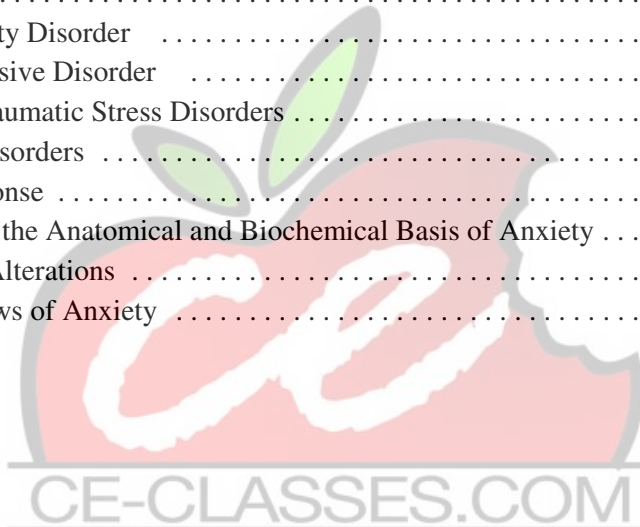


CHAPTER 4

ADULTS AND MENTAL HEALTH

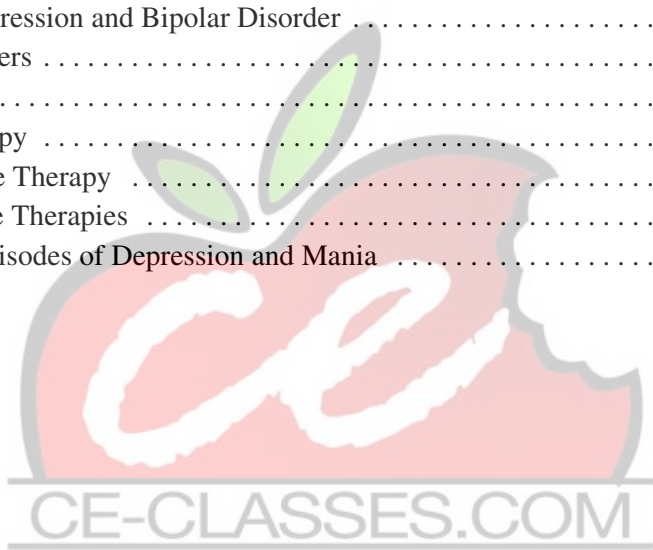
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Service Delivery for Mood Disorders

The mood disorders are associated with significant suffering and high social costs, as explained above (Broadhead et al., 1990; Greenberg et al., 1993; Wells et al., 1989; Wells et al., 1996). Many treatments are efficacious, yet in the case of depression, significant numbers of individuals either receive no care or inappropriate care (Katon et al., 1992; Narrow et al., 1993; Wells et al., 1994; Thase, 1996). Limitations in insurance benefits or in the management strategies employed in managed care arrangements may make it impossible to deliver recommended treatments. In addition, treatment outcome in real-world practice is not as effective as that demonstrated in clinical trials, a problem known as the gap between efficacy and effectiveness (see Chapter 2). The gap is greatest in the primary care setting, although it also is observed in specialty mental health practice. There is a need to develop case identification approaches for women in obstetrics/gynecology settings due to the high risk of recurrence in childbearing women with bipolar disorder. Little attention also has been paid to screening and mental health services for women in obstetrics/gynecology settings despite their high risk of depression (Miranda et al., 1998).

Primary care practice has been studied extensively, revealing low rates of both recognition and appropriate treatment of depression. Approximately one-third to one-half of patients with major depression go unrecognized in primary care settings (Gerber et al., 1989; Simon & Von Korff, 1995). Poor recognition leads to unnecessary and expensive diagnostic procedures, particularly in response to patients' vague somatic complaints (Callahan et al., 1996). Fewer than one-half receive antidepressant medication according to Agency for Health Care Policy Research recommendations for dosage and duration (Simon et al., 1993; Rost et al., 1994; Katon 1995, 1996; Schulberg et al., 1995; Simon & Von Korff, 1995). About 40 percent discontinue their medication on their own during the first 4 to 6 weeks of treatment, and fewer still continue their medication for the recommended period of 6 months (Simon et al., 1993). Although drug treatment is the most common strategy

for treating depression in primary care practice (Olfson & Klerman, 1992; Williams et al., 1999), about one-half of primary care physicians express a preference to include counseling or therapy as a component of treatment (Meredith et al., 1994, 1996). Few primary care practitioners, however, have formal training in psychotherapy, nor do they have the time (Meredith et al., 1994, 1996). A variety of strategies have been developed to improve the management of depression in primary care settings (cited in Katon et al., 1997). These are discussed in more detail in Chapter 5 because of the special problem of recognizing and treating depression among older adults.

Another major service delivery issue focuses on the substantial number of individuals with mood disorders who go on to develop a chronic and disabling course. Their needs for a wide array of services are similar to those of individuals with schizophrenia. Many of the service delivery issues relevant to individuals with severe and persistent mood disorders are presented in the final sections of this chapter.

Schizophrenia

Overview

Our understanding of schizophrenia has evolved since its symptoms were first catalogued by German psychiatrist Emil Kraepelin in the late 19th century (Andreasen, 1997a). Even though the cause of this disorder remains elusive, its frightening symptoms and biological correlates have come to be quite well defined. Yet misconceptions abound about symptoms: schizophrenia is *neither* "split personality" *nor* "multiple personality." Furthermore, people with schizophrenia are not perpetually incoherent or psychotic (DSM-IV; Mason et al., 1997) (Table 4-6).

Schizophrenia *is* characterized by profound disruption in cognition and emotion, affecting the most fundamental human attributes: language, thought, perception, affect, and sense of self. The array of symptoms, while wide ranging, frequently includes psychotic manifestations, such as hearing internal voices or experiencing other sensations not connected to an obvious source (hallucinations) and assigning

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Table 4-6. DSM-IV diagnostic criteria for schizophrenia

A. *Characteristic symptoms:* Two (or more) of the following, each present for a significant portion of time during a 1-month period (or less if successfully treated):

- (1) delusions
- (2) hallucinations
- (3) disorganized speech (e.g., frequent derailment or incoherence)
- (4) grossly disorganized or catatonic behavior
- (5) negative symptoms, i.e., affective flattening, alogia, or avolition

Note: Only one Criterion A symptom is required if delusions are bizarre or hallucinations consist of a voice keeping up a running commentary on the person's behavior or thoughts, or two or more voices conversing with each other.

- B. *Social/occupational dysfunction:* For a significant portion of the time since the onset of the disturbance, one or more major areas of functioning such as work, interpersonal relations, or self-care are markedly below the level achieved prior to the onset (or when the onset is in childhood or adolescence, failure to achieve expected level of interpersonal, academic, or occupational achievement).
- C. *Duration:* Continuous signs of the disturbance persist for at least 6 months. This 6-month period must include at least 1 month of symptoms (or less if successfully treated) that meet Criterion A (i.e., active-phase symptoms) and may include periods of prodromal or residual symptoms. During these prodromal or residual periods, the signs of the disturbance may be manifested by only negative symptoms or two or more symptoms listed in Criterion A present in an attenuated form (e.g., odd beliefs, unusual perceptual experiences).
- D. *Schizoaffective and mood disorder exclusion:* Schizoaffective disorder and mood disorder with psychotic features have been ruled out because either (1) no major depressive, manic, or mixed episodes have occurred concurrently with the active-phase symptoms; or (2) if mood episodes have occurred during active-phase symptoms, their total duration has been brief relative to the duration of the active and residual periods.
- E. *Substance/general medical condition exclusion:* The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition.
- F. *Relationship to a pervasive developmental disorder:* If there is a history of autistic disorder or another pervasive developmental disorder, the additional diagnosis of schizophrenia is made only if prominent delusions or hallucinations are also present for at least a month (or less if successfully treated).

unusual significance or meaning to normal events or holding fixed false personal beliefs (delusions). No single symptom is definitive for diagnosis; rather, the diagnosis encompasses a pattern of signs and symptoms, in conjunction with impaired occupational or social functioning (DSM-IV).

Symptoms are typically divided into positive and negative symptoms (see Table 4-7) because of their impact on diagnosis and treatment (Crow, 1985; Andreasen, 1995; Eaton et al., 1995; Klosterkötter et al., 1995; Maziade et al., 1996). Positive symptoms are

those that appear to reflect an excess or distortion of normal functions (Peralta & Cuesta, 1998). The diagnosis of schizophrenia, according to DSM-IV, requires at least 1-month duration of two or more positive symptoms, unless hallucinations or delusions are especially bizarre, in which case one alone suffices for diagnosis. Negative symptoms are those that appear to reflect a diminution or loss of normal functions (Roy & DeVriendt, 1994; Crow, 1995; Blanchard et al., 1998). These often persist in the lives of people with schizophrenia during periods of low (or absent)

Table 4-7. Positive and negative symptoms of schizophrenia

Positive Symptoms of Schizophrenia

Delusions are firmly held erroneous beliefs due to distortions or exaggerations of reasoning and/or misinterpretations of perceptions or experiences. Delusions of being followed or watched are common, as are beliefs that comments, radio or TV programs, etc., are directing special messages directly to him/her.

Hallucinations are distortions or exaggerations of perception in any of the senses, although auditory hallucinations ("hearing voices" within, distinct from one's own thoughts) are the most common, followed by visual hallucinations.

Disorganized speech/thinking, also described as "thought disorder" or "loosening of associations," is a key aspect of schizophrenia. Disorganized thinking is usually assessed primarily based on the person's speech. Therefore, tangential, loosely associated, or incoherent speech severe enough to substantially impair effective communication is used as an indicator of thought disorder by the DSM-IV.

Grossly disorganized behavior includes difficulty in goal-directed behavior (leading to difficulties in activities in daily living), unpredictable agitation or silliness, social disinhibition, or behaviors that are bizarre to onlookers. Their purposelessness distinguishes them from unusual behavior prompted by delusional beliefs.

Catatonic behaviors are characterized by a marked decrease in reaction to the immediate surrounding environment, sometimes taking the form of motionless and apparent unawareness, rigid or bizarre postures, or aimless excess motor activity.

Other symptoms sometimes present in schizophrenia but not often enough to be definitional alone include affect inappropriate to the situation or stimuli, unusual motor behavior (pacing, rocking), depersonalization, derealization, and somatic preoccupations.

Negative Symptoms of Schizophrenia

Affective flattening is the reduction in the range and intensity of emotional expression, including facial expression, voice tone, eye contact, and body language.

Alogia, or poverty of speech, is the lessening of speech fluency and productivity, thought to reflect slowing or blocked thoughts, and often manifested as laconic, empty replies to questions.

Avolition is the reduction, difficulty, or inability to initiate and persist in goal-directed behavior; it is often mistaken for apparent disinterest.

positive symptoms. Negative symptoms are difficult to evaluate because they are not as grossly abnormal as positive ones and may be caused by a variety of other factors as well (e.g., as an adaptation to a persecutory delusion). However, advancements in diagnostic assessment tools are being made.

Diagnosis is complicated by early treatment of schizophrenia's positive symptoms. Antipsychotic medications, particularly the traditional ones, often produce side effects that closely resemble the negative symptoms of affective flattening and avolition. In addition, other negative symptoms are sometimes present in schizophrenia but not often enough to satisfy diagnostic criteria (DSM-IV): loss of usual interests or pleasures (anhedonia); disturbances of sleep and

eating; dysphoric mood (depressed, anxious, irritable, or angry mood); and difficulty concentrating or focusing attention.

Currently, discussion is ongoing within the field regarding the need for a third category of symptoms for diagnosis: disorganized symptoms (Brekke et al., 1995; Cuesta & Peralta, 1995). Disorganized symptoms include thought disorder, confusion, disorientation, and memory problems. While they are listed by DSM-IV as common in schizophrenia—especially during exacerbations of positive or negative symptoms (DSM-IV)—they do not yet constitute a formal new category of symptoms. Some researchers think that a new category is not warranted because disorganized symptoms may instead reflect an underlying

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dysfunction common to several psychotic disorders, rather than being unique to schizophrenia (Toomey et al., 1998).

Cognitive Dysfunction

Recently there has also been more clinical and research attention on cognitive difficulties that many people with schizophrenia experience (Levin et al., 1989; Harvey et al., 1996). Cognitive problems include information processing (Cadenhead et al., 1997), abstract categorization (Keri et al., 1998), planning and regulating goal-directed behavior (“executive functions”), cognitive flexibility, attention, memory, and visual processing (Cornblatt & Keilp, 1994; Mahurin et al., 1998). These cognitive problems are especially associated with negative and disorganized symptoms but seem to be distinct (Basso et al., 1998; Brekke et al., 1995; Cuesta & Peralta, 1995; Voruganti et al., 1997), although others disagree (Roy & DeVriendt, 1994).

These cognitive problems vary from person to person and can change over time. In some situations it is unclear whether such deficits are due to the illness or to the side effects of certain neuroleptic medications (Zalewski et al., 1998). As research on brain functioning grows more sophisticated, some models posit dysfunction of fundamental cognitive processes at the *center* of schizophrenia, rather than as one of numerous symptoms (Andreasen, 1997a, 1997b; Andreasen et al., 1996). On the basis of neuropsychological and neuroanatomical data, for example, some researchers posit that schizophrenia is a disorder of the prefrontal cortex and its ability to perform the essential cognitive function of working memory (Goldman-Rakic & Selemon, 1997). Problems in such fundamental areas as paying selective attention, problem-solving, and remembering can cause serious difficulties in learning new skills (social interaction, treatment and rehabilitation) and performing daily tasks (Medalia et al., 1998); treatment of such deficits is discussed in later sections of the chapter.

Functional Impairment

The criteria for a diagnosis of schizophrenia include functional impairment in addition to the constellation of symptoms outlined above. For formal diagnosis, a person must be experiencing significant dysfunction in one or more major areas of life activities such as interpersonal relations, work or education, family life, communication, or self-care (Docherty et al., 1996; Patterson et al., 1997, 1998). These problems result from the complex of symptoms and their sequelae, but have been linked more to negative than to positive symptoms (Ho et al., 1998). They have serious economic, social, and psychological effects: unemployment, disrupted education, limited social relationships, isolation, legal involvement, family stress, and substance abuse. Such sequelae form the most distressing aspects of the illness for many people and contribute to the increased risk of suicide among people diagnosed with schizophrenia.

