1%),
he entire NCS
ıes (1998) pro-
exican culture
disorders.
und sex differ-

ences in rates of generalized anxiety disorder, none of the ethnic differences found in the ECA study emerged. Although there are many possible explanations for the discrepancy in findings between the ECA and NCS studies, it is possible that levels of stress among ethnic groups were less similar during the ECA study than during the NCS study. This possibility is consistent with findings that prevalence rates of depression and related disorders are increasing across the world (Klerman, 1993).

Ethnic differences were also found in prevalence rates of specific anxiety disorders. In the ECA study, African-Americans demonstrated nearly twice the rate of simple phobia and agoraphobia than White Americans (Eaton, Dryman, & Weissman, 1991). In a separate analysis of the Los Angeles ECA data, American-born Mexicans had higher rates of simple phobia and agoraphobia than White Americans or immigrant Mexican-Americans (Karno and colleagues, 1989). These findings were not replicated in the NCS study. In both the ECA and NCS studies, ethnic differences were not found for panic disorder; however, across ethnic groups, females demonstrated higher rates of panic disorder than males. Differences in rates of obsessive-compulsive disorder were also found among ethnic American populations in the ECA study. Specifically, rates of obsessive-compulsive disorder were highest among White American females and lowest among Hispanic males (Karno & Golding, 1991).

Although Asian-Americans were not included in either the ECA or NCS studies, other studies (Okazaki, 1997; Uba, 1994; Ying, 1988) suggest that they have higher levels of anxiety symptoms than White Americans, especially those related to social concerns. Because these findings were based on levels of symptomatology, it is unclear whether White and Asian-American groups would differ in prevalence rates of diagnosable anxiety disorders. Regardless, these differences have been attributed to higher levels of acculturative stress and language difficulties among Asian-American populations, although no studies have assessed whether this is in fact the case (Al-Issa & Oudji, 1998).

Very little is known across cultures about prevalence and incidence rates of most types of anxiety, except obsessive-compulsive disorder. Lifetime prevalence rates of obsessive-compulsive disorder are similar across a number of Western and non-Western countries, including Taiwan, Uganda, Puerto Rico, Greece, Italy, New Zealand, Korea, and Hong Kong, and range from 1 to 3% (Weissman et al., 1994; Staley & Wand, 1995).

In summary, cultural and ethnic variation have been found in prevalence rates of general anxiety disorder and specific phobias. These differences have been attributed to cultural and ethnic differences in life circumstances and stress. Prevalence rates for disorders such as panic disorder and obsessive-compulsive disorder, however, demonstrate few cultural and ethnic differences. Because relatively few studies have examined the prevalence rates of anxiety disorders across cultural and ethnic groups, more studies are needed before more definitive statements can be made.

Substance Abuse and Dependence. Substance abuse refers to the overuse of alcohol and/or drugs that results in harmful physical, social, legal, or interpersonal consequences; substance dependence is marked by continued use of alcohol or other drugs, despite these consequences. The WHO has argued that an individual's cultural context must be considered when diagnosing an alcohol problem. For a drinking problem to exist, individuals must drink more than is considered acceptable by their culture, must drink during times that are not culturally acceptable, and must drink to the extent that their health and social relationships are harmed (WHO, 1975). Obviously, these criteria can be applied to other substances as well. Like anxiety, there is relatively little cross-cultural work on substance abuse and dependence. In part, this may be because alcoholism and other forms of substance abuse have been considered actual diseases only in the past few decades (Bennett, Janca, Grant, & Sartorius, 1993; Caetano, 1989). Therefore, we expect to see more cross-cultural work on alcoholism and substance abuse and dependence in the near future.

Ethnic differences in rates of alcohol consumption have been found. However, these studies received much criticism (Trimble, 1991). Within the United States, Native Americans have the highest alcohol consumption rate, followed by White Americans, African-Americans, and Hispanic-Americans (Baxter, Hinson, Wall & McKee, 1998). Among Native American tribes, there is considerable variation in alcohol consumption: May (1982) found that whereas a minority of Navajo (30%) reported drinking during the last year, a majority of Ojibwa (84%) reported drinking during the last

year. White Americans tend to use more non-alcoholic recreational drugs than other ethnic groups, except inhalants and cocaine (Baxter, Hinson, Wall & McKee, 1998). Weatherspoon, Danko, and Johnson (1994) found that Koreans living in Korea drink more than Chinese living in Taiwan; however, these differences did not carry over to Korean-Americans and Chinese-Americans living in Hawaii. Across cultural groups, men engage in greater substance use than women (Baxter, Hinson, Wall & McKee, 1998).

It is unclear whether cultural and ethnic differences in consumption rates of alcohol and other substances translate into different prevalence rates for substance abuse and dependence (Trimble, 1991). Evidence from cross-cultural studies of alcohol consumption suggests they do not. Cultures that have the most severe alcohol-related problems actually have the lowest rates of alcohol consumption (Al-Issa, 1995). Cockerham, Kunz, & Lueschen (1989) found that whereas for Americans, alcohol use was associated with depression, for West Germans (who have higher levels of alcohol consumption), it was not. Thus, it appears that cultural attitudes and norms regarding drinking influence the occurrence of alcoholism. Grant and Harford (1995) also found that within the United States, the relationship between alcohol abuse and depression was stronger for females and African-Americans than for males and non-African-American groups. Thus, drinking may also be a form of coping with life stress.

Interestingly, for some Hispanic groups, alcohol consumption is not related to acculturative stress. For example, Caetano (1994) found that the more acculturated to mainstream American culture Hispanic women were, the more they engaged in drinking. However, these higher alcohol consumption rates were related to more positive associations with drinking rather than to higher levels of acculturative stress (Cervantes et al., 1991). Specifically, American-born Mexicans associated drinking with social pleasure, assertiveness, elevated mood, decreased tension, and disinhibition (Caetano, 1994; Cervantes et al., 1991; Gilbert, 1991). These findings suggest that for Mexican groups, acculturating to American cultural norms may render alcoholism more culturally and socially acceptable behavior. The MAPSS figures (Vega et al., 1998) support this prediction: Rates of alcohol dependence were lowest for recent immigrants (8.6%), higher for immigrants residing in the United States for 13 years or more (10.4%), and highest for U.S.-born Mexican-Americans (18.0%). The latter rates were most similar to the NCS U.S. National sample (15.1%).

In summary, most major mental disorders occur across cultures. Cases of schizophrenia, depression, anxiety, and substance abuse have been found in a variety of cultural and ethnic contexts. The prevalence rates of these disorders, however, vary among cultural and ethnic groups. Consistent with Marsella (1987), the prevalence rates of disorders that are more neurologically based (i.e., schizophrenia and bipolar depression) vary less than those that are less neurologically based (i.e., unipolar depression and generalized anxiety). These different prevalence rates may stem from a variety of sources. They may reflect greater exposure to life stress for some groups than others. Interestingly, several studies (Vega et al., 1998; Ying et al., 2000) have found that groups presumed to be under greater environmental stress (e.g., minority groups and recent immigrants) do *not* demonstrate higher rates of affective disorders. Another possibility is that cultures vary in how syntonic or dystonic specific disorders are with particular cultural values and beliefs. For example, the emphasis placed on interpersonal relationships in many Asian and Latino cultures may serve as a buffer against depression and explain why Mexican and Taiwanese nationals demonstrate lower levels of depression than their American counterparts. Yet another possible explanation is that the expression and meaning of symptoms related to major mental disorders may be culturally shaped. As a result, these symptoms may not be easily classified by Western diagnostic systems. We discuss these latter two possibilities next.

Does Culture Influence the Expression of Symptoms?

Both the biomedical and cultural idioms of distress perspectives acknowledge that culture may influence the expression of symptoms. For example, culture may influence the frequency with which specific symptoms are expressed. Biomedical perspectives view cultural differences in symptoms as peripheral aspects of universal syndromes. Cultural idioms of distress perspectives, however, view such differences as evidence that the disorders themselves are distinct.

Schizophrenia. Findings from the WHO study revealed interesting cultural variation in schizophrenic symptoms. Although schizophrenic patients of "developed" and "developing" countries reported having their thoughts stopped, taken away, "read" by alien agents, and "broadcast" publicly, the relative frequency of other symptoms varied across cultures. In "developed" countries, patients were more likely to manifest depressive affect, whereas in "developing" countries, patients were more likely to experience visual hallucinations (Jablensky, 1989). The latter findings were consistent with those of Ndetei and Vadher (1984), which suggest that auditory and visual hallucinations were more common in African, West Indian, and Asian schizophrenic groups than in English (i.e., from England) schizophrenic groups.