Cultural Variation

On first consideration, symptoms like hallucinations, delusions, and bizarre behavior seem easily defined and clearly pathological. However, increased attention to cultural variation has made it very clear that what is considered delusional in one culture may be accepted as normal in another (Lu et al., 1995). For example, among members of some cultural groups, “visions” or “voices” of religious figures are part of normal religious experience. In many communities, “seeing” or being “visited” by a recently deceased person are not unusual among family members. Therefore, labeling an experience as pathological or a psychiatric symptom can be a subtle process for the clinician with a different cultural or ethnic background from the patient; indeed, cultural variations and nuances may occur within the diverse subpopulations of a single racial, ethnic, or cultural group. Often, however, clinicians’ training, skills, and views tend to reflect their own social and cultural influences.

Clinicians can misinterpret and misdiagnose patients whose cognitive style, norms of emotional expression, and social behavior are from a different culture, unless clinicians become culturally competent

(see Chapter 2 and Center for Mental Health Services [CMHS], 1997). For example, clinicians may misinterpret a client's deferential avoidance of direct eye contact as a sign of withdrawal or paranoia, or a normal emotional reserve as flattened affect if they are unaware of the norms of cultural groups other than their own. There is some empirical evidence that such misinterpretations happen widely. One finding is that African-American patients are more likely than white patients to be diagnosed with severe psychotic disorders in clinical settings (Snowden & Cheung, 1990; Hu et al., 1991; Lawson et al., 1994; Strakowski et al., 1995). The overdiagnosis of psychotic disorders among African Americans is interpreted by some as evidence of clinician bias.

People with differing cultural backgrounds also may experience and exhibit true schizophrenia symptoms differently (Brekke & Barrio, 1997; Thakker & Ward, 1998). Culture shapes the content and form of positive and negative symptoms (Maslowski et al., 1998). For example, people in non-Western countries report catatonic behavior among psychiatric patients much more commonly than in the United States. How culture, societal conditions, and diagnosing tendencies among clinicians in various countries interact to create these differences is being studied but is not yet well understood.

No description of symptoms can adequately convey a person's experience of schizophrenia or other serious mental illness. Two individuals with very different internal experiences and outward presentations may be diagnosed with schizophrenia, if both meet the diagnostic criteria (Brazo & Dollfus, 1997; Kirkpatrick et al., 1998). Additionally, their symptoms and presentation may vary considerably over time (Ribeyre & Dollfus, 1996). This considerable variation (Basso et al., 1997; Sperling et al., 1997) has led to the naming of several subtypes of schizophrenia, depending on what symptoms are most prominent. Currently these are seen as variations within a single disorder. Similarly, the diagnosis is often difficult because other mental disorders share some common features. Diagnosis depends on the details of how people behave and what they report during an evaluation, the diagnostician, and

variations in the illness over time. Therefore, many people receive more than one diagnostic label over the course of their involvement with mental health services. Refining the definition of schizophrenia and other serious mental illnesses to account for these individual and cultural variations remains a challenge to researchers and clinicians.

Prevalence

Studies of schizophrenia's prevalence in the general population vary depending on the way diagnostic criteria are applied and the population, setting, and method of study (Hafner & an der Heiden, 1997). In general, 1-year prevalence in adults ages 18 to 54 is estimated to be 1.3 percent (Table 4-1). Onset generally occurs during young adulthood (mid-20s for men, late-20s for women), although earlier and later onset do occur. It may be abrupt or gradual, but most people experience some early signs, such as increasing social withdrawal, loss of interests, unusual behavior, or decreases in functioning prior to the beginning of active positive symptoms. These are often the first behaviors to worry family members and friends.

Prevalence of Comorbid Medical Illness

The mortality rate in persons with schizophrenia is significantly higher than that of the general population. While elevated suicide accounts for some of the excess mortality—and is a serious problem in its own right—comorbid somatic illnesses also contribute to excess mortality. Until recently, there was little information on the prevalence of comorbid medical illnesses in people with schizophrenia (Jeste et al., 1996). A recent study was among the first to document systematically that people with schizophrenia are beset by vision and dental problems, as well as by high blood pressure, diabetes, and sexually transmitted diseases. Their self-reported lifetime rates of high blood pressure (34.1 percent), diabetes (14.9 percent), and sexually transmitted diseases (10.0 percent) are higher than those for people of similar age in the general population (Dixon et al., 1999; Dixon et al., in press-a). The reasons for excess medical comorbidity are unclear, yet medical comorbidity is independently

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associated with lower perceived physical health status, more severe psychosis and depression, and greater likelihood of a history of a suicide attempt (Dixon et al., 1999). These findings have important implications for improving patient management (Dixon et al., in press-b).

Course and Recovery

It is difficult to study the course of schizophrenia and other serious mental illnesses because of the changing nature of diagnosis, treatment, and social norms (Schultz et al., 1997). Overall, research indicates that schizophrenia's course over time varies considerably from person to person (DSM-IV; Wiersma et al., 1998) and varies for any one person (Moller & von Zerssen, 1995). The variability may emanate from the underlying heterogeneity of the disease process itself, as well as from biological and genetic vulnerability, neurocognitive impairments, socio-cultural stressors, and personal and social factors that confer protection against stress and vulnerability (Lieberman et al., 1980; Nuechterlein et al., 1994). Most individuals experience periods of symptom exacerbation and remission, while others maintain a steady level of symptoms and disability which can range from moderate to severe (Wiersma et al., 1998).

Most people experience at least one, often more, relapse after their first actively psychotic episode (Herz & Melville, 1980; Falloon, 1984; Gaebel et al., 1993; Wiersma et al., 1998). Often these are periods of more intense positive symptoms, yet the person continues to struggle with negative symptoms in between episodes (Gupta et al., 1997; Schultz et al., 1997). However, whether such exacerbations have the same degree of disabling and distressing effects each time depends greatly on the person's coping skills and support system. Over time, many people learn successful ways of managing even severe symptoms to moderate their disruptiveness to daily life (e.g., Hamera et al., 1992). Therefore, earlier years with the illness are often more difficult than later ones. Additionally, gradual onset and delays in obtaining treatment seem to raise the risk of longer episodes of acute illness over time (Wiersma et al., 1998). Early treatment with antipsychotic

medications has been found to predict better long-term outcomes for people experiencing their first psychotic episode, as compared with a variety of control groups, including those in more advanced stages (Lieberman et al., 1996; Wyatt et al., 1997, 1998; Wyatt & Henter, 1998).

The course of schizophrenia is also influenced by personal orientation and motivation, and by supports in the form of skill-building assistance and rehabilitation (Lieberman et al., 1996; Awad et al., 1997; Hafner & an der Heiden, 1997). These, in turn, are heavily influenced by regional, cultural, and socioeconomic factors in addition to individual factors (Dassori et al., 1995).

Family factors also are related to the course of illness. Following hospitalization, patients who return home are more likely to relapse if their family is identified as critical, hostile, or emotionally overinvolved than if their family is not so identified (Jenkins & Karno, 1992; Bebbington & Kuipers, 1994). This is a controversial finding because it appears to blame family members (Hatfield et al., 1987). However, recent studies suggest an interaction between families and the patient (Goldstein, 1995b), suggesting that the negative emotions of some family members may be a reaction to, more than a cause of relapse in, the family member. Blaming either the family or the patient overlooks important ways both parties interact and how such interactions are associated with the course of schizophrenia. In addition, there is a need to examine what part the role of families' prosocial functioning (family warmth and family support) plays in the course of schizophrenia to identify how family factors can serve as protective factors (Lopez et al., in press).

Despite the variability, some generalizations about the long-term course of schizophrenia are possible largely on the basis of longitudinal research. A small percentage (10 percent or so) of patients seem to remain severely ill over long periods of time (Jablensky et al., 1992; Gerbaldo et al., 1995). Most do not return to their prior state of mental function. Yet several long-term studies reveal that about one-half to two-thirds of people with schizophrenia significantly improve or

recover, some completely (for a review see Harding et al., 1992). These studies were important because they began to dispel the traditional view, dating back to the 19th century, that schizophrenia had a uniformly downhill course (Harding et al., 1992). Several other longitudinal studies, however, found less favorable patient outcomes with other cohorts of patients (Harrow et al., 1997). The differences in outcomes between the studies are thought to be explained on the basis of differences in patient age, length of followup, expectations about prognosis, and types of services received (Harrow et al., 1997).

The importance of a rehabilitation focus in shaping patient outcome was supported by one of the only direct comparisons between patient cohorts. The Vermont cohort consisted of the most severely affected patients from the “back wards” of the state hospital (Harding et al., 1987). As part of a statewide program of deinstitutionalization, the cohort was released in the 1950s to a hospital-based rehabilitation program and then to what was at the time an innovative, broad-based community rehabilitation program, which incorporated social, residential, and vocational components.¹³ Patients’ degree of recovery at followup after three decades was measured by global functional improvement and other functional measures. One-half to two-thirds of the Vermont cohort significantly improved or recovered (Harding et al., 1987). The receipt of community-based rehabilitation was considered key to their recovery on the basis of a study comparing their progress with that of a matched cohort of deinstitutionalized patients from Maine. The Maine cohort did not function as well after receiving more traditional aftercare services without a rehabilitation emphasis (DeSisto et al., 1995a, 1995b). Although the findings from the Vermont cohort, as well as those from a cohort in Switzerland (Ciompi, 1980), are widely cited by consumers as evidence of recovery from mental illness, a topic discussed in detail in Chapter 2, it bears noting that patients in the Vermont cohort represented a less rigorously defined

conceptualization of schizophrenia than is common today, which may account, in part, for the more favorable outcomes.

In summary, schizophrenia does not follow a single pathway. Rather, like other mental and somatic disorders, course and recovery are determined by a constellation of biological, psychological, and sociocultural factors. That different degrees of recovery are attainable has offered hope to consumers and families.

Gender and Age at Onset

There appear to be gender differences in the course and prognosis of schizophrenia. Women are more likely than men to experience later onset, more pronounced mood symptoms, and better prognosis (DSM-IV), although the prognosis difference recently has come under question.

Current research (e.g., Hafner & an der Heiden, 1997; Hafner et al., 1998) suggests that some of the apparent gender differences in course and outcome occur because for some women schizophrenia does not develop until after menopause. This delay is thought to be related to the protective effects of estrogen, the levels of which diminish at menopause. According to this line of reasoning, men have no such delay because they lack the protective estrogen levels. Therefore, a higher proportion of men develop schizophrenia earlier.

Generally, early onset (younger than age 25 in most studies) is associated with more gradual development of symptoms, more prominent negative symptoms across the course (DSM-IV), and more neuropsychological problems (Basso et al., 1997; Symonds et al., 1997), regardless of gender. Early onset also usually involves more disruption of adult milestones, such as education, employment achievements, and long-term social relationships (Nowotny et al., 1996). People with later onset often have reached these milestones, cushioning them from disruptive sequelae and enabling better coping with symptoms (Hafner et al., 1998). Therefore, early onset (more men than women) often yields a more difficult first several years, although not necessarily a worse long-term outcome.

¹³ These are the vital components of most contemporary rehabilitation programs (see section on service delivery).

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However, it must be emphasized that group probabilities do not necessarily speak to individual cases.

Etiology of Schizophrenia

The cause of schizophrenia has not yet been determined, although research points to the interaction of genetic endowment and major environmental upheaval during development of the brain. This section first discusses genetic studies and then turns to the evidence for neurodevelopmental disruption. These lines of research are beginning to converge: neurodevelopmental disruption may be the result of genetic and/or environmental stressors early in development, leading to subtle alterations in the brain. Furthermore, environmental factors later in development can either exacerbate or ameliorate expression of genetic or neurodevelopmental defects. The overarching message is that the onset and course of schizophrenia are most likely the result of an interaction between genetic and environmental influences.

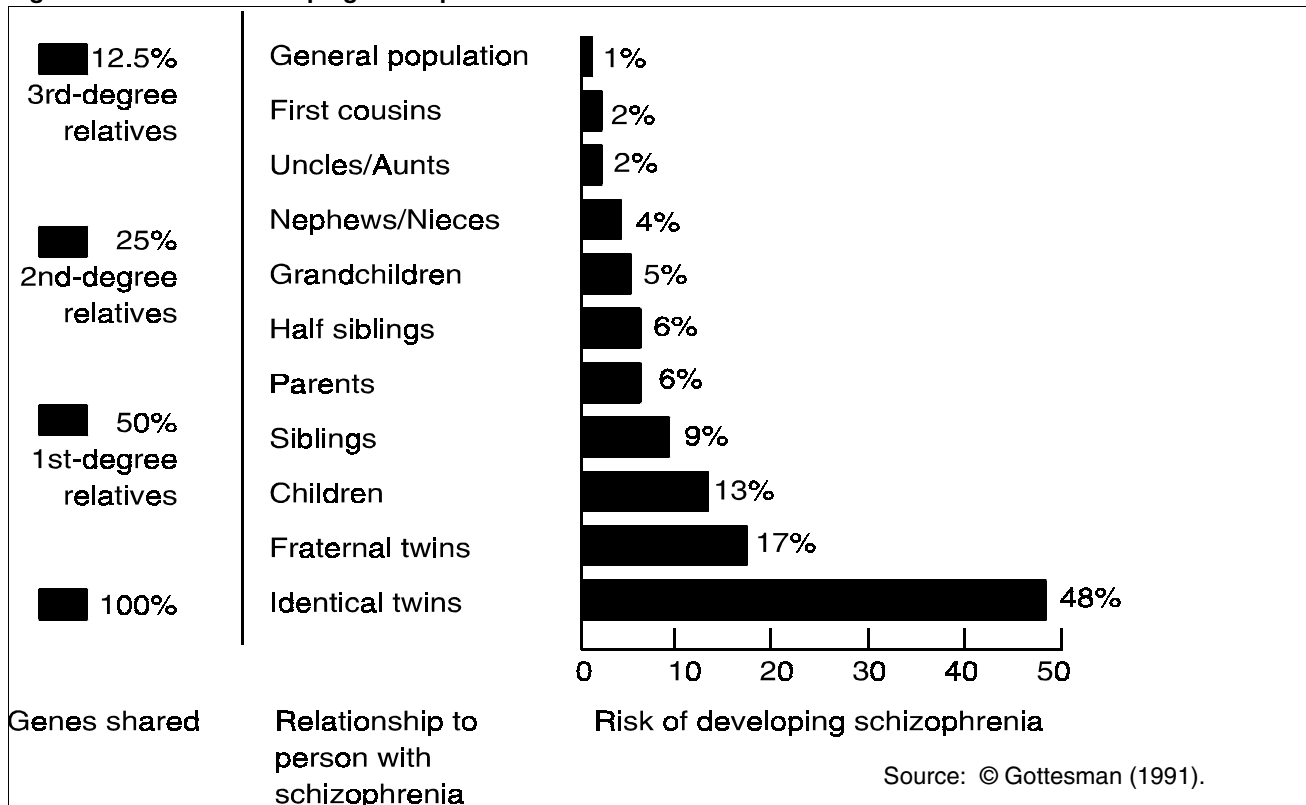
Family, twin, and adoption studies support the role of genetic influences in schizophrenia (Kendler & Diehl, 1993; McGuffin et al., 1995; Portin & Alanen, 1997). Immediate biological relatives of people with schizophrenia have about 10 times greater risk than that of the general population. Given prevalence estimates, this translates into a 5 to 10 percent lifetime risk for first-degree relatives (including children and siblings) and suggests a substantial genetic component to schizophrenia (e.g., Kety, 1987; Tsuang et al., 1991; Cannon et al., 1998). What also bolsters a genetic role are findings that the identical twin of a person with schizophrenia is at greater risk than a sibling or fraternal twin, and that adoptive relatives do not share the increased risk of biological relatives (see Figure 4-3). However, in about 40 percent of identical twins in which one is diagnosed with schizophrenia, the other never meets the diagnostic criteria. The discordance among identical twins clearly indicates that environmental factors likely also play a role (DSM-IV).

Current research proposes that schizophrenia is caused by a genetic vulnerability coupled with environmental and psychosocial stressors, the so-called diathesis-stress model (Zubin & Spring, 1977; Russo et al., 1995; Portin & Alanen, 1997). Family studies suggest that people have varying levels of inherited genetic vulnerability, from very low to very high, to schizophrenia. Whether or not the person develops schizophrenia is partly determined by this vulnerability. At the same time, the development of schizophrenia also depends on the amount and types of stresses the person experiences over time. An analogy can be drawn to diabetes by virtue of both genetic factors (e.g., family history) and behavioral factors (e.g., diet, exercise, stress) that interact to determine whether or not a given person develops diabetes. How the interaction works in schizophrenia is unknown, yet the subject of ongoing research (Murray et al., 1992; Spaulding, 1997; Jones & Cannon, 1998; van Os & Marcelis, 1998).

Despite the evidence for genetic vulnerability to schizophrenia, scientists have not yet identified the genes responsible (Kendler & Diehl, 1993; Levinson et al., 1998). The current consensus is that multiple genes are responsible (Kendler et al., 1996; Kunugi et al., 1996, 1997; Portin & Alanen, 1997; Straub et al., 1998).

Numerous brain abnormalities have been found in schizophrenia. For example, patients often have enlarged cranial ventricles (cavities in the brain that transport cerebrospinal fluid), especially the third ventricle (Weinberger, 1987; Schwarzkopf et al., 1991; Woods & Yurgelun-Todd, 1991; Dykes et al., 1992; Lieberman et al., 1993; DeQuardo et al., 1996), and decreased cerebral size (Schwarzkopf et al., 1991; Ward et al., 1996) compared with control groups. Several studies suggest this may be more common among men (Nopoulos et al., 1997) whose families do not have a history of schizophrenia (Schwarzkopf et al., 1991; Vita et al., 1994). There is also some evidence that at least some people with schizophrenia have unusual cortical laterality, with dysfunction localizing

Figure 4-3. Risk of developing schizophrenia.



to the left hemisphere (Braun et al., 1995). To explain laterality, some have proposed a prenatal injury or insult at the time of left hemisphere development, which normally lags behind that of the right hemisphere (Bracha, 1991).

The anatomical abnormalities found in different parts of the brain tend to correlate with schizophrenia's positive symptoms (Barta et al., 1990; Shenton et al., 1992, Bogerts et al., 1993; Wible et al., 1995) and negative symptoms (Buchanan et al., 1993). Positive symptoms are often linked to temporal lobe dysfunction, as shown by imaging studies that utilize blood flow and glucose metabolism. Such dysfunction possibly is related to abnormal phospholipid metabolism (Fukuzako et al., 1996). Disorganized speech (taken to reflect disorganized thinking) has been associated with abnormalities in brain regions associated with speech regulation (McGuire et al., 1998). Negative and cognitive symptoms, especially those related to volition and planning, are commonly associated with prefrontal lobe dysfunction (Capleton, 1996; Abbruzzese et al., 1997; Mattson et al., 1997).

This is perhaps related to unusual neuronal density (Selemon et al., 1998) and may be more prevalent among patients whose families have a history of schizophrenia than those whose do not (Sautter et al., 1995). However, mapping patients' symptoms with brain regions is complex and variable. Researchers believe that the dysfunctions are present in brain circuitry rather than in one or two localized areas of the brain (Andreasen et al., 1997, 1998; Wiser et al., 1998).

Excessive levels of the neurotransmitter dopamine have long been implicated in schizophrenia, although it is unclear whether the excess is a primary cause of schizophrenia or a result of a more fundamental dysfunction. More recent evidence implicates much greater complexity in the dysregulation of dopamine and other neurotransmitter systems (Grace, 1991, 1992; Olie & Bayle, 1997). Some of this research ties schizophrenia to certain variations in dopamine receptors (Nakamura et al., 1995; Serretti et al., 1998), while other research focuses on the serotonin system (Inayama et al., 1996). However, it must be emphasized that in many cases it is possible that perturbations in

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neurotransmitter systems may result from complications of schizophrenia, or its treatment, rather than from its causes (Csernansky & Grace, 1998).

The “stressors” investigated in schizophrenia research include a wide range of biological, environmental, psychological, and social factors. There is consistent evidence that prenatal stressors are associated with increased risk of the child developing schizophrenia in adulthood, although the mechanisms for these associations are unexplained. Some interesting preliminary research suggests risk factors include maternal prenatal poverty (Cohen, 1993), poor nutrition (Susser & Lin, 1992; Susser et al., 1996, 1998), and depression (Jones et al., 1998). Other stressors are exposure to influenza outbreaks (Mednick et al., 1988; Adams et al., 1993; Rantakallio et al., 1997), war zone exposure (van Os & Selten, 1998), and Rh-factor incompatibility (Hollister, 1996). Their variety suggests other stressors might also be risk factors, under the general rubric of “maternal stress.”

As a result of such stresses, newborns of low birth weight and short gestation have been linked to increased risk of later developing schizophrenia (Jones et al., 1998), as have delivery complications (Hultman et al., 1997; Jones & Cannon, 1998) and other early developmental problems (Brixey et al., 1993; Ellenbroek & Cools, 1998; Portin & Alanen, 1998; Preti et al., 1998). Among children, especially infants, viral central nervous system infections may be associated with greater risk (Rantakallio et al., 1997; Iwahashi et al., 1998), thereby explaining links between schizophrenia and being born or raised in crowded conditions (Torrey & Yolken, 1998) or during the flu-prone winter and spring months (Castrogiovanni et al., 1998). However, support for these hypotheses is inconsistent and incomplete (Yolken & Torrey, 1995). In fact, it is possible that prenatal and obstetric complications associated with schizophrenia could reflect already disrupted fetal development, rather than being causal themselves (Lipska & Weinberger, 1997). More generally, across the life span, the chronic stresses of poverty (Cohen, 1993; Saraceno & Barbui, 1997) and some facets of minority social status appear to alter the course of schizophrenia.

Presently, it is unclear whether and how these risks contribute to the diathesis-stress interaction for any one person because specific causes may differ (Onstad et al., 1991; Cardno & Farmer, 1995; Tsuang & Faraone, 1995; Miller, 1996). Although genetic vulnerability is difficult to control, certain other important factors can be addressed with current knowledge. An awareness of stressors that increase the likelihood of genetic vulnerability being actualized supports preventive strategies, such as good prenatal health care and nutrition. Furthermore, since life stresses can exacerbate the course of the illness, access to good quality services and social supports, as well as attention to relapse prevention interventions, can have beneficial effects on longer term outcome (Wiersma et al., 1998).

At the same time, researchers and clinicians are striving to integrate findings concerning both diathesis and stress into models of how schizophrenia develops (Andreasen, 1997b). Not only does brain biology influence behavior and experience, but behavior and experience mold brain biology as well. One promising integrative model is the neurodevelopmental theory of schizophrenia developed by Weinberger and others (Murray & Lewis, 1987; Weinberger, 1987, 1995; Bloom, 1993; Weinberger & Lipska, 1995; Lipska & Weinberger, 1997). It posits that schizophrenia develops from “a subtle defect in cerebral development that disrupts late-maturing, highly evolved neocortical functions, and fully manifests itself years later in adult life” (Lipska & Weinberger, 1997; see also Susser et al., 1998).

The nature of the defect, which has not been identified, may be a product of a pre- or neonatal insult to the brain. Further support for the neurodevelopmental theory comes from abnormalities in brain structure that have long been found in people with schizophrenia. Such findings have been interpreted to reflect abnormal neuronal migration in early development (Jakob & Beckmann, 1986; Arnold et al., 1991; Akbarian et al., 1993; Falkai et al., 1995). Researchers have developed animal models of early neurodevelopmental dysfunctions that manifest in later behavioral and functional deficits (Geyer et al., 1993; Lipska & Weinberger, 1993; Wilkinson et al., 1994;

Table 4-8. Selected treatment recommendations, Schizophrenia Patient Outcomes Research Team

Recommendation 1. Antipsychotic medications, other than clozapine, should be used as the first-line treatment to reduce psychotic symptoms for persons experiencing an acute symptom episode of schizophrenia.

Recommendation 2. The dosage of antipsychotic medication for an acute symptom episode should be in the range of 300–1,000 chlorpromazine (CPZ) equivalents per day for a minimum of 6 weeks. Reasons for dosages outside this range should be justified. The minimum effective dose should be used.

Recommendation 8. Persons who experience acute symptom relief with an antipsychotic medication should continue to receive this medication for at least 1 year subsequent to symptom stabilization to reduce the risk of relapse or worsening of positive symptoms.

Recommendation 9. The maintenance dosage of antipsychotic medication should be in the range of 300–600 CPZ equivalents (oral or depot) per day.

Recommendation 12. Depot antipsychotic maintenance therapy should be strongly considered for persons who have difficulty complying with oral medication or who prefer the depot regimen.

Recommendation 23. Individual and group therapies employing well-specified combinations of support, education, and behavioral and cognitive skills training approaches designed to address the specific deficits of persons with schizophrenia should be offered over time to improve functioning and enhance other target problems, such as medication noncompliance.

Recommendation 24. Patients who have ongoing contact with their families should be offered a family psychosocial intervention that spans at least 9 months and that provides a combination of education about the illness, family support, crisis intervention, and problem-solving skills training. Such interventions should also be offered to nonfamily members.

Recommendation 27. Selected persons with schizophrenia should be offered vocational services.*

Recommendation 29. Systems of care serving persons with schizophrenia who are high users should include ACT and ACM programs.

* Edited

Source: Lehman & Steinwachs, 1998a, 1998b.

Lipska et al., 1995) and are influenced by genetics (de Kloet et al., 1996; Zaharia et al., 1996). As promising as these theories are, the causes and mechanisms of schizophrenia remain unknown. Nonetheless, research has uncovered several types of treatment for schizophrenia that are effective in reducing symptoms and functional impairments.

Interventions

The treatment of schizophrenia has advanced considerably in recent years. A battery of treatments has become available to ameliorate symptoms, to improve quality of life, and to restore productive lives.

Treatment and other service interventions often are linked to the clinical phases of schizophrenia: acute phase, stabilizing phase, stable (or maintenance) phase, and recovery phase. Where possible, this report ties available data to these treatment phases.

Optimal treatment across all phases of treatment includes some form of pharmacotherapy with antipsychotic medication, usually combined with a variety of psychosocial interventions. Psychosocial interventions include supportive psychotherapy, and family psychoeducational interventions, as well as psychosocial and vocational rehabilitation. The treatment of individuals with schizophrenia who are

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high service users should be orchestrated by an interdisciplinary treatment team to ensure continuity of services (i.e., assertive community treatment, which is discussed below). Others may benefit from less intensive forms of case management and various self-help and consumer-operated services, described later. It is also important to assist individuals with schizophrenia in meeting their many related needs, such as for supported housing, transportation, and general medical care. These are among the 30 pivotal treatment recommendations of the Agency for Health Care Policy and Research- and NIMH-sponsored Schizophrenia Patient Outcomes Research Team (PORT), which developed its recommendations on the basis of a comprehensive review of the treatment outcomes literature (Lehman & Steinwachs, 1998a). Table 4-8 contains a distillation of key recommendations.

Although the Schizophrenia PORT study recommendations are grounded in research such as that reviewed in the following paragraphs, it is noteworthy that treatment practices fail to adhere to these recommendations, with conformance generally falling below 50 percent (Lehman & Steinwachs, 1998b). The disturbing gap between knowledge and practice is discussed later in this chapter. Many barriers exist in the transfer of information about treatment and evidence-based practice to clinicians, family members, and service users.

Pharmacotherapy

Pharmacotherapies are the most extensively evaluated intervention for schizophrenia. The conventional or older antipsychotic medications (e.g., chlorpromazine, haloperidol, fluphenazine, molindone) and the more recently developed medications (e.g., clozapine, risperidone, olanzapine, quetiapine, sertindole) are used to reduce the positive symptoms of schizophrenia. The newer medications, often called atypical because they have a different mechanism action than their predecessors, also appear in preliminary studies to be more effective against negative symptoms, display fewer side effects, and show promise for treating people for whom older medications are ineffective (Ballus, 1997). Their introduction has created more

treatment options for people with schizophrenia and other serious mental illnesses. Although the newer, more broadly effective medications have increased hopes for recovery, they also have resulted in greater treatment complexity for patients and providers alike (Fenton & Kane, 1997).

Conventional antipsychotics have been shown to be highly effective both in treating acute symptom episodes and in long-term maintenance and prevention of relapse (Cole & Davis, 1969; Davis et al., 1989; Kane, 1992). Across many studies, positive symptoms improved in about 70 percent of patients, compared with only 25 percent improvement in placebo groups (Kane, 1989; Kane & Marder, 1993). Their common mechanism of action is by blocking dopamine D₂ receptors, and their therapeutic effects are presumably due to D₂ blockade in the mesolimbic system (Dixon et al., 1995).

For acute symptom episodes, treatment recommendations call for dosages of antipsychotic medication in the range of 300 to 1,000 “chlorpromazine equivalents”¹⁴ per day (Lehman & Steinwachs, 1998b). Among patients discharged from inpatient units whose dosage fell outside of this range, minority patients often are much more likely than Caucasian patients to be on a higher dose (> 1,000 chlorpromazine equivalents) (Lehman & Steinwachs, 1998b). Such dosing patterns run counter to evidence that a higher proportion of minority patients, because of lower rates of drug metabolism, may require lower doses of antipsychotics.