Despite the fact that the WHO study is the most widely cited cross-cultural study of schizophrenia, critics argue that the differences between "developed" and "developing" countries in the WHO study are at most speculative (Edgerton & Cohen, 1994). These critics argue that the WHO study did not measure specific cultural variables, wrongly assumed that countries within the "developing" and "developed" groups were more similar than different, and did not provide any compelling explanations for the cultural differences found (Edgerton & Cohen, 1994). More recent studies have provided clearer cultural explanations for cultural differences in symptomatology. For example, Tateyama, Asai, Hashimoto, Bartels, and Kasper (1998) compared schizophrenic patients (according to ICD-9 criteria) in Tokyo, Vienna, and Tubingen matched by sex, duration of illness, and mean age at onset and on admission. They found that across the three cities, similar percentages of patients reported having delusions (89.5%, 91.1%, and 87.3%, respectively). Furthermore, there were no cultural differences in the frequency of delusions of persecution/injury or of grandeur. City differences emerged in delusions of "belittlement" (e.g., being dead, feeling guilty or sinful), which were attributed to cultural differences in religion. Specifically, non-Christian Tokyo patients reported fewer delusions regarding guilt and sin than patients from European cities who were more influenced by Christianity. Not surprisingly, the specific religious figures in the delusions were culture-specific: whereas patients of European descent spoke of "Jesus Christ" or "The Father of Europe," Tokyo patients spoke of "Shakyamuni" or "Nichiren."

Furthermore, when Tateyama, Asai, Hashimoto, Bartels, and Kasper (1998) used a different classification scheme to decompose delusions of persecution/injury, Tokyo patients reported "being slandered by surrounding people" more than Europeans. The authors interpreted this difference as reflecting a greater desire for social approval in Japanese than in Western cultures. In a similar vein, Phillips, West, and Wang (1996) observed that Chinese schizophrenic patients (according to DSM criteria) are more likely to manifest "erotomania," the delusion of being loved by another person from afar, than Western patients. They also attribute these differences to cultural factors: in general, Chinese may be more concerned with social approval and have greater restrictions on sexual expression than Westerners.

Other studies conducted before the WHO study proposed that cultural values and beliefs influenced the expression of schizophrenia. For example, Opler and Singer (1956) predicted that Irish and Italian patients would differ in their schizophrenic symptoms because of cultural differences in their expression of emotion and views of sex, and in which parent assumed the dominant role in the home. Their findings supported their predictions for a male sample and were subsequently replicated in a female sample by Fantl and Schiro (1959). For example, consistent with notions that Italians accept more emotional expression and impulsiveness than the Irish, these researchers found greater behavioral problems such as impulsiveness, open rebellion and physical assault among Italian patients than Irish patients. Unfortunately, these studies relied primarily on diagnoses that were not based on standard classification criteria; therefore, it is unclear whether members of the cultural groups would be diagnosed similarly according to ICD or DSM criteria. However, Enright and Jaekle (1961) compared Japanese and Filipino patients in Hawaii who were diagnosed with "schizophrenic reaction, paranoid type" according to DSM criteria and also found ethnic differences in symptomatology that were consistent with cultural differences in emotional expression and control. Filipino patients were more expressive, less restrained, and exerted more primary than secondary control compared to Japanese patients.

Affective Disorders. Cultural differences in the expression of bipolar disorder have been documented. For example, Mukherjee and colleagues

(1983) found that African-American and Hispanic patients with bipolar disorder manifested more auditory hallucinations than White patients. As a result, they were more frequently misdiagnosed with schizophrenia than White patients. Most research, however, has focused on cultural expressions of unipolar depression.

As with schizophrenia, the WHO conducted a study in the 1970s to examine whether the symptoms of unipolar depression varied cross-culturally (Sartorius, Jablensky, Gulbinat, & Emberg, 1980). This study examined unipolar depression in 573 patients from Canada, Iran, Japan, and Switzerland, using the WHO Standardized Assessment of Depressive Disorders (SADD). Across sites, depressive patients demonstrated a "core" profile of depressive symptoms that included sadness, joylessness, anxiety and tension, lack of energy, loss of interest, inability to concentrate, and feelings of worthlessness. Beiser, Cargo, & Woodbury (1994) also found evidence of a core constellation of depressive symptoms in a community sample of 1348 Southeast Asian refugees and 319 Canadians. Participants completed questionnaires that contained items assessing depression, anxiety, and somatization, as well as items that tapped into culture-specific idioms of distress. Using grade-of-membership analysis, Beiser et al. (1994) found that for both Southeast Asians and Canadians, items loaded into three distinct categories: Major Depression, Depression with Panic, and Subclinical Depression.

Other evidence in support of the universality of depressive symptoms comes from studies of "culturally bound syndromes." Increasingly, researchers find that syndromes that were previously considered "culturally bound" resemble depressive disorders. For example, "dhat syndrome" in Indian culture, marked by the belief that semen is being lost, was initially regarded by Wig in 1960 as a culturally bound syndrome; however, recent work suggests that it is strongly associated with depressed mood, fatigue, and the DSM-III-R diagnosis of depression (Mumford, 1996). Similarly, "hwa-byung," considered a "Korean folk illness" marked by multiple somatic and psychological symptoms, is also strongly associated with DSM-III diagnoses of major depression (Lin et al., 1992).

Cultural variation has been found in the frequency of specific depressive symptoms, however. For example, the WHO study found that feelings of guilt and self-reproach were more frequently reported in Western countries than in non-Western countries (Sartorius et al., 1980). As in schizophrenia, the lower frequency of guilt-related symptoms has been attributed to cultural differences in religious traditions. Hamdi, Amin, and Abou-Saleh (1997)'s findings were consistent with those of the WHO study. Although the general disorder of endogenous depression exists in Arab culture, the loss of libido, a distinct quality of depressed mood, and feelings of guilt are less common in Arab than in Western cultures. Again, these differences may be related to different religious and cultural traditions among the ethnocultural groups.

Other differences have been found between members of Asian and Western cultures. Members of Asian cultures have been described as "somatizing" their depressive symptoms more than members of Western cultures (Kleinman, 1986). This may be particularly true for Chinese samples. Ying and colleagues (2000) found that compared to Chinese Americans, Chinese who lived in Taiwan reported more somatic symptoms of depression (as assessed by the Center for Epidemiological Studies Depression Scale), despite no differences between the two groups in overall levels of depressive symptoms. Various hypotheses were posited to explain this cultural difference. Compared to their Western counterparts, Asians have been described as using more somatic terms to describe their emotional states (Tung, 1994), as believing that somatic complaints are a more culturally appropriate way to present their distress (Kleinman, 1986), and as suffering from a disorder (i.e., neuraesthenia) that is distinct from depression (Ying et al., under review). Some recent evidence, however, suggests that Asian-Americans may not somatize more than White Americans. For example, Zhang, Snowden, and Sue (1998) found that Asian-Americans and White Americans in the ECA data for the Los Angeles community reported similar levels of somatic discomfort.

Anxiety Disorders. Cultural differences in the expression of anxiety have been documented. For instance, although posttraumatic stress disorder (PTSD) can be diagnosed in American populations and Southeast Asian refugees (Carlson & Rosser-Hogan, 1994), clinicians and researchers have found higher levels of dissociation among Southeast Asian refugees with PTSD (Carlson & Rosser-Hogan, 1994; Guarnaccia, 1997; Kirmayer, 1996). This may be due to the greater cultural acceptance of dissociative states in Southeast

Asian culture (Lewis-Fernandez, 1998). Similarly, among many African-American populations, isolated sleep paralysis is associated with anxiety. In some cases, these cultural expressions of anxiety were misinterpreted as psychotic symptoms and diagnosed as such (Friedman et al., 1994; Williams & Chambless, 1994).

Most studies have focused on the way culture influences the causes and content of anxiety, which may be related to specific cultural norms and values. For instance, the emphasis on interpersonal harmony and appropriate social behavior in many Asian cultures may result in distinct social triggers of anxiety. In Japan, allocentricism, issues of amae (i.e., dependence), the denial of the self, and the importance of harmonious interpersonal relationships (Russell, 1989) result in the existence of "taijin kyofusho." "Taijin kyofusho" is marked by fear that one's body is displeasing or offensive to others, fear of eye-to-eye confrontation, fear of giving off an offensive odor, and fear of having unpleasant facial expressions (Tanaka-Matsumi, 1979). Although "taijin kyofusho" has been compared to social phobia in the United States, the two disorders involve considerably different fears. Whereas social phobia is a fear of strangers and people, "taijin kyofusho" is a fear that one might not be acceptable to others (Russell, 1989). Moreover, many of the fears of social phobics are different from those harbored by sufferers of "taijin kyofusho" (Russell, 1989). Cultural differences also occur in the content of specific obsessions and compulsions. For example, in many cultural contexts, the content of obsessions and compulsions is related to the dominant religion (Al-Issa & Oudji, 1998).