Dosage studies have found that moderate levels (300 to 750 chlorpromazine equivalents daily for acute episodes, 300 to 600 for maintenance, although many people require less than 300) are more effective for positive symptom reduction over the long run than very high (“loading”), intermittent, or very low doses (Donlon et al., 1978, 1980; Neborsky et al., 1981; Baldessarini et al., 1990; Levinson et al., 1990; Van Putten et al., 1990, 1992; Rifkin et al., 1991). Very low

¹⁴ A chlorpromazine equivalent is a measure in milligrams of antipsychotic medication doses indexed to the potency of a standard dosage of chlorpromazine, one of the earliest, most widely used antipsychotic medications.

and intermittent dosing substantially increases the risk of relapse, while rapid loading and very high doses greatly increase adverse effects (Davis et al., 1989), although medication programs must be tailored to individual needs. On conventional neuroleptics, patients experience symptom reduction over the first 5 to 10 weeks of treatment, with more gradual improvement sometimes continuing for more than double that time (Baldessarini et al., 1990). The older medications are occasionally found to reduce some negative symptoms as well, although it is impossible to tell from existing research if this is a primary or secondary effect of reduced positive symptoms (Davis et al., 1989; Cassens et al., 1990).

Apart from their minimal effects on negative symptoms, the greatest problem with conventional neuroleptic medications is their pervasive, uncomfortable, and sometimes disabling and dangerous side effects. The spectrum of side effects is broad (Davis et al., 1989; Casey, 1997), yet the most common and troubling are extrapyramidal effects such as acute dystonia, parkinsonism, and tardive dyskinesia (Chakos et al., 1996; Yuen et al., 1996; Trugman, 1998) and akathisia (Kane, 1985).¹⁵ Side effects are evident in an estimated 40 percent of patients, but pinpointing their prevalence is complicated by the vagaries of diagnosis, length of prescription and observation, and variability across individuals and medications. Rare side effects (seizures, paradoxical exacerbation of psychotic symptoms, neuroleptic malignant syndrome) also can be devastating.

Acute dystonia, parkinsonism, dyskinesias, and akathisia are usually treated by lowering the doses of neuroleptics and/or using adjunctive anticholinergic, antiparkinsonian medications (e.g., benztropine). Because these side effects can be mistaken for core psychotic symptoms, the neuroleptic dose is often increased, rather than decreased, exacerbating the side

effects. Many other side effects such as attention and vigilance problems, sleepiness, blurry vision, dry mouth, and constipation are worse in the initial weeks of treatment and usually taper off as a person adjusts to the medication. However, the discomfort and disability of the initial weeks are intolerably disruptive to some individuals. Dosages can be individualized to minimize side effects while maximizing benefit.

Efficacy data on the newer antipsychotics indicate that they are as efficacious as the older agents at reducing positive symptoms and carry fewer side effects. They also offer important additional advantages for some who have had treatment-resistant schizophrenia (Kane, 1996, 1997; Vanelle, 1997; van Os et al., 1997; Andersson et al., 1998).

The prototype of the newer medications, clozapine, has been found effective for about 30 to 50 percent of treatment-resistant patients (Kane & Marder, 1993; Lieberman et al., 1994; Buchanan, 1995; Kane & McGlashan, 1995; Kane, 1996), as well as for patients who have responded to previous medications. Clozapine also seems to help secondary depression and anxiety, and perhaps the negative symptoms of schizophrenia (Buchanan, 1995). Clozapine not only has a very low incidence of tardive dyskinesia (Barnes & McPhillips, 1998) but may also show some promise as its treatment (Walters et al., 1997). However, the use of clozapine was constrained for many years in the United States because of findings that in about 1 percent of patients it causes a potentially fatal blood condition: agranulocytosis, a loss of white blood cells that fight infection. Because agranulocytosis is reversible if detected early, frequent (weekly) blood monitoring is critical (Lamarque, 1996; Meltzer, 1997). Although effective safeguards exist, use of clozapine tends to be limited to those who are unresponsive to, or cannot tolerate, other antipsychotics. The Veterans' Administration sponsored the largest cost-effectiveness study to date of clozapine, comparing it to haloperidol. Studies by Rosenheck and his collaborators (1997, 1998b, 1999) replicated previous findings that clozapine was more effective than haloperidol in treating positive and negative symptoms and had fewer extrapyramidal side effects. In addition to its direct

¹⁵ Acute dystonia is involuntary muscle spasms resulting in abnormal and usually painful body positions. Parkinsonism is defined by tremors, muscle rigidity, and stuporous appearance. Dyskinesias are involuntary repetitive movements, often of the mouth, face, or hands, and akathisia is painful muscular restlessness requiring the person to move constantly.

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pharmacologic effect, the investigators found that clozapine enhances participation in psychosocial treatments, which augments its overall clinical effectiveness (Rosenheck et al., 1998b). Savings associated with use of clozapine were particularly significant among study participants who had averaged 215 inpatient hospital days in the year prior to the study (Rosenheck et al., 1998b).

Increasing numbers of patients with schizophrenia receive newer agents like risperidone (Smith et al., 1996a; Foster & Goa, 1998), olanzapine (Bymaster et al., 1997), and quetiapine (Wetzel et al., 1995; Gunasekara & Spencer, 1998). They have replaced the older antipsychotics in many cases because they cause fewer side effects at therapeutic levels (Umbricht & Kane, 1995) and do not require clozapine's close monitoring. Their effects on negative schizophrenia symptoms are currently being evaluated and hold some promise, as do their effects on some cognitive dysfunctions (Gallhofer et al., 1996; Green et al., 1997; Kern et al., 1998). Furthermore, current cost analyses find these newer medications at least cost-neutral and sometimes more cost-effective in the long run than older agents, despite being more expensive per pill (Loebel et al., 1998).

Thus, as a whole, there is evidence that the newer antipsychotics are more clinically advantageous than the older ones due to the combination of their effective treatment of positive (and perhaps negative) symptoms, their treatment of ancillary symptoms such as anxiety and depression, and their more favorable side effect profile (Lieberman, 1993, 1996; Fleischhacker & Hummer, 1997; Shore, 1998). Having fewer side effects generally results in better compliance with the medication, although atypical side effects can include sedation, weight gain, sexual dysfunction, and other dose-related discomforts (Casey, 1997; Hasan & Buckley, 1998). Although the newer agents have less adverse impact on fecundity, so that more women with schizophrenia can conceive, there are very little data to address the impact of treatment on pregnancy and lactation. While it is not clear whether the newer medications directly lessen the functional disabilities that usually accompany schizophrenia, they may

improve a person's quality of life (Lehman, 1996) and responsiveness to psychosocial, rehabilitation, and therapeutic interventions (Buckley, 1997). Effectiveness in real-world settings may be substantially lower than efficacy in clinical trials, possibly due to patient heterogeneity, prescribing practices, and noncompliance (Dixon et al., 1995).

Ethnopsychopharmacology

Growing awareness that ethnicity and culture influence patients' response to medications has catapulted to prominence the field of ethnopharmacology. In the past decade, studies have demonstrated that psychiatric medications interact with patient ethnicity in multiple ways, with response to the same medication and dose varying by patient ethnicity (Frackiewicz et al., 1997). For example, due to racial and ethnic variation in pharmacokinetics, Asians and Hispanics with schizophrenia may require lower doses of antipsychotics than Caucasians to achieve the same blood levels (Collazo et al., 1996; Ramirez, 1996; Ruiz et al., 1996). Pharmacokinetics and pharmacodynamics also vary across other ethnic groups.¹⁶ Racial and ethnic variation likely stem from a combination of genetic and psychosocial factors, such as diet and health behaviors (Lin et al., 1995).

At the same time, it is possible that the documented medication differences are the result of underlying biological mechanisms of mental illness related to ethnicity, culture, and gender variations. Additionally, the effects of psychotropic medications may be interpreted differently by culture (Lewis et al., 1980). Although knowledge in these areas is incomplete, it is important to consider cultural patterns in dosing decisions and medication management, as well as risks of side effects and tardive dyskinesia. Furthermore, studies suggest that medication differences among African American people diagnosed with schizophrenia may reflect clinician biases in diagnosis and prescription practices more than differences in

¹⁶ For Caucasian, Hispanic, Asian, African-Americans variations, see Frackiewicz et al., 1997; Chinese-Jann et al., 1992; black, white, Chinese, Mexican American-Lam et al., 1995; Lin et al., 1995).

medication metabolism or health behaviors alone (Frackiewicz et al., 1997).

Psychosocial Treatments

Psychosocial treatments are vital complements to medication for individuals with schizophrenia. They help patients maximize functioning and recovery. The PORT treatment recommendations, as noted earlier, stipulate that patients should receive pharmacotherapy in conjunction with supportive psychotherapy, family treatment, psychosocial rehabilitation and skill development, and vocational rehabilitation (Lehman & Steinwachs, 1998a). In the active phase of illness, medication enables patients to be more receptive to psychosocial treatments. During periods of remission, when maintenance medication is still recommended, psychosocial treatments continue to help patients to improve quality of life. Psychosocial treatments assume even greater importance for patients who do not respond to, cannot tolerate, or refuse to take medications. Several decades ago, psychosocial programs were developed that used little or no medication (Mosher, 1999). For a highly selected group of patients at the beginning of their first acute episode of schizophrenia, these programs were reported effective (Mosher & Menn, 1978). Most patients, however, do not meet the selection criteria employed in this study. Few such programs are currently operating (Mosher, 1999), and treatment with antipsychotic medication is recommended in conjunction with psychosocial treatments (Lehman & Steinwachs, 1998a).

Psychotherapy

Outcomes of individual and group therapies have been studied for people with schizophrenia, although not extensively and not in relation to current managed care practices. Overall, it is clear that individual and group therapies that focus on practical life problems associated with schizophrenia (e.g., life skills training) are superior to psychodynamically oriented therapies (Scott & Dixon, 1995a). Psychodynamically oriented therapies are considered to be potentially harmful; therefore, their use is not recommended (Lehman,

1997). Individual, group, or family therapies that combine support, education, and behavioral and cognitive skills, and that address specific challenges, can help clients cope with their illness and improve their functioning, quality of life, and degree of social integration. However, the optimum length of therapy seems to be longer than that afforded by “brief therapy” (Gunderson et al., 1984; Stanton et al., 1984; Hogarty et al., 1997). Additionally, certain targeted therapeutic interventions may be useful in addressing specific symptoms (Drury et al., 1996; Jensen & Kane, 1996). Certain subgroups of clients appear to find different types of therapy more or less useful than others (Scott & Dixon, 1995a).

Family Interventions

Several professionally operated family intervention programs have been developed to help the family member with severe mental illness (e.g., Hogarty et al., 1987; Cazzullo et al., 1989; Mari & Streiner, 1994; McFarlane, 1997). Randomized trials have been conducted for interventions that educate families about schizophrenia, provide support and crisis intervention, and offer training in effective problem solving and communication. These interventions have strongly and consistently demonstrated their value in preventing or delaying symptom relapse and appear to improve the patient’s overall functioning and family well-being (Goldstein et al., 1978; Falloon et al., 1985; Strachan, 1986; Lam, 1991; Tarrier et al., 1994; Goldstein 1995a; Penn & Mueser, 1996). Research has suggested that groups of multiple families are more effective and less expensive than individual family interventions (McFarlane et al., 1995). Incorporating family religious and ethnic background may prove useful in family interventions (Guarnaccia et al., 1992). Family self-help groups are discussed subsequently in this chapter.

Psychosocial Rehabilitation and Skills Development

Psychosocial skills training strives to teach clients verbal and nonverbal interpersonal skills and competencies to live successfully in community settings. Skills or tasks are divided into small, simple behavioral elements that the client then learns,

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practices, and puts together. Currently, there is a growing addition of cognitive skill remediation to rehabilitation programs that have focused on social skills training (Bellack et al., 1989; Bellack & Mueser, 1993; Scott & Dixon, 1995a). As one example of the scope of such programs, the program examined by Liberman and co-workers (1998) focused on four skill areas: medication management, symptom management, recreation for leisure, and basic conversation skills. Each area was addressed through concrete topics, with the basic conversation skills module, for example, consisting of active listening skills, initiating conversations, maintaining conversations, terminating conversations, and putting it all together.

The evolution of psychosocial skills training is important yet incomplete. A review in the mid-1990s concluded that its overall impact on social, cognitive, or vocational functioning is modest, and it remains unclear whether these gains are maintained after the training is over and can be used in real-life situations (Scott & Dixon, 1995a). However, a more recent study found greater independent living skills among clients who had received skills training during a 2-year followup of everyday community functioning (Liberman et al., 1998). Several others agree that skills training is effective for specific behavioral outcomes (Marder et al., 1996; Penn & Mueser, 1996). Specific symptom profiles may also influence how effective skills training is for a given person (Kopelowicz et al., 1997). Furthermore, Medalia and coworkers (1998) report recent success adapting cognitive rehabilitation techniques, originally developed for survivors of serious head injuries, for people with schizophrenia, but long-term effects and generalizability have not been determined. This exemplifies both the progress and the need for further refinement of this intervention (Smith et al., 1996b).

In a recent review article, a team of researchers concluded that the most potent rehabilitation programs (1) establish direct, behavioral goals; (2) are oriented to specific effects on related outcomes; (3) focus on long-term interventions; (4) occur within or close to clients' naturally preferred settings; and (5) combine skills training with an array of social and environmental

supports. They also note that most programs do not contain all of these elements, but most are much improved over previous eras (Mueser et al., 1997b).

There are a host of multi-component psychosocial rehabilitation *services* that combine pharmacologic treatment, independent living and social skills training, psychological support to clients and their families, housing, vocational rehabilitation, social support and network enhancement, and access to leisure activities (World Health Organization [WHO], 1997). These are discussed in the later section on service delivery.

Coping and Self-Monitoring

An important goal of recovery and the consumer movement is to enable patients themselves to participate more actively in their own treatment. While complete remission of all symptoms is unlikely for the majority, most can and do learn skills and techniques over time that they can use to manage distressing symptoms and the effects of the illness. Often, better skills in coping and monitoring one's own health status occurs simply through experience. However, the growth of self-help and the development of recovery models for serious mental illnesses has spawned interventions that purposefully teach and encourage active coping on the part of clients and their families. Controlled research is sparse (Penn & Mueser, 1996), except in the area of relapse prevention.

For example, some people find it very useful to pay attention to their own warning signs of relapse or symptom exacerbation, so that additional coping practices, supports, or interventions can be put into place. Norman and Malla (1995) conclude that there is not a standardized set of signs that predict relapse, but that some individuals have and get to know their own reasonably consistent patterns. Herz and Lamberti (1995) agree that many people experience predictable signs, although whether a relapse occurs depends on many factors besides the signs themselves. Therefore, the risk and magnitude of relapse can be reduced by monitoring early symptoms and intervening when they emerge (Herz & Lamberti, 1995). Watching for such signs is recommended for consumers, family members, and clinicians (Jorgensen, 1998). Specific training

programs for teaching individuals with schizophrenia to identify the warning signs of relapse and to develop relapse prevention plans have been shown to be effective (Lieberman et al., 1998).