Substance Abuse and Dependence. Almost no studies have examined how the expression of alcoholism and other forms of substance abuse vary across cultures. Studies are needed to fill this gap in the literature.

In summary, cultural values and beliefs, views of emotion, concerns about social relationships, and religious traditions appear to influence the expression of symptoms associated with major mental disorders.

Does Culture Influence the Meaning of Mental Illness?

Most of the research reviewed until now was conducted using translated Western instruments and classification systems by investigators who view mental illness from a biomedical perspective. Proponents of cultural idioms of distress perspectives argue that mental illness cannot be separated from the cultural context in which it occurs. The cultural context may shape the meaning and subjective experience of mental illness, which may influence its prognosis.

Schizophrenia. Even though schizophrenic symptoms are similar across cultures, evidence suggests that the meaning that cultural and ethnic groups attach to these symptoms may differ. For example, Jenkins (1997) asked schizophrenic and depressed Latino and European-Americans who lived in Los Angeles to describe their "life situations." She found that European-Americans, particularly those with schizophrenia, were more likely to characterize their life situations in terms of mental illness than Latinos. Latinos, on the other hand, particularly those with schizophrenia, were more likely to describe their life situations in terms of "nervios," or nerves. "Nervios" is a culturally acceptable way of describing emotional distress in Latino cultures that imparts sympathy onto the suffering person (Jenkins, 1997). Thus, because Latino culture may view mental illness more sympathetically, Latinos who suffer from mental illness may be less alienated from their society and therefore, demonstrate better prognoses than their European-American counterparts. Similarly, based on interview data with schizophrenic patients and their families in Sri Lanka, Waxler (1979) found that the social and clinical outcome of Sri Lankan patients 5 years after their first hospital admission was better than that of schizophrenic patients in Denmark and Russia. Waxler attributes these findings to differences across the cultures in the meanings of deviance and mental illness. Deviance and mental illness are more culturally accepted in Sri Lanka than in Denmark or Russia.

Other studies suggest that individuals with schizophrenia also do better (e.g., are hospitalized less often) in cultures that view the self as dynamic and that afford individuals opportunities to move easily between reality and fantasy (Corin, 1990; Estroff, 1989). Presumably, these cultures give individuals with schizophrenia a "way of being" that promotes their mental health (Corin, 1990).

Affective Disorders. Most research on the cultural meaning of affective illness has focused on unipolar depression. Findings from these studies suggest that the cultural context shapes the way specific depressive symptoms are understood. For

example, although "dhat syndrome" in India resembles depression, it exists in a cultural context that views semen as the vital source of male physical and mental energy (Mumford, 1996).

Ying (1988) provides additional evidence that cultural contexts influence conceptions of depression. She found that for a Chinese-American community sample, somatic and affective symptoms of depression were inseparable constructs, whereas for a White American community, they were distinct constructs. The mixing of somatic and affective symptoms is consistent with Chinese notions that the mind and body are one. Similarly, Ying et al. (2000) found that affective and somatic symptoms were inseparable for Chinese college students who lived in Taiwan; however, they were separable factors for Chinese-Americans who lived in the United States. Thus, although depressive symptoms themselves may not be invariant across cultures, how they are viewed and how they relate to each other may.

Anxiety Disorders. Cultural idioms of distress perspectives argue that anxiety symptoms are shaped by the cultural contexts in which they occur. Thus, because cultures differ in the events that trigger anxiety, the meanings of anxiety may vary across cultures. For example, Guarnaccia (1993) found that although "ataque de nervios" resembles depressive and anxious symptoms, it is defined by its triggering event—upsetting or frightening events in the family sphere. Russell (1989) and Tanaka-Matsumi (1979) argue that "taijin kyofusho" is unique to Japanese contexts because it can be understood only in terms of Japanese values and norms. Malgady, Rogler, and Cortes (1996) demonstrate that Puerto Rican adults use cultural idioms of anger (e.g., aggression and assertiveness) to express their depression and anxiety, suggesting that the cultural meanings of depression and anxiety may be different from those of European-American adults.

Substance Abuse and Dependence. Variation among cultures in the meaning of alcohol and substance use may influence consumption rates. For instance, Caetano (1989) found that although African-American, Hispanic, and White American adults in the United States (controlling for differences in income and education) agreed that alcoholism is a disease, the first two groups were more likely than White Americans to view alcoholics as morally weak. These findings are consistent with the ethnic patterns in alcohol consumption described earlier. Sigelman and colleagues (1992) found that Native American schoolchildren were less likely to see alcoholism as serious, saw alcoholics as less responsible for their problems, and viewed alcoholism as a disease more than Hispanic or White American children. These findings are consistent with Pedigo's (1983) assertions that alcohol and substance use and abuse have cultural meanings for Native Americans that render them more culturally acceptable in Native American culture than in White American culture. For instance, Native Americans are more likely to view individuals holistically and therefore to be more accepting and less critical of problem drinking than members of other cultural groups. Furthermore, in some Native American groups, drinking and other forms of substance use are often viewed as ways of coping with past and present stresses. In all likelihood, this explains why alcohol consumption rates are higher in Native American groups than in other ethnic groups in the United States. In other cultural contexts, the use of alcohol and other substances in spiritual and religious ceremonies may also influence the cultural meaning of alcohol and substance consumption.

In summary, cultures vary in their views of mental illness, tolerance of deviant behavior, and conceptions of emotion, the self, and the mind–body relationship. These cultural differences shape the meaning of and social response to mental illness and may influence the course of mental illness.

Do "Culture-Bound" Syndromes Exist?

Throughout this chapter, we referred to "culture-bound syndromes," or syndromes that are found only in one culture. By definition, culture-bound syndromes are more than variants of "universal" disorders and are determined by the specific beliefs and practices of a particular culture (Ahktar, 1988). Originally, "culture-bound" syndromes were limited to syndromes observed in non-Western cultures, but more recent modifications of the term acknowledge that certain syndromes may occur only in Western cultures. Among these is multiple personality disorder (MPD). Although MPD is extremely rare in the United States, in Japan, it is virtually nonexistent. Takahashi (1990) found that among all inpatients in a Japanese hospital from 1983–1988, not one diagnosis of MPD was made, based on DSM-III and DSM-III-R criteria. Takahashi argues that MPD is inconsistent with Japanese cultural norms.

1998). For example, although African-American and Hispanic clients with affective disorders often report more delusions and hallucinations than their White American counterparts, this may not hold for a specific African-American or Hispanic individual. It is possible that under specific circumstances, one's cultural heritage is less relevant to one's symptoms than other influences, such as one's socioeconomic status. Therefore, a critical aspect of diagnosis, especially with patients of different cultural backgrounds, is assessing the patients' cultural history, cultural identity and orientation, and subjective experience of culture (Dana, 1998).

Therapist and Client Interactions. The current DSM-IV contains guidelines for conducting a "cultural formulation," or assessing how cultural factors influence a client's psychology (American Psychiatric Association, 1994). These guidelines also emphasize the importance of assessing the cultural aspects of the therapist–client relationship. Cultures vary in their emphasis on and expectations of interpersonal relationships. Clinicians' ability to establish rapport with clients of different cultural backgrounds may hinge on their knowledge of the clients' cultural expectations for the therapist–client relationship. In some cases, this rapport is critical. For example, an overwhelming majority of Asian-American patients discontinue mental health treatment after the first session. These drop-out rates, however, are significantly reduced when the therapist has the same ethnocultural background as the client (Sue et al., 1991). Similarly, Takeuchi, Sue, and Yeh (1995) found that in Los Angeles, Asian-American, African-American, and Mexican-American patients were more likely to continue in mental health programs if the programs were oriented toward their specific ethnic heritage.

Culture may influence different aspects of the clinician–patient interaction. First, culture may influence nonverbal communication (e.g., interpersonal space, body movement, paralanguage, eye contact). For example, in Asian cultural groups, clinicians are considered authority figures, and therefore, clients may avert their gaze as an expression of deference and respect. This behavior is a culturally appropriate response, rather than an indication of abnormal interpersonal behavior. Second, culture may influence expectations of therapist credibility (e.g., expertise and trustworthiness). Certain groups may explicitly inquire about clinicians' credentials or may require demonstration of clinical expertise before engaging in treatment. Again, this may be considered a culturally appropriate response rather than an anomalous response to treatment. Third, culture may influence expectations of the therapist–client relationship. For example, whereas some cultural groups may expect a formal interaction style between clinician and client, other cultural groups may expect an informal interactional style (Sue & Sue, 1990). In these cases, patients may expect clinicians to share personal information as a way of demonstrating their trustworthiness. Finally, cultural groups may vary in their exposure to and experience with mental health services; therefore, patients may require explicit education about the process of and regulations related to treatment.

Cultural Adaptations of Treatment. The most popular treatments for mental disorders in psychiatric settings were developed for use with mainstream European-American populations. Many clinicians have recommended ways of adapting Western treatments for culturally diverse populations. We discuss a few of these adaptations here.

Many Western treatments must be adapted for culturally diverse populations because their basic cultural assumptions may not apply to non-Western cultural groups. For example, Randall (1994) argues that the concepts of time and self that underlie cognitive therapy stem from a Western European cultural tradition that may differ for ethnic clients. Minority clients from cultures in which time is less salient and concepts of the self are more sociocentric than in Western cultures may not do as well in cognitive therapy. Randall (1994) proposes changes to traditional forms of cognitive therapy that may make it more relevant for one such cultural group, African-American women. Even in medication treatments, research has demonstrated that "standard" dosages of psychotropic medications must be modified when administered to specific ethnic groups. For example, Lin, Poland, and Lesser (1986) found that Asian-American patients often require only half of the standard "European-American" dosage of psychotropic medications.

Other adaptations include greater involvement of the family in treatment. In cultures that emphasize familialism, treating the individual without the family may be counterproductive and culturally inappropriate. In addition, when working with members of different cultural groups, clinicians

often must employ interpreters. In these cases, culturally sensitive nonverbal communication is even more critical in developing rapport with the client. Moreover, clinicians must develop a positive working relationship with the interpreter before obtaining rapport with the client. Finally, Western forms of treatment may have to work in collaboration with non-Western forms of treatment. Patients may be using traditional medicines or seeking the help of traditional healers while they are seeking treatment in Western psychiatric settings.

In summary, when working with individuals of cultural backgrounds different from one's own, it becomes imperative that clinicians entertain hypotheses that account for cultural differences at all stages of diagnosis and treatment. The extent to which cultural considerations should be included in diagnosis and treatment, however, depends on the specific individual.

Future Research Directions in Cross-Cultural Psychopathology

During the past few decades, significant advances have been made in studying psychopathology across cultures. However, after reviewing the literature, what becomes even more apparent is the dire need for future research. Thus far, we have reviewed studies that provide some answers to basic questions about psychopathology across cultures. Next, we discuss issues that must be addressed in future research to advance our understanding and treatment of psychopathology across cultures.

Methodological Issues

To gain a more comprehensive understanding of cultural influences on psychopathology, future empirical studies must use more sophisticated measures of culture, employ multiple methods of assessment, and integrate qualitative and quantitative research methods.

More Sophisticated Measurement of Cultural Variables. A common critique of cross-cultural studies of psychopathology is their poor measurement of cultural variables. Most studies assume that individuals who reside in specific countries also represent the cultural values and beliefs associated with that country. For example, in epidemiological studies of mental disorders across countries, national differences in incidence and prevalence rates are attributed to cultural factors. Only by explicitly measuring cultural factors can we determine whether national differences are indeed due to culture. Thus, future studies of the incidence and prevalence of mental disorders across cultures or of cultural influences on symptom expression should explicitly measure the cultural variables of interest and then examine how they relate to the occurrence and expression of psychopathology. These cultural variables include individualism–collectivism, cultural orientation/acculturation, and views of mental illness.

Multiple Methods of Assessment. Most cross-cultural studies of psychopathology rely on self-report data. Although self-report data are invaluable, they are also vulnerable to a number of biases, including self-presentation biases, unreliability, and contextual demands. Self-report data become even less reliable when collected across cultures. Given that the symptoms of mental disorder span various domains—cognitive, behavioral, and physiological—our assessments of psychopathology should reflect such variation. Thus, future studies should include physiological and behavioral assessments.

Examples of research that attempts to integrate physiological and cultural aspects of psychopathology are studies of the "psychobiology of ethnicity" (Lin, Poland, & Nakasaki, 1993). These studies have found ethnic differences in responses to psychotropic medications. Hispanic patients require less antidepressant medication and report more side effects at lower dosages than White patients (Marcos & Cancro, 1982; Mendoza, Smith, Poland, Lin, & Strickland, 1991). African-Americans respond better and more rapidly to tricyclic antidepressants than Whites (Lawson, 1986; Silver et al., 1993). Although studies have attempted to disentangle cultural (Smith, Lin, & Mendoza, 1993) and biological influences (Silver, Poland, & Lin, 1993) on responses to medication, more research is needed.

Integration of Qualitative and Quantitative Methods. A variety of methods has been used to study cultural variation in psychopathology, ranging from smaller scale ethnographic interviews to larger scale epidemiological studies. Each method has its advantages and disadvantages. Therefore,

multiple methods should be used. This may be particularly important if specific cultural groups respond more to one method than another. For instance, cultural groups that value personal contact may respond in more truthful and thoughtful ways during an interview than they would to a questionnaire, whereas cultural groups that are concerned with self-presentation may be more likely to respond truthfully to a questionnaire than to an interviewer. Thus, converging findings from studies that employ multiple research methods will allow a comprehensive understanding of the way culture shapes psychopathology.

Conceptual Issues

Future studies must address the following conceptual issues to advance our understanding of psychopathology across cultural contexts.

Cultural Differences in Response Styles or Psychopathology? Cultural differences exist in participants' responses to assessment instruments. For example, cultural differences exist in using standard rating scales in questionnaires and interview schedules. Compared to members of European-American culture, members of Asian cultures have been described as using the middle of rating scales (Chen, Lee, & Stevenson, 1995), whereas members of Latino cultures have been described as using the extreme ends of the scale. Thus, cultural differences in the reported intensity of specific symptoms may reflect culturally normative response styles rather than true differences in symptomology.

Cultural groups may also vary in their responses to particular treatment modalities. For instance, work by Hall and colleagues (1994) showed that for English-speaking, White smokers, adding a mood management component to a smoking cessation group intervention substantially increases quit rates for smokers with a history of major depression. However, Muñoz and colleagues (1997) found that this treatment was not effective with a Spanish-speaking group because they did not attend the group interventions. When Muñoz and colleagues (1997) conducted their intervention through the mail, the treatment was as effective for Spanish speakers as the group intervention was for English-speaking White Americans. Cultural groups may also respond more to specific instruments than others. For example, Vietnamese women reported fewer depressive symptoms on the Diagnostic Interview Schedule than on the Edinburgh Postnatal Depression Scale or the General Health Questionnaire-30 (Matthey, Barnett, & Elliott, 1997).

It should be noted that although cultural differences in responses to questionnaires may exist, relationships across variables may still hold across cultural groups. For example, Spanish-speaking respondents scored much higher than English-speaking respondents on the Personal Beliefs Inventory (PBI), a self-report measure of what Albert Ellis termed "irrational beliefs" related to depression. In particular, Spanish speakers endorsed items regarding the desirability of being loved ("Everyone needs the love and approval of those persons who are important to them,") and of being accepted by friends and family ("What others think of you is most important") more than English speakers. In Albert Ellis' individualistic New York culture, high endorsement of these items was culturally inappropriate; however, in collectivistic Latino culture, high endorsement of these items was culturally desirable. Regardless, for both cultural groups, scores on the PBI were positively correlated with depression (Muñoz, 1986).

Do Mental Disorders Impair Psychological Functioning Similarly Across Cultures? Previous studies of psychopathology across cultures have focused on cultural variation in incidence rates and symptom presentation. This work has advanced our knowledge of the existence of mental disorders across cultures. The next step in cultural studies of psychopathology is to examine the impact of such disorders on "basic" psychological processes related to emotion, memory, and cognition. Such studies will elucidate whether the mechanisms that underlie specific symptoms are the same across cultures.

Are the Clinical Recommendations Regarding the Treatment of Clients of Different Cultural Backgrounds Effective? Volumes of clinical recommendations regarding the assessment and treatment of clients of different cultural backgrounds have been written (Sue & Sue, 1990; Tseng & Streltzer, 1997; Pedersen et al., 1996). In this chapter, we reviewed only a few recommendations. Unfortunately, we know very little about the way clinicians implement these clinical recommendations and whether they are actually effective (Dana, 1998). Clearly, such

knowledge would shape our future clinical interventions. Therefore, empirical studies of the implementation and effectiveness of culturally sensitive treatments are needed.

Conclusion

In this chapter, we examined cultural influences on various aspects of psychopathology—assessment, incidence and prevalence rates, symptom expression, meaning, prognosis, and treatment. Our review illustrates what we know and what we still have to learn about the cultural shaping of mental illness. We look forward to future research that will advance our understanding of human processes and also enhance our ability to treat and live with mental illness across cultures.