Vocational Rehabilitation

Unemployment is pervasive among people with serious and persistent mental illness. Employment is valued highly by the general public and by people with schizophrenia alike because it generates financial independence, social status, contact with other people, structured time and goals, and opportunities for personal achievement and community contribution (Mowbray et al., 1997). These attributes of employment, combined with the self-esteem and personal purpose that it engenders, make vocational rehabilitation a prominent facet of treatment for serious mental illnesses. Vocational rehabilitation is especially important because early adult onset often disrupts education and employment history.

Controlled studies of vocational rehabilitation interventions have shown mixed results (Lehman, 1995, 1998; Cook & Jonikas, 1996). Although such programs do seem to increase work-related activities while people are engaged in them, the gains do not seem to be translated into more *independent* employment once services cease. This has led to the conclusion that ongoing support is needed for many individuals with schizophrenia who wish to work in competitive employment (Wehman, 1988). Recent controlled studies have shown the effectiveness of this newer type of so-called supported employment models, which emphasize rapid placement in a real job setting and strong support from a job coach to learn, adapt, and maintain the position (Drake et al., 1994, 1996; Bond et al., 1997). These models, which are growing in use, strike a dynamic balance between being supportive yet challenging in order to avoid clients' dependency and maximize their growth (Mowbray et al., 1997).

As vocational rehabilitation has moved away from sheltered workshops and toward supported employment models, the Americans With Disabilities Act of 1990 has helped to open jobs and educate employers about reasonable accommodations for people with psychiatric

disabilities (Mechanic, 1998; Scheid, 1998). Additionally, innovations like client-run and client-owned vocational programs and independent businesses have begun to be developed on a larger scale (Rowland et al., 1993; Miller & Miller, 1997). These innovations are part of a larger movement of consumer involvement in the provision of services for people with mental illness (see Chapter 2).

Service Delivery

The organization of services for adults with severe mental disorders is the linchpin of effective treatment. Since many mental disorders are best treated by a constellation of medical and psychosocial services, it is not just the services in isolation, but the delivery system as a whole, that dictates the outcome of treatment (Goldman, 1998b). Access to a delivery system is critical for individuals with severe mental illness not only for treatment of symptoms but also to achieve a measure of community participation.

Among the fundamental elements of effective service delivery are integrated community-based services, continuity of providers and treatments, and culturally sensitive and high-quality, empowering services (Mowbray et al., 1997; Lehman & Steinwachs, 1998a). Effective service delivery also requires support from the social welfare system in the form of housing, job opportunities, welfare, and transportation (Goldman, 1998a), issues that are discussed in the final section of this chapter.

What models of service delivery are most effective? This section strives to answer this question by focusing on models of service delivery for individuals with severe and persistent mental disorders, including severe depression and bipolar disorder, as well as schizophrenia. Although adults with mental illness in midlife confront many service delivery issues—for example, the problem of proper identification and treatment of depression in primary care settings—those who are most disabled by mental disorders encounter special service delivery problems. The focus on the most disabled is warranted for three reasons: (1) Society has a special obligation to those who are most impaired and consequently are the “least

Conclusions

1. ~~As individuals move into adulthood, developmental goals focus on productivity and intimacy including pursuit of education, work, leisure, creativity, and personal relationships. Good mental health enables individuals to cope with adversity while pursuing these goals.~~
2. ~~Untreated, mental disorders can lead to lost productivity, unsuccessful relationships, and significant distress and dysfunction. Mental illness in adults can have a significant and continuing effect on children in their care.~~
3. ~~Stressful life events or the manifestation of mental illness can disrupt the balance adults seek in life and result in distress and dysfunction. Severe or life-threatening trauma experienced either in childhood or adulthood can further provoke emotional and behavioral reactions that jeopardize mental health.~~
4. ~~Research has improved our understanding of mental disorders in the adult stage of the life cycle. Anxiety, depression, and schizophrenia, particularly, present special problems in this age group. Anxiety and depression contribute to the high rates of suicide in this population. Schizophrenia is the most persistently disabling condition, especially for young adults, in spite of recovery of function by some individuals in mid to late life.~~
5. ~~Research has contributed to our ability to recognize, diagnose, and treat each of these conditions effectively in terms of symptom control and behavior management. Medication and other therapies can be independent, combined, or sequenced depending on the individual's diagnosis and personal preference.~~
6. ~~A new recovery perspective is supported by evidence on rehabilitation and treatment as well as by the personal experiences of consumers.~~
7. ~~Certain common events of midlife (e.g., divorce or other stressful life events) create mental health problems (not necessarily disorders) that may be addressed through a range of interventions.~~
8. ~~Care and treatment in the real world of practice do not conform to what research determines as best. For many reasons, at times care is inadequate but there are models for improving treatment.~~
9. ~~Substance abuse is a major co-occurring problem for adults with mental disorders. Evidence supports combined treatment, although there are substantial gaps between what research recommends and what typically is available in communities.~~
10. ~~Several special problems in care and treatment of adults have been recognized, beyond traditional mainstream mental health concerns, including racial and ethnic differences, lack of consumer involvement, and the consequences of disability and poverty.~~
11. ~~Barriers of access exist in the organization and financing of services for adults. There are specific problems with Medicare, Medicaid, income supports, housing, and managed care.~~

References

- Aagaard, J., Vestergaard, P., & Maarbjer, K. (1988). Adherence to lithium prophylaxis: II. Multivariate analysis of clinical, social, and psychosocial predictors of nonadherence. *Pharmacopsychiatry*, 21, 166–170.
- Abbruzzese, M., Ferri, S., & Scarone, S. (1997). The selective breakdown of frontal functions in patients with obsessive-compulsive disorder and in patients with schizophrenia: A double dissociation experimental finding. *Neuropsychologia*, 35, 907–912.
- Abram, K., & Teplin, L. (1991). Co-occurring disorders among mentally ill jail detainees: Implications for public policy. *American Psychologist*, 46, 1036–1046.
- Adams, W., Kendell, R. E., Hare, E. H., & Munk-Jorgensen, P. (1993). Epidemiological evidence that maternal influenza contributes to the aetiology of schizophrenia. An analysis of Scottish, English, and Danish data. *British Journal of Psychiatry*, 163, 522–534.
- Adolphs, R., Tranel, D., & Damasio, A. R. (1998). The human amygdala in social judgement. *Nature*, 393, 470–474.
- Agency for Health Care Policy and Research. (1999). *Treatment of depression—newer pharmacotherapies* (Evidence Report/Technology Assessment, Number 7, Pub. No. 99–E014). Rockville, MD: Author.

- Aguglia, E., Casacchia, M., Cassano, G. B., Faravelli, C., Ferrari, G., Giordano, P., Pancheri, P., Ravizza, L., Trabucchi, M., Bolino, F., Scarpato, A., Berardi, D., Provenzano, G., Brugnoli, R., & Rozzini, R. (1993). Double-blind study of the efficacy and safety of sertraline versus fluoxetine in major depression. *International Clinical Psychopharmacology*, 8, 197–202.
- Aiken, L., Somers, S., & Shore, M. (1986). Private foundations in health affairs: A case study of a national initiative for the chronically mentally ill. *American Psychologist*, 41, 1290–1295.
- Akbarian, S., Bunney, W. E. J., Potkin, S. G., Wigal, S. B., Hagman, J. O., Sandman, C. A., & Jones, E. G. (1993). Altered distribution of nicotinamide-adenine dinucleotide phosphate-diaphorase cells in frontal lobe of schizophrenics implies disturbances of cortical development. *Archives of General Psychiatry*, 50, 169–177.
- Akiskal, H. S. (1985). Interaction of biologic and psychologic factors in the origin of depressive disorders. *Acta Psychiatrica Scandinavica*, 319(Suppl.), 131–139.
- Alexander, M. J. (1996). Women with co-occurring addictive and mental disorders: An emerging profile of vulnerability. *American Journal of Orthopsychiatry*, 66, 61–70.
- Alexander, P. C., Neimeyer, R. A., & Follette, V. M. (1991). Group therapy for women sexually abused as children: Controlled study and investigation of individual differences. *Journal of Interpersonal Violence*, 6, 218–231.
- Alexander, P. C., Neimeyer, R. A., Follette, V. M., Moore, M. K., & Harter, S. (1989). A comparison of group treatments of women sexually abused as children. *Journal of Consulting and Clinical Psychology*, 57, 479–483.
- Allness, D. & Knoedler, W. (1999). *Recommended PACT standards for new teams* [On-line]. Available: <http://www.nami.org/about/pactstd.html>
- Alloy, L. B., & Abramson, L. Y. (1988). Depressive realism: Four theoretical perspectives. In Alloy L. B. (Ed.), *Cognitive processes in depression* (pp. 223–265). New York: Guilford Press.
- Alloy, L. B., Peterson, C., Abramson, L. Y., & Seligman, M. E. (1984). Attributional style and the generality of learned helplessness. *Journal of Personality and Social Psychology*, 46, 681–687.
- American Psychiatric Association. (1993). *Practice guideline for major depressive disorder in adults*. *American Journal of Psychiatry*, 150(Suppl. 4), 1–26.
- American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author
- American Psychiatric Association. (1998). Practice guidelines for the treatment of patients with panic disorder. *American Journal of Psychiatry*, 155(Suppl. 12), 1–34.
- Andersson, C., Chakos, M., Mailman, R., & Lieberman, J. (1998). Emerging roles for novel antipsychotic medications in the treatment of schizophrenia. *Psychiatric Clinics of North America*, 21, 151–179.
- Andrade, C., Gangadhar, B. N., Subbakrishna, D. K., Channabasavanna, S. M., & Pradhan, N. (1998). A double-blind comparison of sinusoidal wave and brief-pulse electroconvulsive therapy in endogenous depression. *Convulsive Therapy*, 4, 297–305.
- Andreasen, N. C. (1995). Symptoms, signs, and diagnosis of schizophrenia. *Lancet*, 346, 477B481.
- Andreasen, N. C. (1997a). The evolving concept of schizophrenia: From Kraepelin to the present and future. *Schizophrenia Research*, 28, 105–109.
- Andreasen, N. C. (1997b). Linking mind and brain in the study of mental illnesses: A project for a scientific psychopathology. *Science*, 275, 1586–1593.
- Andreasen, N. C., O'Leary, D. S., Cizadlo, T., Arndt, S., Reza, K., Ponto, L. L., Watkins, G. L., & Hichwa, R. D. (1996). Schizophrenia and cognitive dysmetria: A positron-emission tomography study of dysfunctional prefrontal-thalamic-cerebellar circuitry. *Proceedings of the National Academy of Sciences of the United States of America*, 93, 9985–9990.
- Andreasen, N. C., O'Leary, D. S., Flaum, M., Nopoulos, P., Watkins, G. L., Boles Ponto, L. L., & Hichwa, R. D. (1997). Hypofrontality in schizophrenia: Distributed dysfunctional circuits in neuroleptic-naive patients. *Lancet*, 349, 1730–1734.
- Andreasen, N. C., Paradiso, S., & O'Leary, D. S. (1998). "Cognitive dysmetria" as an integrative theory of schizophrenia: A dysfunction in cortical-subcortical-cerebellar circuitry? *Schizophrenia Bulletin*, 24, 203–218.
- Andrews, G. (1995). Workforce deployment: Reconciling demands and resources. *Australian and New Zealand Journal of Psychiatry*, 29, 394–402.

Mental Health: A Report of the Surgeon General

- Angst, J., Angst, F., & Stassen, H. H. (1999). Suicide risk in patients with major depressive disorder. *Journal of Clinical Psychiatry, 60*(Suppl. 2), 57–62.
- Appleby, L., Desai, P. N., Luchins, D. J., Gibbons, R. D., & Hedeker, D. R. (1993). Length of stay and recidivism in schizophrenia: A study of public psychiatric hospital patients. *American Journal of Psychiatry, 150*, 72–76.
- Arborelius, L., Owens, M. J., Plotsky, P. M., & Nemeroff, C. B. (1999). The role of corticotropin-releasing factor in depression and anxiety disorders. *Journal of Endocrinology, 160*, 1–12.
- Armitage, R., Rush, A. J., Trivedi, M., Cain, J., & Roffwarg, H. P. (1994). The effects of nefazodone on sleep architecture in depression. *Neuropsychopharmacology, 10*, 123–127.
- Arnold, S. E., Hyman, B. T., Van Hoesen, G. W., & Damasio, A. R. (1991). Some cytoarchitectural abnormalities of the entorhinal cortex in schizophrenia. *Archives of General Psychiatry, 48*, 625–632.
- Ascher, J. A., Cole, J. O., Colin, J. N., Feighner, J. P., Ferris, R. M., Fibiger, H. C., Golden, R. N., Martin, P., Potter, W. Z., Richelson, E., & Sulser, F. (1995). Bupropion: A review of its mechanism of antidepressant activity. *Journal of Clinical Psychiatry, 56*, 395–401.
- Attkisson, C., Cook, J., Karno, M., Lehman, A., McGlashan, T. H., Meltzer, H. Y., O'Connor, M., Richardson, D., Rosenblatt, A., Wells, K., & Williams, J., & Hohmann, A. A. (1992). Clinical services research. *Schizophrenia Bulletin, 18*, 561–626.
- Awad, G. A., Voruganti, L. N., & Heslegrave, R. J. (1997). Measuring quality of life in patients with schizophrenia. *Pharmacoeconomics, 11*, 32–47.
- Baldessarini, R. J., Cohen, B. M., & Teicher, M. H. (1990). Pharmacological treatment. In S. T. Levy & P. T. Ninan (Eds.), *Schizophrenia: Treatment of acute psychotic episodes* (pp. 61–118). Washington, DC: American Psychiatric Press.
- Baldwin, D. S., & Birtwistle, J. (1998). The side effect burden associated with drug treatment of panic disorder. *Journal of Clinical Psychiatry, 59*(Suppl. 8), 39–44.
- Ball, F. L., & Havassy, B. E. (1984). A survey of the problems and needs of homeless consumers of acute psychiatric services. *Hospital and Community Psychiatry, 35*, 917–921.
- Ballenger, J. C., Davidson, J. R., Lecrubier, Y., Nutt, D. J., Bobes, J., Beidel, D. C., Ono, Y., & Westenberg, H. G. (1998). Consensus statement on social anxiety disorder from the International Consensus Group on Depression and Anxiety. *Journal of Clinical Psychiatry, 59*(Suppl. 17), 54–60.
- Ballus, C. (1997). Effects of antipsychotics on the clinical and psychosocial behavior of patients with schizophrenia. *Schizophrenia Research, 28*, 247–255.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191–215.
- Barbee, J. G. (1998). Mixed symptoms and syndromes of anxiety and depression: Diagnostic, prognostic, and etiologic issues. *Annals of Clinical Psychiatry, 10*, 15–29.
- Barlow, D. H. (1988). *Anxiety and its disorders: The nature and treatment of anxiety and panic*. New York: Guilford Press.
- Barlow, D. H., Chorpita, B. F., & Turovsky, J. (1996). Fear, panic, anxiety, and disorders of emotion. In D. A. Hope (Ed.), *Perspectives on anxiety, panic, and fear (The 43rd Annual Nebraska Symposium on Motivation*, pp. 251–328). Lincoln, NE: Nebraska University Press.
- Barlow, D. H., & Lehman, C. L. (1996). Advances in the psychosocial treatment of anxiety disorders. Implications for national health care. *Archives of General Psychiatry, 53*, 727–735.
- Barnes, T. R., & McPhillips, M. A. (1998). Novel antipsychotics, extrapyramidal side effects and tardive dyskinesia. *International Clinical Psychopharmacology, 13*(Suppl. 3), S49–S57.
- Baron, M. (1997). Genetic linkage and bipolar affective disorder: Progress and pitfalls. *Molecular Psychiatry, 2*, 200–210.
- Barta, P. E., Pearlson, G. D., Powers, R. E., Richards, S. S., & Tune, L. E. (1990). Auditory hallucinations and smaller superior temporal gyral volume in schizophrenia. *American Journal of Psychiatry, 147*, 1457–1462.
- Bartels, S. J., Drake, R. E., & Wallach, M. A. (1995). Long-term course of substance use disorders among patients with severe mental illness. *Psychiatric Services, 46*, 248–251.
- Basso, M. R., Nasrallah, H. A., Olson, S. C., & Bornstein, R. A. (1997). Cognitive deficits distinguish patients with adolescent- and adult-onset schizophrenia. *Neuropsychiatry, Neuropsychology, and Behavioral Neurology, 10*, 107–112.