References

Akhtar, S. (1988). Four culture-bound psychiatric syndromes in India. *International Journal of Social Psychiatry, 34*, 70–74.

Al-Issa, I. (1995). Culture and mental illness in an international perspective. In I. Al-Issa (Ed.), *Handbook of culture and mental illness: An international perspective* (pp. 3–49). Madison, CT: International Universities Press.

Al-Issa, I., & Oudji, S. (1998). Culture and anxiety disorders. In S. S. Kazarian & D. Evans (Eds.), *Cultural clinical psychology: Theory, research, and practice* (pp. 127–151). New York: Oxford University Press.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Baxter, B., Hinson, R. E., Wall, A., & McKee, S. A. (1998). Incorporating culture into the treatment of alcohol abuse and dependence. In S. S. Kazarian & D. R. Evans (Eds), *Cultural clinical psychology: Theory, research, and practice* (pp. 215–245). New York: Oxford University Press.

Beiser, M., Cargo, M., & Woodbury, M. A. (1994). A comparison of psychiatric disorder in different cultures: Depressive typologies in Southeast Asian refugees and resident Canadians. *International Journal of Methods in Psychiatric Research, 4*, 157–172.

Bennett, L. A., Janca, A., Grant, B. F., & Sartorius, N. (1993). Boundaries between normal and pathological drinking: A cross-cultural comparison. *Alcohol Health and World, 17*, 190–195.

Birchwood, M., Cochrane, R., Macmillan, F., Copestake, S., et al. (1992). The influence of ethnicity and family structure on relapse in first-episode schizophrenia: A comparison of Asian, Afro-Caribbean, and White patients. *British Journal of Psychiatry, 161*, 783–790.

Blazer, D., Hughes, D., George, L. K., Swartz, M., & Boyer, R. (1991). Generalized anxiety disorder. In L. N. Robins & D. A. Regier (Eds.), *Psychiatric disorders in America: The Epidemiological Catchment Study* (pp. 180–203). New York: The Free Press.

Brown, G., Birley, J. L. Y., & Wing, J. (1972). Influence of family life on the course of schizophrenic disorders: A replication. *British Journal of Psychiatry, 121*, 241–258.

Butcher, J. N. (1982). Cross-cultural research methods in clinical psychology. In P. Kendall & J. N. Butcher (Eds.), *Handbook of research methods in clinical psychology* (pp. 273–310). New York: Wiley.

Butcher, J. N. (1996). *International adaptations of the MMPI-2*. Minneapolis: University of Minnesota.

Butcher, J. N., Coelho, S., & Tsai, J. L. (in press). International adaptations of the Minnesota Multiphasic Personality Inventory and the MMPI-2. In P. F. Merenda, R. K. Hambleton, & C. D. Spielberger (Eds.), *Adapting educational and psychological tests for cross-cultural assessment*. Mahwah, NJ: Erlbaum.

Butcher, J. N., Dahlstrom, W. G., Graham, J. R., Tellegen, A. M., & Kaemmer, B. (1989). *MMPI-2: Manual for administration and scoring*. Minneapolis: University of Minnesota Press.

Caetano, R. (1989). Concepts of alcoholism among Whites, Blacks, and Hispanics in the United States. *Journal of Studies on Alcohol, 50*, 580–582.

Caetano, R. (1994). Drinking and alcohol-related problems among minority women. *Alcohol Health and Research World, 18*, 233–241.

Carlson, E. B., & Rosser-Hogan, R. (1994). Cross-cultural responses to trauma: A study of traumatic experiences and posttraumatic symptoms in Cambodian refugees. *Journal of Traumatic Stress, 7*, 43–58.

Castillo, R. J. (1998). *Meanings of madness*. Pacific Grove, CA: Brooks/Cole.

Cervantes, R., Gilbert, M. J., Salgado de Snyder, S. N., & Padilla, A. M. (1991). Psychosocial and cognitive correlates of alcohol use in younger adult immigrant and U.S. born Hispanics. *The International Journal of the Addictions, 25*, 687–708.

Cetingok, M., Chu, C. C., & Park, D. B. (1990). The effect of culture on the sex differences in schizophrenia. *The International Journal of Social Psychiatry, 36*, 272–279.

Chen, C., Lee, S. Y., & Stevenson, H. W. (1995). Response style and cross-cultural comparison of rating scales among East Asian and North American students. *Psychological Science, 6*, 170–175.

Clark, L. A., Watson, D., & Reynolds, S. (1995). Diagnosis and classification of psychopathology: Challenges to the current system and future directions. *Annual Review of Psychology, 46*, 121–153.

Cockerham, W. C., Kunz, G., & Lueschen, G. (1989). Alcohol use and psychological distress: A comparison of Americans and West Germans. *The International Journal of the Addictions, 24*, 951–961.

Corin, E. E. (1990). Facts and meanings in psychiatry. An anthropological approach to the lifeworld of schizophrenics. *Culture, Medicine, and Psychiatry, 14*, 153–188.

Dana, R. H. (1998) (Ed.). *Understanding cultural identity in intervention and assessment*. Thousand Oaks, CA: Sage.

Davison, G. C., & Neale, J. M. (1994). *Abnormal psychology* (6th ed.). New York: Wiley.

Doi, T. (1973). *The anatomy of dependence*. Translated by John Bester. (1st ed.). New York: Harper & Row.

Draguns, J. (1977). Problems of defining and comparing abnor-

mal behavior across cultures. *Annals of the New York Academy of Sciences, 285*, 66–679.

Draguns, J. (1982). Methodology in cross-cultural psychopathology. In Al-Issa (Ed.), *Culture and psychopathology*. Baltimore: University Park Press.

Draguns, J. G. (1994). Pathological and clinical aspects. In L. Adler and U. P. Gielen (Eds.), *Cross-cultural topics in psychology* (pp. 165–177). Westport, CT: Praeger/Greenwood.

Eaton, W. W., Dryman, A., & Weissman, M. (1991). Panic and phobia. In L. N. Robins & D. A. Regier (Eds.), *Psychiatric disorders in America: The Epidemiological Catchment Study* (pp. 155–179). New York: The Free Press.

Edgerton, R. B., & Cohen, A. (1994). Culture and schizophrenia: The DOSMD challenge. *British Journal of Psychiatry, 164*, 222–231.

Egeland, J. A. (1994). An epidemiologic and genetic study of affective disorders among the Old Order Amish. In D. F. Papolos & H. M. Lachman (Eds.), *Genetic studies in affective disorders: Overview of basic methods, current directions, and critical research issues* (pp. 70–90). New York: Wiley.

Enright, J. B., & Jaeckle, W. R. (1961). Ethnic differences in psychopathology. *Social Process, 25*, 71–77.

Estroff, S. E. (1989). Self, identity, and subjective experiences of schizophrenia: In search of the subject. *Schizophrenia Bulletin, 15*, 189–196.

Fabrega, H. (1989). Cultural relativism and psychiatric illness. *Journal of Nervous and Mental Disease, 177*, 415–425.

Fabrega, H. (1989). The self and schizophrenia: A cultural perspective. *Schizophrenia Bulletin, 15*, 277–290.

Fantl, B., & Schiro, J. (1959). Cultural variables in the behaviour patterns and symptom formation of 15 Irish and 15 Italian female schizophrenics. *International Journal of Social Psychiatry, 4*, 245–253.

Friedman, S., Paradis, C. M., & Hatch, M. L. (1994). Issues of misdiagnosis in panic disorder with agoraphobia. In S. Friedman (Ed.), *Anxiety disorders in African-Americans* (pp. 128–146). New York: Springer Publishing.

Fugita, S. S., & Crittenden, K. S. (1990). Towards culture- and population-specific norms for self-reported depressive symptomology. *International Journal of Social Psychiatry, 36*, 83–92.

Gilbert, M. J. (1991). Acculturation and changes in drinking patterns among Mexican-American women: Implications for prevention. *Alcohol Health and World, 15*, 234–238.

Gottesman, I., & Moldin, S. (1997). Schizophrenia genetics at the millennium: Cautious optimism. *Clinical Genetics, 52*, 404–407.

Gottesman, I., & Bertelsen, (1989). Confirming unexpressed genotypes for schizophrenia. *Archives of General Psychiatry, 46*, 867–872.

Grant, B. F., & Harford, T. C. (1995). Comorbidity between DSM-IV alcohol use disorders and major depression: Results of a national survey. *Drug and Alcohol Dependence, 39*, 197–206.

Guarnaccia, P. J. (1993). Ataques de nervios in Puerto Rico: Culture-bound syndrome or popular illness? *Medical Anthropology, 15*, 157–170.

Guarnaccia, P. J. (1997). A cross-cultural perspective on anxiety disorders. In S. Friedman (Eds.), *Cultural issues in the treatment of anxiety*. New York: Guilford.

Guarnaccia, P. J., DeLaCancela, V., & Carrillo, E. (1989). The multiple meanings of ataques de nervios in the Latino community. *Medical Anthropology, 11*, 47–62.

Hall, S. M., Muñoz, R. F., & Reus, V. (1994). Cognitive-behavioral intervention increases abstinence rates for depressive-history smokers. *Journal of Clinical and Consulting Psychology, 62*, 141–146.

Hamdi, E., Amin, Y., & Abou-Saleh, M. T. (1997). Problems in validating endogenous depression in the Arab culture by contemporary diagnostic criteria. *Journal of Affective Disorders, 44*, 131–143.

Hughes, C. C. (1998). The glossary of "culture-bound syndromes" in DSM-IV: A critique. *Transcultural Psychiatry, 35*, 413–421.

Hwu, H. G., Yeh, E. K., Chang, L. Y., & Yeh, Y. L. (1986). Chinese Diagnostic Interview Schedule. II. A validity study estimation of lifetime prevalence. *Acta Psychiatrica Scandinavica, 73*, 348–357.

Jablensky, A. (1989). Epidemiology and cross-cultural aspects of schizophrenia. *Psychiatric Annals, 19*, 516–524.

Jarvis, E. (1998). Schizophrenia in British immigrants: Recent findings, issues, and implications. *Transcultural Psychiatry, 35*, 39–74.

Jenkins, J. H. (1991). Anthropology, expressed emotion, and schizophrenia. *Ethos, 19*, 387–431.

Jenkins, J. H. (1997). Subjective experience of persistent schizophrenia and depression among U.S. Latinos and Euro-Americans. *British Journal of Psychiatry, 171*, 20–25.

Jenkins, J. H., Kleinman, A., & Good, B. J. (1991). Cross-cultural studies of depression. In J. Becker & A. Kleinman (Eds.), *Psychosocial aspects of depression* (pp. 67–99). Hillsdale, NJ: Erlbaum.

Jilek, W. G. (1995). Emil Kraepelin and comparative sociocultural psychiatry. *European Archives of Psychiatry and Clinical Neuroscience, 245*, 231–238.

Jones, R. L. (Ed.). (1996). *Handbook of tests and measurements for Black populations* (Vols. 1–2). Hampton, VA: Cobb & Henry.

Karno, M., & Golding, J. M. (1991). Obsessive-compulsive disorder. In L. N. Robins & D. A. Regier (Eds.), *Psychiatric disorders in America: The Epidemiologic Catchment Area Study* (pp. 204–219). New York: Free Press.

Karno, M., Golding, J. M., Burnam, M., Hough, R. L., et al. (1989). Anxiety disorders among Mexican-Americans and non-Hispanic Whites in Los Angeles. *Journal of Nervous and Mental Disease, 177*, 202–209.

Kessler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshleman, S., Wittchen, H. U., & Kendler, K. S. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. *Archives of General Psychiatry, 51*, 8–19.

Kirmayer, L. (1996). Confusion of the senses: Implications of ethnocultural variations in somatoform and dissociative disorders for PTSD. In A. J. Marsella, M. J. Friedman, E. T. Gerrity, & R. M. Scurfield (Eds.), *Ethnocultural aspects of PTSD: Issues, research, and clinical applications*. Washington, DC: American Psychological Association.

Kleinman, A. (1986). *Social origins of distress and disease: Depression, neurasthenia, and pain in modern China*. New Haven, CT: Yale University Press.

Klerman, G. L. (1993). The postwar generation and depression. In A. Abdu'l-Missagh, H. Ghadirian, & E. Lehmann (Eds.), *Environment and psychopathology* (pp. 73–86). New York: Springer Publishing.

Krause, I. B. (1989). Sinking heart: A Punjabi communication of distress. *Social Science Medicine, 29*, 563–575.

mal behavior across cultures. *Annals of the New York Academy of Sciences, 285*, 66–679.

Draguns, J. (1982). Methodology in cross-cultural psychopathology. In Al-Issa (Ed.), *Culture and psychopathology*. Baltimore: University Park Press.

Draguns, J. G. (1994). Pathological and clinical aspects. In L. Adler and U. P. Gielen (Eds.), *Cross-cultural topics in psychology* (pp. 165–177). Westport, CT: Praeger/Greenwood.

Eaton, W. W., Dryman, A., & Weissman, M. (1991). Panic and phobia. In L. N. Robins & D. A. Regier (Eds.), *Psychiatric disorders in America: The Epidemiological Catchment Study* (pp. 155–179). New York: The Free Press.

Edgerton, R. B., & Cohen, A. (1994). Culture and schizophrenia: The DOSMD challenge. *British Journal of Psychiatry, 164*, 222–231.

Egeland, J. A. (1994). An epidemiologic and genetic study of affective disorders among the Old Order Amish. In D. F. Papolos & H. M. Lachman (Eds.), *Genetic studies in affective disorders: Overview of basic methods, current directions, and critical research issues* (pp. 70–90). New York: Wiley.

Enright, J. B., & Jaeckle, W. R. (1961). Ethnic differences in psychopathology. *Social Process, 25*, 71–77.

Estroff, S. E. (1989). Self, identity, and subjective experiences of schizophrenia: In search of the subject. *Schizophrenia Bulletin, 15*, 189–196.

Fabrega, H. (1989). Cultural relativism and psychiatric illness. *Journal of Nervous and Mental Disease, 177*, 415–425.

Fabrega, H. (1989). The self and schizophrenia: A cultural perspective. *Schizophrenia Bulletin, 15*, 277–290.

Fantl, B., & Schiro, J. (1959). Cultural variables in the behaviour patterns and symptom formation of 15 Irish and 15 Italian female schizophrenics. *International Journal of Social Psychiatry, 4*, 245–253.

Friedman, S., Paradis, C. M., & Hatch, M. L. (1994). Issues of misdiagnosis in panic disorder with agoraphobia. In S. Friedman (Ed.), *Anxiety disorders in African-Americans* (pp. 128–146). New York: Springer Publishing.

Fugita, S. S., & Crittenden, K. S. (1990). Towards culture- and population-specific norms for self-reported depressive symptomology. *International Journal of Social Psychiatry, 36*, 83–92.

Gilbert, M. J. (1991). Acculturation and changes in drinking patterns among Mexican-American women: Implications for prevention. *Alcohol Health and World, 15*, 234–238.

Gottesman, I., & Moldin, S. (1997). Schizophrenia genetics at the millennium: Cautious optimism. *Clinical Genetics, 52*, 404–407.

Gottesman, I., & Bertelsen, (1989). Confirming unexpressed genotypes for schizophrenia. *Archives of General Psychiatry, 46*, 867–872.

Grant, B. F., & Harford, T. C. (1995). Comorbidity between DSM-IV alcohol use disorders and major depression: Results of a national survey. *Drug and Alcohol Dependence, 39*, 197–206.

Guarnaccia, P. J. (1993). Ataques de nervios in Puerto Rico: Culture-bound syndrome or popular illness? *Medical Anthropology, 15*, 157–170.

Guarnaccia, P. J. (1997). A cross-cultural perspective on anxiety disorders. In S. Friedman (Eds.), *Cultural issues in the treatment of anxiety*. New York: Guilford.

Guarnaccia, P. J., DeLaCancela, V., & Carrillo, E. (1989). The multiple meanings of ataques de nervios in the Latino community. *Medical Anthropology, 11*, 47–62.

Hall, S. M., Muñoz, R. F., & Reus, V. (1994). Cognitive-behavioral intervention increases abstinence rates for depressive-history smokers. *Journal of Clinical and Consulting Psychology, 62*, 141–146.

Hamdi, E., Amin, Y., & Abou-Saleh, M. T. (1997). Problems in validating endogenous depression in the Arab culture by contemporary diagnostic criteria. *Journal of Affective Disorders, 44*, 131–143.

Hughes, C. C. (1998). The glossary of "culture-bound syndromes" in DSM-IV: A critique. *Transcultural Psychiatry, 35*, 413–421.

Hwu, H. G., Yeh, E. K., Chang, L. Y., & Yeh, Y. L. (1986). Chinese Diagnostic Interview Schedule. II. A validity study estimation of lifetime prevalence. *Acta Psychiatrica Scandinavica, 73*, 348–357.

Jablensky, A. (1989). Epidemiology and cross-cultural aspects of schizophrenia. *Psychiatric Annals, 19*, 516–524.

Jarvis, E. (1998). Schizophrenia in British immigrants: Recent findings, issues, and implications. *Transcultural Psychiatry, 35*, 39–74.

Jenkins, J. H. (1991). Anthropology, expressed emotion, and schizophrenia. *Ethos, 19*, 387–431.