- Basso, M. R., Nasrallah, H. A., Olson, S. C., & Bornstein, R. A. (1998). Neuropsychological correlates of negative, disorganized and psychotic symptoms in schizophrenia. *Schizophrenia Research, 31*, 99–111.
- Bauer, M. S., Calabrese, J., Dunner, D. L., Post, R., Whybrow, P. C., Gyulai, L., Tay, L. K., Younkin, S. R., Bynum, D., Lavori, P., & Price, R. A. (1994). Multisite data reanalysis of the validity of rapid cycling as a course modifier for bipolar disorder in DSM-IV. *American Journal of Psychiatry, 151*, 506–515.
- Baxter, L. R., Jr., Mazziotta, J. C., Phelps, M. E., Selin, C. E., Guze, B. H., & Fairbanks, L. (1987). Cerebral glucose metabolic rates in normal human females versus normal males. *Psychiatry Research, 21*, 237–245.
- Beardslee, W. R., & Vaillant, G. (1997). Adult development. In A. Tasman, J. Kay, & J. A. Lieberman (Eds.), *Psychiatry* (Vol. 1, pp. 145–155). Philadelphia: W. B. Saunders.
- Beasley, C. M., Jr., Dornseif, B. E., Bosomworth, J. C., Sayler, M. E., Rampey, A. H., Jr., Heiligenstein, J. H., Thompson, V. L., Murphy, D. J., & Masica, D. N. (1991). Fluoxetine and suicide: A meta-analysis of controlled trials of treatment for depression. *British Medical Journal, 303*, 685–692.
- Beasley, C. M., Jr., Sayler, M. E., Cunningham, G. E., Weiss, A. M., & Masica, D. N. (1990). Fluoxetine in tricyclic refractory major depressive disorder. *Journal of Affective Disorders, 20*, 193–200.
- Bebbington, P., & Kuipers, L. (1994). The predictive utility of expressed emotion in schizophrenia: An aggregate analysis. *Psychological Medicine, 24*, 707–718.
- Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York: International Universities Press.
- Beck, A. T., Rush A. J., & Shaw B. F. (1979). *Cognitive therapy of depression*. New York: Guilford Press.
- Bell, C. C. & Mehta, H. (1981). The misdiagnosis of black patients with manic depressive illness. *Journal of the National Medical Association 73*, 101–107.
- Bell, M. D., & Lysaker, P. H. (1997). Clinical benefits of paid work activity in schizophrenia: 1-year followup. *Schizophrenia Bulletin, 23*, 317–328.
- Bell, M. D., Lysaker, P. H., & Milstein, R. M. (1996). Clinical benefits of paid work activity in schizophrenia. *Schizophrenia Bulletin, 22*, 51–67.
- Bell, M. D., & Ryan, E. R. (1984). Integrating psychosocial rehabilitation into the hospital psychiatric service. *Hospital and Community Psychiatry, 35*, 1017–1022.
- Bellack, A. S., & Gearon, J. S. (1998). Substance abuse treatment for people with schizophrenia. *Addictive Behaviors, 23*, 749–766.
- Bellack, A. S., Morrison, R. L., & Mueser, K. T. (1989). Social problem solving in schizophrenia. *Schizophrenia Bulletin, 15*, 101–116.
- Bellack, A. S., & Mueser, K. T. (1993). Psychosocial treatment for schizophrenia. *Schizophrenia Bulletin, 19*, 317–336.
- Berren, M., Hill, K., Merikle, E., Gonzalez, N., & Santiago, J. (1994). Serious mental illness and mortality rates. *Hospital and Community Psychiatry, 45*, 604–605.
- Bertelsen, A., Harvald, B., & Hauge, M. (1977). A Danish twin study of manic-depressive disorders. *British Journal of Psychiatry, 130*, 330–351.
- Besio, S. W., & Mahler, J. (1993). Benefits and challenges of using consumer staff in supported housing services. *Hospital and Community Psychiatry, 44*, 490–491.
- Bezold, H. S., MacDowell M., & Kunkel R. (1996). Predicting psychiatric length of stay. *Administration and Policy in Mental Health, 23*, 407–423.
- Bierut, L. J., Heath, A. C., Bucholz, K. K., Dinwiddie, S. H., Madden, P. A., Statham, D. J., Dunne, M. P., & Martin, N. G. (1999). Major depressive disorder in a community-based twin sample: Are there different genetic and environmental contributions for men and women? *Archives of General Psychiatry, 56*, 557–563.
- Black, D. W., Winokur, G., & Nasrallah, A. (1987). The treatment of depression: Electroconvulsive therapy v antidepressants: A naturalistic evaluation of 1,495 patients. *Comprehensive Psychiatry, 28*, 169–182.
- Blackburn, I. M., Eunson, K. M., & Bishop, S. (1986). A two-year naturalistic follow-up of depressed patients treated with cognitive therapy, pharmacotherapy and a combination of both. *Journal of Affective Disorders, 10*, 67–75.
- Blanchard, J. J., Mueser, K. T., & Bellack, A. S. (1998). Anhedonia, positive and negative affect, and social functioning in schizophrenia. *Schizophrenia Bulletin, 24*, 413–424.
- Blehar, M. C., DePaulo, J. R. Jr, Gershon, E. S., Reich, T., Simpson, S. G., & Nurnberger, J. I. Jr. (1998). Women with bipolar disorder: Findings from the NIMH Genetics Initiative sample. *Psychopharmacology Bulletin, 34*, 239–243.
- Bloom, F. E. (1993). Advancing a neurodevelopmental origin for schizophrenia. *Archives of General Psychiatry, 50*, 224–227.

Mental Health: A Report of the Surgeon General

- Blumenthal, S. J. (1988). Suicide: A guide to risk factors, assessment, and treatment of suicidal patients. *Medical Clinics of North America*, 72, 937–971.
- Blumenthal, S. J. (1994a). Gender differences in mental disorders. *Journal of Clinical Psychiatry*, 3, 453–458.
- Blumenthal, S. J. (1994b). Women and depression. *Journal of Women's Health*, 3, 467–453.
- Bogerts, B., Lieberman, J. A., Ashtari, M., Bilder, R. M., Degreet, G., & Lerner, G. (1993). Hippocampus-amygdala volumes and psychopathology in chronic schizophrenia. *Biological Psychiatry*, 33, 236–246.
- Bolden-Watson, C., & Richelson, E. (1993). Blockade by newly-developed antidepressants of biogenic amine uptake into rat brain synaptosomes. *Life Sciences*, 52, 1023–1029.
- Bond, G. R., & Dincin, J. (1986). Accelerating entry into transitional employment in a psychosocial rehabilitation agency. *Rehabilitation Psychology*, 31, 143–154.
- Bond, G. R., Drake, R. E., Mueser, K. T., & Becker, D. R. (1997). An update on supported employment for people with severe mental illness. *Psychiatric Services*, 48, 335–346.
- Bond, G. R., McGrew, J. H., & Fekete, D. M. (1995). Assertive outreach of frequent users of psychiatric hospitals: A meta-analysis. *Journal of Mental Health Administration*, 22, 4–16.
- Borkman, T. J. (1997). A selected look at self-help groups in the U.S. *Health and Social Care in the Community*, 5, 357–364.
- Borkman, T. J. (1991). Self-help groups. Introduction to the special issue. *American Journal of Community Psychology*, 19, 643–650.
- Borland, A., McRae, J., & Lycan, C. (1989). Outcome of five years of continuous intensive case management. *Hospital and Community Psychiatry*, 40, 369–376.
- Bowden, C. L., Brugger, A. M., Swann, A. C., Calabrese, J. R., Janicak, P. G., Petty, F., Dilsaver, S. C., Davis, J. M., Rush, A. J., Small, J. G., Garza-Treviño, E. S., Risch, S. C., Goodnick, P. J., & Morris, D. D. (1994). Efficacy of divalproex vs lithium and placebo in the treatment of mania. The Depakote Mania Study Group. *Journal of the American Medical Association*, 271, 918–924.
- Bracha, H. S. (1991). Etiology of structural asymmetry in schizophrenia: An alternative hypothesis. *Schizophrenia Bulletin*, 17, 551–553.
- Braun, C. M., Lapierre, D., Hodgins, S., Toupin, J., Leveille, S., & Constantineau, C. (1995). Neurological soft signs in schizophrenia: Are they related to negative or positive symptoms, neuropsychological performance and violence? *Archives of Clinical Neuropsychology*, 10, 489–509.
- Brawman-Mintzer, O., & Lydiard, R. B. (1996). Generalized anxiety disorder: Issues in epidemiology. *Journal of Clinical Psychiatry*, 57(Suppl. 7), 3–8.
- Brazo, P., & Dollfus, S. (1997). Syndromic and diagnostic heterogeneity of schizophrenia. *Encephale*, 23, 20–24.
- Breggin, P. R., & Breggin, G. R. (1994). *Talking back to Prozac*. New York: St. Martin's Press.
- Breiter, H. C., Etcoff, N. L., Whalen, P. J., Kennedy, W. A., Rauch, S. L., Buckner, R. L., Strauss, M. M., Hyman, S. E., & Rosen, B. R. (1996). Response and habituation of the human amygdala during visual processing of facial expression. *Neuron*, 17, 875–887.
- Brekke, J. S., & Barrio, C. (1997). Cross-ethnic symptom differences in schizophrenia: The influence of culture and minority status. *Schizophrenia Bulletin*, 23, 305–316.
- Brekke, J. S., Raine, A., & Thomson, C. (1995). Cognitive and psychophysiological correlates of positive, negative, and disorganized symptoms in the schizophrenia spectrum. *Psychiatry Research*, 57, 241–250.
- Breslau, N., Davis, G. C., Andreski, P., & Peterson, E. (1991). Traumatic events and posttraumatic stress disorder in an urban population of young adults. *Archives of General Psychiatry*, 48, 216–222.
- Breslau, N., Kessler, R. C., Chilcoat, H. D., Schultz, L. R., Davis, G. C., & Andreski, P. (1998). Trauma and posttraumatic stress disorder in the community: The 1996 Detroit Area Survey of Trauma. *Archives of General Psychiatry*, 55, 626–632.
- Briere J. (1992). *Child abuse trauma: Theory and treatment of the lasting effects*. Newbury Park, CA: Sage.
- Brixey, S. N., Gallagher, B. J., III, McFalls, J. A., Jr., & Parmelee, L. F. (1993). Gestational and neonatal factors in the etiology of schizophrenia. *Journal of Clinical Psychology*, 49, 447–456.
- Broadhead, W. E., Blazer, D. G., George, L. K., & Tse, C. K. (1990). Depression, disability days, and days lost from work in a prospective epidemiologic survey. *Journal of the American Medical Association*, 264, 2524–2528.
- Brown, G. W., & Harris, T. O. (1989). *Life events and illness*. New York: Guilford Press.