Jenkins, J. H. (1997). Subjective experience of persistent schizophrenia and depression among U.S. Latinos and Euro-Americans. *British Journal of Psychiatry, 171*, 20–25.

Jenkins, J. H., Kleinman, A., & Good, B. J. (1991). Cross-cultural studies of depression. In J. Becker & A. Kleinman (Eds.), *Psychosocial aspects of depression* (pp. 67–99). Hillsdale, NJ: Erlbaum.

Jilek, W. G. (1995). Emil Kraepelin and comparative sociocultural psychiatry. *European Archives of Psychiatry and Clinical Neuroscience, 245*, 231–238.

Jones, R. L. (Ed.). (1996). *Handbook of tests and measurements for Black populations* (Vols. 1–2). Hampton, VA: Cobb & Henry.

Karno, M., & Golding, J. M. (1991). Obsessive-compulsive disorder. In L. N. Robins & D. A. Regier (Eds.). *Psychiatric disorders in America: The Epidemiologic Catchment Area Study* (pp. 204–219). New York: Free Press.

Karno, M., Golding, J. M., Burnam, M., Hough, R. L., et al. (1989). Anxiety disorders among Mexican-Americans and non-Hispanic Whites in Los Angeles. *Journal of Nervous and Mental Disease, 177*, 202–209.

Kessler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshleman, S., Wittchen, H. U., & Kendler, K. S. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. *Archives of General Psychiatry, 51*, 8–19.

Kirmayer, L. (1996). Confusion of the senses: Implications of ethnocultural variations in somatoform and dissociative disorders for PTSD. In A. J. Marsella, M. J. Friedman, E. T. Gerrity, & R. M. Scurfield (Eds.), *Ethnocultural aspects of PTSD: Issues, research, and clinical applications*. Washington, DC: American Psychological Association.

Kleinman, A. (1986). *Social origins of distress and disease: Depression, neurasthenia, and pain in modern China*. New Haven, CT: Yale University Press.

Klerman, G. L. (1993). The postwar generation and depression. In A. Abdu'l-Missagh, H. Ghadirian, & E. Lehmann (Eds.), *Environment and psychopathology* (pp. 73–86). New York: Springer Publishing.

Krause, I. B. (1989). Sinking heart: A Punjabi communication of distress. *Social Science Medicine, 29*, 563–575.

Krueger, R. F., Caspi, A., Moffitt, T. E., & Silva, P. A. (1998). The structure and stability of common mental disorders (DSM-III-R): A longitudinal-epidemiological study. *Journal of Abnormal Psychology, 107*, 216–227.

Lawson, W. B. (1986). Racial and ethnic factors in psychiatric research. *Hospital and Community Psychiatry, 37*, 50–54.

Lefley, H. P. (1990). Culture and chronic mental illness. *Hospital and Community Psychiatry, 41*, 277–286.

Lewis-Fernandez, R. (1998). A cultural critique of the DSM-IV dissociative disorders section. *Transcultural Psychiatry, 35*, 387–400.

Lin, K. M., & Kleinman, A. M. (1988). Psychopathology and clinical course of schizophrenia: A cross-cultural perspective. *Schizophrenia Bulletin, 14*, 555–567.

Lin, K. M., Lau, J. K., Yamamoto, J., Sheng, Y. P., Kim, H. S., Cho, K. H., & Nakasaki, G. (1992). Hwa-byung: A community study of Korean Americans. *Journal of Nervous and Mental Disease, 180*, 386–391.

Lin, K. M., Poland, R. E., & Lesser, I. M. (1986). Ethnicity and psychopharmacology. *Culture, Medicine, and Psychiatry, 10*, 151–165.

Lin, K. M., Poland, R. E., & Nakasaki, G. (Eds.). (1993). *Psychopharmacology and psychobiology of ethnicity*. Washington, DC: American Psychiatric Press.

Malgady, R. G., Rogler, L. H., & Cortes, D. E. (1996). Cultural expression of psychiatric symptoms: Idioms of anger among Puerto Ricans. *Psychological Assessment, 8*, 265–268.

Manson, S. M. (1995). Culture and major depression: Current challenges in the diagnosis of mood disorders. *Cultural Psychiatry, 18*, 487–501.

Marcos, L. R., & Cancro, R. (1982). Pharmacotherapy of Hispanic depressed patients: Clinical observations. *American Journal of Psychotherapy, 36*, 505–512.

Marsella, A. (1987). The measurement of depressive experience and disorder across cultures. In A. Marsella, R. M. Hirschfeld, & M. M. Katz (Eds.), *The measurement of depression* (pp. 376–397). New York: Guilford.

Martins, C., de Lemos, A. I., & Bebbington, P. E. (1992). A Portuguese/Brazilian study of expressed emotion. *Social Psychiatry and Psychiatric Epidemiology, 27*, 22–27.

Matthey, S., Barnett, B. E. W., & Elliott, A. (1997). Vietnamese and Arabic women's responses to the Diagnostic Interview Schedule (depression) and self-report questionnaires: Cause for concern. *Australian and New Zealand Journal of Psychiatry, 31*, 360–369.

May, P. A. (1982). Substance abuse and American Indians: Prevalence and susceptibility. *The International Journal of the Addictions, 17*, 1185–1209.

Mendoza, R., Smith, M. W., Poland, R. E., Lin, K. M., & Strickland, T. L. (1991). Ethnic psychopharmacology: The Hispanic and Native American perspective. *Psychopharmacology Bulletin, 27*, 449–461.

Mino, Y., Tanaka, S., Inoue, S., Tsuda, T., Babazono, A., & Aoyama, H. (1995). Expressed emotion components in families of schizophrenic patients in Japan. *International Journal of Mental Health, 24*(2), 38–49.

Moscicki, E. K., Rae, D. S., Regier, D. A., & Locke, B. Z. (1987). The Hispanic Health and Nutrition Examination Survey: Depression among Mexican-Americans, Cuban-Americans, and Puerto Ricans. In M. Gaviria & J. D. Arana (Eds.), *Health and behavior: Research agenda for Hispanics* (pp. 145–159). Chicago: University of Illinois.

Mukherjee, S., Shukla, S., Woodle, J., et al. (1983). Misdiagnosis of schizophrenia in bipolar patients: A multiethnic comparison. *American Journal of Psychiatry, 140*, 1571–1574.

Mumford, D. B. (1996). The "Dhat syndrome": A culturally determined symptom of depression? *Acta Psychiatrica Scandinavica, 94*, 163–167.

Muñoz, R. F. (1986). Opportunities for prevention among Hispanics. In R. L. Hough, P. Gongla, V. Brown, & S. Goldston (Eds.), *Psychiatric epidemiology and primary prevention: The possibilities* (pp. 109–129). Los Angeles: University of California Neuropsychiatric Institute.

Muñoz, R. F., Marín, B. V., Posner, S. F., and Pérez-Stable, E. J. (1997). Mood management mail intervention increases abstinence rates for Spanish-speaking Latino smokers. *American Journal of Community Psychology, 25*, 325–343.

Nakane, Y., Ohta, Y., Radford, M., Yan, H., et al. (1991). Comparative study of affective disorders in three Asian countries: II. Differences in prevalence rates and symptom presentation. *Acta Psychiatrica Scandinavica, 84*, 313–319.

Ndetei, D. M., & Vadher, A. (1984). A comparative cross-cultural study of the frequencies of hallucination in schizophrenia. *Acta Psychiatrica Scandinavica, 70*, 545–549.

Neff, J. A., & Hoppe, S. K. (1992). Acculturation and drinking patterns among U.S. Anglos, Blacks, and Mexican-Americans. *Alcohol and Alcoholism, 27*, 293–308.

Okazaki, S. (1997). Sources of ethnic differences between Asian-American and White American college students on measures of depression and social anxiety. *Journal of Abnormal Psychology, 106*, 52–60.

Opler, M. K., & Singer, J. L. (1956). Ethnic differences in behavior and psychopathology: Italian and Irish. *International Journal of Social Psychiatry, 2*, 11–23.

Pedersen, P. B., Draguns, J. G., Lonner, W. J., & Trimble, J. E. (Eds.). (1996). *Counseling across cultures* (4th ed.). Thousand Oaks, CA: Sage.

Pedigo, J. (1983). Finding the "meaning" of Native American substance abuse: Implications for community prevention. *The Personnel and Guidance Journal, 61*, 273–277.

Phillips, M. R., West, C. L., & Wang, R. (1996). Erotomanic symptoms in 42 Chinese schizophrenic patients. *British Journal of Psychiatry, 169*, 501–508.