- Brown, G. W., Harris, T. O., & Hepworth, C. (1994). Life events and endogenous depression. A puzzle reexamined. *Archives of General Psychiatry*, *51*, 525–534.
- Brown, G. W., & Moran, P. M. (1997). Single mothers, poverty and depression. *Psychological Medicine*, *27*, 21–33.
- Brown, S. (1997). Excess mortality of schizophrenia—A meta-analysis. *British Journal of Psychiatry*, *171*, 502–508.
- Browne, A., & Finkelhor, D. (1986). Impact of child sexual abuse: A review of the research. *Psychological Bulletin*, *99*, 66–77.
- Buchanan, R. W. (1995). Clozapine: Efficacy and safety. *Schizophrenia Bulletin*, *21*, 579–591.
- Buchanan, R. W., Breier, A., Kirkpatrick, B., Elkashef, A., Munson, R. C., Gellad, F., Carpenter, W. T., Jr. (1993). Structural abnormalities in deficit and non-deficit schizophrenia. *American Journal of Psychiatry*, *150*, 59–65.
- Buckley, P. F. (1997). New dimensions in the pharmacologic treatment of schizophrenia and related psychoses. *Journal of Clinical Pharmacology*, *37*, 363–378.
- Burke, K. C., Burke, J. D., Jr., Regier, D. A., & Rae, D. S. (1990). Age at the onset of selected mental disorders in five community populations. *Archives of General Psychiatry*, *47*, 511–518.
- Burke, M. J., Silkey, B., & Preskorn, S. H. (1994). Pharmacoeconomic considerations when evaluating treatment options for major depressive disorder. *Journal of Clinical Psychiatry*, *55*(Suppl. A), 42–52.
- Bymaster, F. P., Rasmussen, K., Calligaro, D. O., Nelson, D. L., DeLapp, N. W., Wong, D. T., & Moore, N. A. (1997). In vitro and in vivo biochemistry of olanzapine: A novel, atypical antipsychotic drug. *Journal of Clinical Psychiatry*, *58*(Suppl. 10), 28–36.
- Cadenhead, K. S., Geyer, M. A., Butler, R. W., Perry, W., Sprock, J., & Braff, D. L. (1997). Information processing deficits of schizophrenia patients: Relationship to clinical ratings, gender and medication status. *Schizophrenia Research*, *28*, 51–62.
- Calabrese, J. R., & Delucchi, G. A. (1990). Spectrum of efficacy of valproate in 55 patients with rapid-cycling bipolar disorder. *American Journal of Psychiatry*, *147*, 431–434.
- Caley, A. (1994). Neuropsychology and ECT: Past and future research trends. *Psychopharmacology Bulletin*, *30*, 461–469.
- Callahan, D. (1999). Balancing efficiency and need in allocating resources to the care of persons with serious mental illness. *Psychiatric Services*, *50*, 664–666.
- Callahan, E. J., Bertakis, K. D., Azari, R., Robbins, J., Helms, L. J., & Miller, J. (1996). The influence of depression on physician-patient interaction in primary care. *Family Medicine*, *28*, 346–351.
- Cannon, T. D., Kaprio, J., Lonnqvist, J., Huttunen, M., & Koskenvuo, M. (1998). The genetic epidemiology of schizophrenia in a Finnish twin cohort. A population-based modeling study. *Archives of General Psychiatry*, *55*, 67–74.
- Capleton, R. A. (1996). Cognitive function in schizophrenia: Association with negative and positive symptoms. *Psychological Reports*, *78*, 123–128.
- Cardno, A. G., & Farmer, A. E. (1995). The case for or against heterogeneity in the etiology of schizophrenia. The genetic evidence. *Schizophrenia Research*, *17*, 153–159.
- Carling, P. (1989). Access to housing: Cornerstone of the American dream. *Journal of Rehabilitation*, *55*, 6–8.
- Carpinello, S. E., & Knight, E. L. (1993). *A survey of mental health self-help groups in New York state: Summary results*. Albany, NY: New York State Office of Mental Health.
- Casey, D. E. (1997). The relationship of pharmacology to side effects. *Journal of Clinical Psychiatry*, *58*(Suppl. 10), 55–62.
- Cassens, G., Inglis, A. K., Appelbaum, P. S., & Gutheil, T. G. (1990). Neuroleptics: Effects on neuropsychological function in chronic schizophrenic patients. *Schizophrenia Bulletin*, *16*, 477–499.
- Castrogiovanni, P., Iapichino, S., Pacchierotti, C., & Pieraccini, F. (1998). Season of birth in psychiatry. A review. *Neuropsychobiology*, *37*, 175–181.
- Cazzullo, C. L., Bertrando, P., Clerici, C., Bressi, C., Da Ponte, C., & Albertini, E. (1989). The efficacy of an information group intervention on relatives of schizophrenics. *International Journal of Social Psychiatry*, *35*, 313–323.
- Center for Mental Health Services. (1995). *Double jeopardy: Persons with mental illnesses in the criminal justice system*. Rockville, MD: Author.
- Center for Mental Health Services. (1996). *Consumer Affairs Bulletin*, *1*(1).

Mental Health: A Report of the Surgeon General

- Center for Mental Health Services. (1997). *Cultural competence standards in managed mental health care for four underserved/underrepresented racial/ethnic groups* (Final report from Working Groups on Cultural Competence in Managed Mental Health Care). Rockville, MD: Author.
- Center for Mental Health Services. (1998). *Electroconvulsive therapy background paper* (DHHS Publication No. SMA 98-3201). Vienna, VA: Research-Abele, Inc.
- Chakos, M. H., Alvir, J. M., Woerner, M. G., Koreen, A., Geisler, S., Mayerhoff, D., Sobel, S., Kane, J. M., Borenstein, M., & Lieberman, J. A. (1996). Incidence and correlates of tardive dyskinesia in first episode of schizophrenia. *Archives of General Psychiatry, 53*, 313–319.
- Chamberlin, J., & Rogers, J. A. (1990). Planning a community-based mental health system. Perspective of service recipients. *American Psychologist, 45*, 1241–1244.
- Chambless, D. K., Baker, M. J., Baucom, D. H., Beutler, L. E., et al. (1998). Update on empirically validated therapies II. *The Clinical Psychologist, 51*, 3–16.
- Charney, D. S., & Deutch, A. (1996). A functional neuroanatomy of anxiety and fear: Implications for the pathophysiology and treatment of anxiety disorders. *Critical Reviews in Neurobiology, 10*, 419–446.
- Chouinard, G. (1988). The use of benzodiazepines in the treatment of manic-depressive illness. *Journal of Clinical Psychiatry, 49*(Suppl.), 15–20.
- Christensen, A., & Heavey, C. L. (1999). Interventions for couples. *Annual Review of Psychology, 50*, 165B190.
- Ciampi, L. (1980). Catamnestic long-term study on the course of life and aging of schizophrenics. *Schizophrenia Bulletin, 6*, 606–618.
- Claghorn, J. L., & Feighner, J. P. (1993). A double-blind comparison of paroxetine with imipramine in the long-term treatment of depression. *Journal of Clinical Psychopharmacology, 13*, 23S–27S.
- Clark, L. A., Watson, D., & Mineka, S. (1994). Temperament, personality, and the mood and anxiety disorders. *Journal of Abnormal Psychology, 103*, 103–116.
- Clayton, P. J., & Darvish, H. S. (1979). Course of depressive symptoms following the stress of bereavement. In J. E. Barrett, R. M. Rose, & G. Klerman (Eds.), *Stress and mental disorder* (pp. 121–136). New York: Raven.
- Clerc, G. E., Ruimy, P., & Verdeau-Palles, J. (1994). A double-blind comparison of venlafaxine and fluoxetine in patients hospitalized for major depression and melancholia. The Venlafaxine French Inpatient Study Group. *International Clinical Psychopharmacology, 9*, 139–143.
- Cohen, C. I. (1993). Poverty and the course of schizophrenia: Implications for research and policy. *Hospital and Community Psychiatry, 44*, 951–958.
- Cohen, L. S., Friedman, J. M., Jefferson, J. W., Johnson, E. M., & Weiner, M. L. (1994). A reevaluation of risk of in utero exposure to lithium. *Journal of the American Medical Association, 271*, 146–150.
- Cohn, J. B., Collins, G., Ashbrook, E., & Wernicke, J. F. (1989). A comparison of fluoxetine imipramine and placebo in patients with bipolar depressive disorder. *International Clinical Psychopharmacology, 4*, 313–322.
- Cole, J. O., & Davis, J. M. (1969). Antipsychotic drugs. In *The schizophrenia syndrome* (pp. 478B568). Grune & Stratton.
- Collazo, Y., Tam, R., Sramek, J., & Herrera, J. (1996). Neuroleptic dosing in Hispanic and Asian inpatients with schizophrenia. *Mt. Sinai Journal of Medicine, 63*, 310–313.
- Conrad, K. J., Matters, M. D., Hanrahan, P., Luchins, D. J., Savage, C., & Daugherty, B. (1998). Characteristics of persons with mental illness in a representative payee program. *Psychiatric Services, 49*, 1223–1225.
- Conwell, Y., & Brent, D. (1995). Suicide and aging. I: Patterns of psychiatric diagnosis. *International Psychogeriatrics, 2*, 149–164.
- Cook, J. A., & Jonikas, J. A. (1996). Outcomes of psychiatric rehabilitation service delivery. *New Directions in Mental Health Services, 71*, 33–47.
- Cook, J. A., & Solomon, M. L. (1993). The Community Scholar Program: An outcome study of supported education for students with severe mental illness. *Psychosocial Rehabilitation Journal, 17*, 83–97.
- Cook, J. A., Wessell, M., & Dincin, J. (1987). Predicting educational levels of the severely mentally ill: Implications for psychosocial program directors. *Psychosocial Rehabilitation Journal, 11*, 23–37.
- Cook, M., & Mineka, S. (1989). Observational conditioning of fear to fear-relevant vs. fear-irrelevant stimuli in rhesus monkeys. *Journal of Abnormal Psychology, 98*, 448–459.

- Coplan, J. D., & Lydiard, R. B. (1998). Brain circuits in panic disorder. *Biological Psychiatry*, *44*, 1264–1276.
- Coplan, J. D., Pine, D. S., Papp, L. A., & Gorman, J. M. (1997). A view on noradrenergic, hypothalamic-pituitary-adrenal axis and extrahypothalamic corticotrophin-releasing factor function in anxiety and affective disorders: The reduced growth hormone response to clonidine. *Psychopharmacology Bulletin*, *33*, 193–204.
- Cornblatt, B. A., & Keilp, J. G. (1994). Impaired attention, genetics, and the pathophysiology of schizophrenia. *Schizophrenia Bulletin*, *20*, 31–46.
- Coryell, W., Endicott, J., & Keller, M. (1992). Rapidly cycling affective disorder. Demographics, diagnosis, family history, and course. *Archives of General Psychiatry*, *49*, 126–131.
- Coryell, W., Solomon, D., Leon, A. C., Akiskal, H. S., Keller, M. B., Scheftner, W. A., & Mueller, T. (1998). Lithium discontinuation and subsequent effectiveness. *American Journal of Psychiatry*, *155*, 895–898.
- Cournos, F., & McKinnon, K. (1997). HIV seroprevalence among people with severe mental illness in the United States: A critical review. *Clinical Psychology Review*, *17*, 259–269.
- Coxhead, N., Silverstone, T., & Cookson, J. (1992). Carbamazepine versus lithium in the prophylaxis of bipolar affective disorder. *Acta Psychiatrica Scandinavica*, *85*, 114–118.
- Crismon, M. L., Trivedi, M., Pigott, T. A., Rush, A. J., Hirschfeld, R. M., Kahn, D. A., DeBattista, C., Nelson, J. C., Nierenberg, A. A., Sackeim, H. A., & Thase, M. A. (1999). The Texas Medication Algorithm Project: Report of the Texas Consensus Conference Panel on Medication Treatment of Major Depressive Disorder. *Journal of Clinical Psychiatry*, *60*, 142–156.
- Crow, T. J. (1985). The two-syndrome concept: Origins and current status. *Schizophrenia Bulletin*, *11*, 471–486.
- Crow, T. J. (1995). Brain changes and negative symptoms in schizophrenia. *Psychopathology*, *28*, 18–21.
- Csernansky, J. G., & Grace, A. A. (1998). New models of the pathophysiology of schizophrenia: Editors' introduction. *Schizophrenia Bulletin*, *24*, 185–187.
- Cuesta, M. J., & Peralta, V. (1995). Cognitive disorders in the positive, negative, and disorganization syndromes of schizophrenia. *Psychiatry Research*, *58*, 227–235.
- Danish University Antidepressant Group. (1986). Citalopram: Clinical effect profile in comparison with clomipramine. A controlled multicenter study. *Psychopharmacology (Berlin)*, *90*, 131–138.
- Danish University Antidepressant Group. (1990). Paroxetine: A selective serotonin reuptake inhibitor showing better tolerance but weaker antidepressant effect than clomipramine in a controlled multicenter study. *Journal of Affective Disorders*, *18*, 289–299.
- Dassori, A. M., Miller, A. L., & Saldana, D. (1995). Schizophrenia among Hispanics: Epidemiology, phenomenology, course, and outcome. *Schizophrenia Bulletin*, *21*, 303–312.
- Davidson, J. (1989). Seizures and bupropion: A review. *Journal of Clinical Psychiatry*, *50*, 256B261.
- Davidson, J. R. (1998). Pharmacotherapy of social anxiety disorder. *Journal of Clinical Psychiatry*, *59*(Suppl. 17), 47–53.
- Davis, J. M., Barter, J. T., & Kane, J. M. (1989). The natural course of schizophrenia and effective maintenance drug treatment. In H. I. Kaplan & B. J. Sadock (Eds.), *Comprehensive textbook of psychiatry* (Vol. 5, pp. 1591–1626). Baltimore: Williams & Wilkins.
- Davis, M. (1997). Neurobiology of fear responses: The role of the amygdala. *Journal of Neuropsychiatry and Clinical Neurosciences*, *9*, 382–402.
- Dawlans, K. (1995). Gender differences in psychiatry: Epidemiology and drug response. *CNS Drugs*, *3*, 393–407.
- de Kloet, E. R., Rots, N. Y., & Cools, A. R. (1996). Brain-corticosteroid hormone dialogue: Slow and persistent. *Cellular and Molecular Neurobiology*, *16*, 345–356.
- DeJong R., Treiber R., & Henrich G. (1986). Effectiveness of two psychological treatments for inpatients with severe and chronic depression. *Cognitive Therapy and Research*, *10*, 645–663.
- Deltito, J., & Beyer, D. (1998). The scientific, quasi-scientific and popular literature on the use of St. John's Wort in the treatment of depression. *Journal of Affective Disorders*, *51*, 341–351.
- Depression Guideline Panel. (1993). *Clinical practice guideline number 5: Depression in primary care II* (AHCPR Publication No. 93-0551). Rockville, MD: U.S. Department of Health and Human Services.
- DeQuardo, J. R., Goldman, M., & Tandon, R. (1996). VBR in schizophrenia: Relationship to family history of psychosis and season of birth. *Schizophrenia Research*, *20*, 275–285.