Randall, E. J. (1994). Cultural relativism in cognitive therapy with disadvantaged African-American women. *Journal of Cognitive Psychotherapy: An International Quarterly, 8*, 195–207.

Robins, L. N., Helzer, J. E., Croughan, J. L., & Ratcliff, K. S. (1981). National Institute of Mental Health Diagnostic Interview Schedule: Its history, characteristics, and validity. *Archives of General Psychiatry, 38*, 381–189.

Robins, L. N., & Regier, D. A. (1991). *Psychiatric disorders in America. The Epidemiological Catchment Area Study*. New York: Free Press.

Robbins, L., & Smith, E. (1983). *The Diagnostic Interview Schedule Disaster Supplement*. St. Louis, MO: Washington University School of Medicine.

Rosenhan, D., & Seligman, M. (1989). *Abnormal psychology* (2nd ed.). New York: W.W. Norton.

Russell, J. G. (1989). Anxiety disorders in Japan: A review of the Japanese literature on Shinkeishitsu and Taijinkyofusho. *Culture, Medicine, and Psychiatry, 13*, 391–403.

Sartorius, N., Jablensky, A., Gulbinat, W., & Ernberg, G. (1980). WHO Collaborative Study: Assessment of depressive disorders. *Psychological Medicine, 10*, 739–79.

Sartorius, N., Ustun, T. B., Lecrubier, Y., & Wittchen, H. U. (1996). Depression comorbid with anxiety: Results for the

WHO study on psychological disorders in primary health care. *British Journal of Psychiatry, 168*(Suppl. 30), 38–43.

Segall, M., Lonner, W., & Berry, J. (1998). Cross-cultural psychology as a scholarly discipline: On the flowering of culture in behavioral research. *American Psychologist, 53*, 1101–1110.

Sigelman, C., Didjurgis, T., Marshall, B., Vargas, F., & Stewart, A. (1992). Views of problem drinking among Native American, Hispanic, and Anglo children. *Child Psychiatry and Human Development, 22*, 265–276.

Silver, B., Poland, R. E., & Lin, K. E. (1993). Ethnicity and the pharmacology of tricyclic antidepressants. In K. M. Lin, R. E. Poland, & G. Nakasaki (Eds.), *Psychopharmacology and psychobiology of ethnicity* (pp. 61–89). Washington, DC: American Psychiatric Press.

Smith, M., Lin, K. M., & Mendoza, R. (1993). "Nonbiological" issues affecting psychopharmacotherapy: Cultural considerations. In K. M. Lin, R. E. Poland, & G. Nakasaki (Eds.), *Psychopharmacology and psychobiology of ethnicity* (pp. 37–58). Washington, DC: American Psychiatric Press.

Staley, D., & Wand, R. R. (1995). Obsessive-compulsive disorder: A review of the cross-cultural epidemiological literature. *Transcultural Psychiatric Research Review, 32*, 103–136.

Sue, D. W., & Sue, D. (1990). *Counseling the culturally different: Theory and practice* (2nd ed.). New York: Wiley.

Sue, S., Fujino, D. C., Hu, L., Takeuchi, D. T., et al. (1991). Community mental health services for ethnic minority groups: A test of the cultural responsiveness hypothesis. *Journal of Consulting and Clinical Psychology, 59*, 533–540.

Takahashi, Y. (1990). Is multiple personality disorder really rare in Japan? *Dissociation: the official journal of the International Society for the Study of Multiple Personality and Dissociation, 3*, 57–59.

Takeuchi, D. T., Chung, R., Lin, K. M., Shen, H., Kurasaki, K., Chun, C. A., & Sue, S. (1998). Lifetime and twelve-month prevalence rates of major depressive episodes and dysthymia among Chinese Americans in Los Angeles. *American Journal of Psychiatry, 155*, 1407–1414.

Takeuchi, D. T., Sue, S., & Yeh, M. (1995). Return rates and outcomes from ethnicity-specific mental health programs in Los Angeles. *American Journal of Public Health, 85*, 638–643.

Tanaka-Matsumi, J., & Marsella, A. (1976). Cross-cultural variation in the phenomenological experience of depression: Word association. *Journal of Cross-Cultural Psychology, 7*, 379–396.

Tanaka-Matsumi, J. (1979). Taijin Kyofusho: Diagnostic and cultural issues in Japanese psychiatry. *Culture, Medicine, and Psychiatry, 3*, 231–245.

Tateyama, M., Asai, M., Hashimoto, M., Bartels, M., & Kasper, S. (1998). Transcultural study of schizophrenic delusions. *Psychopathology, 31*, 59–68.

Trimble, J. E. (1991). Ethnic specification, validation prospects, and the future of drug use research. *The International Journal of the Addictions, 25*, 149–170.

Tsai, J. L., Ying, Y. W., & Lee, P. A. (2000). The meaning of "being Chinese" and "being American": Variation among Chinese American young adults. *Journal of Cross-Cultural Psychology, 31*, 302–322.

Tseng, W. S., & Streltzer, J. (1997). *Culture and psychopathology: A guide to clinical assessment*. New York: Brunner/Mazel.

Tung, M. (1994). Symbolic meanings of the body in Chinese culture and "somatization." *Culture, Medicine, and Psychiatry, 18*, 483–492.

Uba, L. (1994). *Asian-Americans: Personality patterns, identity, and mental health*. New York: Guilford.

Vega, W. A., Kolody, B., Aguilar-Gaxiola, S., Alderete, E., et al. (1998). Lifetime prevalence of DSM-III-R psychiatric disorders among urban and rural Mexican-Americans in California. *Archives of General Psychiatry, 55*, 771–778.

Waxler, N. E. (1979). Is outcome for schizophrenia better in nonindustrial societies? The case of Sri Lanka. *Journal of Nervous and Mental Disease, 167*, 144–158.

Weatherspoon, A. J., Danko, G. P., & Johnson, R. C. (1994). Alcohol consumption and use norms among Chinese-Americans and Korean-Americans. *Journal of Studies on Alcohol, 55*, 203–206.

Weissman, M. M., Bland, R. C., Canino, G. J., Greenwald, S., Hwu, H., Lee, C. K., Newman, S. C., Oakley-Browne, M. A., Rubio-Stipel, M., Wickreamaratne, P. J., Wittchen, H., & Hey, E. (1994). The cross-national epidemiology of obsessive-compulsive disorder. *Journal of Clinical Psychiatry, 55*(Suppl.), 5–10.

Weissman, M., Livingston Bruce, M., Leaf, P. J., Florio, L. P., & Holzer, C. (1991). Affective disorders. In L. N. Robins & D. A. Regier (Eds.), *Psychiatric disorders in America: The Epidemiological Catchment Study* (pp. 53–80). New York: The Free Press.

Wexler, B. E., Levenson, L., Warrenberg, S., & Price, L. (1994). Decreased perceptual sensitivity to emotion-evoking stimuli in depression. *Psychiatry Research, 51*, 127–138.

Wig, N. N. (1960). Problems of mental health in India. *Journal of the Clinical Society of the Medical College, 17*, 48.

Wig, N. N., Menon, D. K., Bedi, H., Ghosh, A., et al. (1987). Expressed emotion and schizophrenia in North India: I. Cross-cultural transfer of ratings of relatives' expressed emotion. *British Journal of Psychiatry, 151*, 156–160.

Williams, K. E., & Chambless, D. (1994). The results of exposure-based treatment in agoraphobia. In S. Friedman (Ed.), *Anxiety disorders in African-Americans* (pp. 149–165). New York: Springer Publishing.

Wing, J. K., Cooper, J. E., & Sartorius, N. (1974). *Measurement and classification of psychiatric symptoms: An instruction manual for the PSE and Catego program*. Cambridge: Cambridge University Press.

World Health Organization. (1975). *A manual on drug dependence*. Geneva: Author.

World Health Organization. (1992). *The ICD-10 classification of mental and behavioral disorders: Clinical descriptions and diagnostic guidelines*. Geneva: Author.

Ying, Y. W. (1988). Depressive symptomatology among Chinese-Americans as measured by the CES-D. *Journal of Clinical Psychology, 44*, 739–746.

Ying, Y. W., Lee, P. A., Tsai, J. L., Yeh, Y., & Huang, J. (2000). The concept of depression in Chinese American college students. *Cultural Diversity and Ethnic Minority Psychology, 6*(2), 183–195.

Yinger, J. M. (1986). Intersecting strands in the theorization of race and ethnic relations. In J. Rex & D. Mason (Eds.), *Theories of race and ethnic relations* (pp. 20–41). Cambridge: Cambridge University Press.

Zhang, A. Y., Snowden, L. R., & Sue, S. (1998). Differences between Asian and White Americans' help seeking and utilization patterns in the Los Angeles area. *Journal of Community Psychology, 26*, 317–326.