Mental Health: A Report of the Surgeon General

- DeSisto, M., Harding, C. M., McCormick, R. V., Ashikaga, T., & Brooks, G. W. (1995a). The Maine and Vermont three-decade studies of serious mental illness: I. Matched comparison of cross-sectional outcome. *British Journal of Psychiatry*, *167*, 331–342.
- DeSisto, M., Harding, C. M., McCormick, R. V., Ashikaga, T., & Brooks, G. W. (1995b). The Maine and Vermont three-decade studies of serious mental illness: II. Longitudinal course. *British Journal of Psychiatry*, *167*, 331–342.
- Devanand, D. P., Dwork, A. J., Hutchinson, E. R., Bolwig, T. G., & Sackeim, H. A. (1994). Does ECT alter brain structure? *American Journal of Psychiatry*, *151*, 957–970.
- DeVane, C. L. (1992). Pharmacokinetics of the selective serotonin reuptake inhibitors. *Journal of Clinical Psychiatry*, *53*(Suppl.), 13–20.
- DiMascio, A., Klerman, G. L., Weissman, M. M., Prusoff, B. A., Neu, C., & Moore, P. (1979). A control group for psychotherapy research in acute depression: One solution to ethical and methodologic issues. *Journal of Psychiatric Research*, *15*, 189–197.
- Dincin, J. (1975). Psychiatric rehabilitation. *Schizophrenia Bulletin*, *13*, 131–147.
- Dincin, J., & Witheridge, T. F. (1982). Psychiatric rehabilitation as a deterrent to recidivism. *Hospital and Community Psychiatry*, *33*, 645–650.
- Dixon, L. B., Hackman, A., & Lehman, A. F. (1997). Consumers as staff in assertive community treatment programs. *Administration and Policy in Mental Health*, *25*, 199–208.
- Dixon, L. B., Lehman, A. F., & Levine, J. (1995). Conventional antipsychotic medications for schizophrenia. *Schizophrenia Bulletin*, *21*, 567–577.
- Dixon, L., Postrado, L., Delahanty, J., Fischer, P. J., & Lehman, A. (1999). The association of medical comorbidity in schizophrenia with poor physical and mental health. *Journal of Nervous and Mental Disease*, *187*, 496–502.
- Dixon, L. B., Stewart, B., Krauss, N., Robbins, J., Hackman, A., & Lehman, A. F. (1998). The participation of families of homeless persons with severe mental illness in an outreach intervention. *Community Mental Health Journal*, *34*, 251–259.
- Dixon, L., Weiden, P., Delahanty, J., Goldberg, R., Postrado, L., Lucksted, A., & Lehman, A. (in press-a). Diabetes and schizophrenia. *Schizophrenia Bulletin*.
- Dixon, L., Wohlheiter, K., & Thompson, D. (in press-b). Medical management of schizophrenia. In J. Lieberman & R. Murray (Eds.), *Comprehensive care of schizophrenia*. London: Martin Dunitz Publishers.
- Dobson, K. S. (1989). A meta-analysis of the efficacy of cognitive therapy for depression. *Journal of Consulting and Clinical Psychology*, *57*, 414–419.
- Docherty, N. M., DeRosa, M., & Andreasen, N. C. (1996). Communication disturbances in schizophrenia and mania. *Archives of General Psychiatry*, *53*, 358–364.
- Donlon, P. T., Hopkin, J. T., Tupin, J. P., Wicks, J. J., Wahba, M., & Meadow, A. (1980). Haloperidol for acute schizophrenic patients. An evaluation of three oral regimens. *Archives of General Psychiatry*, *37*, 691–695.
- Donlon, P. T., Meadow, A., Tupin, J. P., & Wahba, M. (1978). High vs standard dosage fluphenazine HCL in acute schizophrenia. *Journal of Clinical Psychiatry*, *39*, 800–804.
- Doogan, D. P., & Caillard, V. (1992). Sertraline in the prevention of depression. *British Journal of Psychiatry*, *160*, 217–222.
- Drake, R.E., Becker, D. R., Biesanz, J. C., Torrey, W. C., McHugo, G.J., & Wyzik, P. F. (1994). Rehabilitative day treatment vs. supported employment: I. Vocational outcomes. *Community Mental Health Journal*, *30*, 519–532.
- Drake, R. E., Becker, D. R., Biesanz, J. C., Wyzik, P. F., & Torrey, W. C. (1996). Day treatment versus supported employment for persons with severe mental illness: A replication study. *Psychiatric Services*, *47*, 1125–1127.
- Drake, R. E., Mercer-McFadden, C., Mueser, K. T., McHugo, G. J., & Bond, G. R. (1998). Review of integrated mental health and substance abuse treatment for patients with dual disorders. *Schizophrenia Bulletin*, *24*, 589–608.
- Drake, R. E., & Osher, F. C. (1997). Treating substance abuse in patients with severe mental illness. In S. W. Henggeler & A. B. Santos (Eds.), *Innovative approaches for difficult-to-treat populations* (pp. 239–252). Washington, DC: American Psychiatric Press.
- Drevets, W. C. (1998). Functional neuroimaging studies of depression: The anatomy of melancholia. *Annual Review of Medicine*, *49*, 341–361.
- Drury, V., Birchwood, M., Cochrane, R., & Macmillan, F. (1996). Cognitive therapy and recovery from acute psychosis: A controlled trial: II. Impact on recovery time. *British Journal of Psychiatry*, *169*, 602–607.

- Druss, B. G., & Rosenheck, R. A. (1998). Mental disorders and access to medical care in the United States. *American Journal of Psychiatry*, *155*, 1775–1777.
- DSM-IV. See American Psychiatric Association (1994).
- Duboff, E. A. (1993). Long-term treatment of major depressive disorder with paroxetine. *Journal of Clinical Psychopharmacology*, *13*(Suppl. 2), 28S–33S.
- Dubovsky, S. L., Franks, R. D., Allen, S., & Murphy, J. (1986). Calcium antagonists in mania: A double-blind study of verapamil. *Psychiatry Research*, *18*, 309–320.
- Dubovsky, S. L., Murphy, J., Thomas, M., & Rademacher, J. (1992). Abnormal intracellular calcium ion concentration in platelets and lymphocytes of bipolar patients. *American Journal of Psychiatry*, *149*, 118–120.
- Duman, R. S., Heninger, G. R., & Nestler, E. J. (1997). A molecular and cellular theory of depression. *Archives of General Psychiatry*, *54*, 597–606.
- Dykes, K. L., Mednick, S. A., Machon, R. A., Praestholm, J., & Parnas, J. (1992). Adult third ventricle width and infant behavioral arousal in groups at high and low risk for schizophrenia. *Schizophrenia Research*, *7*, 13–18.
- Eaton, W. W., Thara, R., Federman, B., Melton, B., & Liang, K. Y. (1995). Structure and course of positive and negative symptoms in schizophrenia. *Archives of General Psychiatry*, *52*, 127–134.
- Egeland, J. A., Hostetter, A. M., & Eshleman, S. K., III. (1983). Amish study, III: The impact of cultural factors on diagnosis of bipolar illness. *American Journal of Psychiatry*, *140*, 67–71.
- Eisenstat, S. A., & Bancroft, L. (1999). Domestic violence. *New England Journal of Medicine*, *341*, 886–892.
- el-Bayoumi, G., Borum, M. L., & Haywood, Y. (1998). Domestic violence in women. *Medical Clinics of North America*, *82*, 391–401.
- Elkin, I., Shea, M. T., Watkins, J. T., Imber, S. D., Sotsky, S. M., Collins, J. F., Glass, D. R., Pilkonis, P. A., Leber, W. R., Docherty, J. P., Fiester, S. J., & Parloff, M. B. (1989). National Institute of Mental Health Treatment of Depression Collaborative Research Program. General effectiveness of treatments. *Archives of General Psychiatry*, *46*, 971–982.
- Ellenbroek, B. A., & Cools, A. R. (1998). Mini-review. The neurodevelopmental hypothesis of schizophrenia: Clinical evidence and animal models. *Neuroscience Research Communications*, *22*, 127–136.
- Erikson, E. (1963). *Childhood and society*. New York: W. W. Norton.
- Evans, M. D., Hollon, S. D., DeRubeis, R. J., Piasecki, J. M., Grove, W. M., Garvey, M. J., & Tuason, V. B. (1992). Differential relapse following cognitive therapy and pharmacotherapy for depression. *Archives of General Psychiatry*, *49*, 802–808.
- Eysenck, H. K., & Eysenck, S. B. (1975). *Eysenck personality questionnaire manual*. San Diego: Educational and Industrial Testing Service.
- Fabian, E., Waterworth, A., & Ripka, B. (1993). Reasonable accommodation for workers with serious mental illness: Type frequency and associated outcomes. *Psychosocial Rehabilitation Journal*, *17*, 163–172.
- Fairweather, G. W., Sanders, D. H., Maynard, H., Cressler, D. L., & Bleck, D. S. (1969). *Community life for the mentally ill: An alternative to institutional care*. Chicago: Aldine.
- Falkai, P., Schneider, T., Greve, B., Klieser, E., & Bogerts, B. (1995). Reduced frontal and occipital lobe asymmetry on the CT-scans of schizophrenic patients. Its specificity and clinical significance. *Journal of Neural Transmission. General Section*, *99*, 63–77.
- Falloon, I. R. (1984). Relapse: A reappraisal of assessment of outcome in schizophrenia. *Schizophrenia Bulletin*, *10*, 293–299.
- Falloon, I. R., Boyd, J. L., McGill, C. W., Williamson, M., Razani, J., Moss, H.B., Gilderman, A. M., & Simpson, G. M. (1985). Family management in the prevention of morbidity of schizophrenia. Clinical outcome of a two-year longitudinal study. *Archives of General Psychiatry*, *42*, 887–896.
- Fava, M., & Rosenbaum, J. F. (1991). Suicidality and fluoxetine: Is there a relationship? *Journal of Clinical Psychiatry*, *52*, 108–111.
- Fawcett, J., Epstein, P., Fiester, S. J., Elkin, I., & Autry, J. H. (1987). Clinical management—imipramine/placebo administration manual. NIMH Treatment of Depression Collaborative Research Program. *Psychopharmacology Bulletin*, *23*, 309–324.
- Federal Interagency Task Force on Homelessness and Mental Illness. (1992). *Outcasts on Main Street*. Washington, DC: Federal Interagency Task Force on Homelessness and Mental Illness.
- Feighner, J. P. (1999). Mechanism of action of antidepressant medications. *Journal of Clinical Psychiatry*, *60*(Suppl. 4), 4–11.

Mental Health: A Report of the Surgeon General

- Felker, B., Yazel, J. J., & Short, D. (1996). Mortality and medical comorbidity among psychiatry patients: A review. *Psychiatric Services, 47*, 1356–1363.
- Felton, C. J., Stastny, P., Shern, D. L., Blanch, A., Donahue, S. A., Knight, E., & Brown, C. (1995). Consumers as peer specialists on intensive case management teams: Impact on client outcomes. *Psychiatric Services, 46*, 1037–1044.
- Fenton, W. S., & Kane, J. M. (1997). Clinical challenges in the psychopharmacology of schizophrenia. *Schizophrenia Bulletin, 23*, 563–565.
- Fenton, W., Mosher, L., Herrell, J., & Blyler, C. (1998). A randomized trial of general hospital versus residential alternative care for patients with severe and persistent mental illness. *American Journal of Psychiatry, 155*, 516–522.
- Fleischhacker, W. W., & Hummer, M. (1997). Drug treatment of schizophrenia in the 1990s. Achievements and future possibilities in optimizing outcomes. *Drugs, 53*, 915–929.
- Flynn, L. M. (1998). Patterns of usual care for schizophrenia: Initial results from the Schizophrenia Patient Outcomes Research Team (PORT) client survey. Commentary. *Schizophrenia Bulletin, 24*, 30–32.
- Foster, R. H., & Goa, K. L. (1998). Risperidone—a pharmacoeconomic review of its use in schizophrenia. *Pharmacoeconomics, 14*, 97–133.
- Frackiewicz, E. J., Sramek, J. J., Herrera, J. M., Kurtz, N. M., & Cutler, N. R. (1997). Ethnicity and antipsychotic response. *Annals of Pharmacotherapy, 31*, 1360–1369.
- Frances, A., Docherty, P., & Kahn, A. (1996). Treatment of schizophrenia. *Journal of Clinical Psychiatry, 57*, 1–59.
- Franchini, L., Gasperini, M., Perez, J., Smeraldi, E., & Zanardi, R. (1997). A double-blind study of long-term treatment with sertraline or fluvoxamine for prevention of highly recurrent unipolar depression. *Journal of Clinical Psychiatry, 58*, 104–107.
- Frank, E., Anderson, B., Reynolds, C. F., III, Ritenour, A., & Kupfer, D. J. (1994). Life events and the research diagnostic criteria endogenous subtype. A confirmation of the distinction using the Bedford College methods. *Archives of General Psychiatry, 51*, 519–524.
- Frank, E., Kupfer, D. J., Perel, J. M., Cornes, C., Jarrett, D. B., Mallinger, A. G., Thase, M. E., McEachran, A. B., & Grochocinski, V. J. (1990). Three-year outcomes for maintenance therapies in recurrent depression. *Archives of General Psychiatry, 47*, 1093–1099.
- Frank, E., Kupfer, D. J., Perel, J. M., Cornes, C., Mallinger, A. G., Thase, M. E., McEachran, A. B., & Grochocinski, V. J. (1993). Comparison of full-dose versus half-dose pharmacotherapy in the maintenance treatment of recurrent depression. *Journal of Affective Disorders, 27*, 139–145.
- Frank, E., Kupfer, D. J., Wagner, E. F., McEachran, A. B., & Cornes, C. (1991a). Efficacy of interpersonal psychotherapy as a maintenance treatment of recurrent depression. Contributing factors. *Archives of General Psychiatry, 48*, 1053–1059.
- Frank, E., Prien, R. F., Jarrett, R. B., Keller, M. B., Kupfer, D. J., Lavori, P. W., Rush, A. J., & Weissman, M. M. (1991b). Conceptualization and rationale for consensus definitions of terms in major depressive disorder. Remission, recovery, relapse, and recurrence. *Archives of General Psychiatry, 48*, 851–855.
- Freeman, T. W., Clothier, J. L., Pazzaglia, P., Lesem, M. D., & Swann, A. C. (1992). A double-blind comparison of valproate and lithium in the treatment of acute mania. *American Journal of Psychiatry, 149*, 108–111.
- Fukuzako, H., Fukuzako, T., Takeuchi, K., Ohbo, Y., Ueyama, K., Takigawa, M., & Fujimoto, T. (1996). Phosphorus magnetic resonance spectroscopy in schizophrenia: Correlation between membrane phospholipid metabolism in the temporal lobe and positive symptoms. *Progress in Neuropsychopharmacology and Biological Psychiatry, 20*, 629–640.
- Gaebel, W., Frick, U., Kopcke, W., Linden, M., Muller, P., Muller-Spahn, F., Pietzcker, A., & Tegeler, J. (1993). Early neuroleptic intervention in schizophrenia: Are prodromal symptoms valid predictors of relapse? *British Journal of Psychiatry. Supplement, 21*, 8–12.
- Galanter, M. (1988). Zealous self-help groups as adjuncts to psychiatric treatment: A study of Recovery, Inc. *American Journal of Psychiatry, 145*, 1248–1253.
- Gallhofer, B., Bauer, U., Lis, S., Krieger, S., & Gruppe, H. (1996). Cognitive dysfunction in schizophrenia: Comparison of treatment with atypical antipsychotic agents and conventional neuroleptic drugs. *European Neuropsychopharmacology, 6*(Suppl. 2), S13–S20.
- Gardner, E. A., & Johnston, J. A. (1985). Bupropion—An antidepressant without sexual pathophysiological action. *Journal of Clinical Psychopharmacology, 5*, 24–29.
- Garza-Trevino, E. S., Overall, J. E., & Hollister, L. E. (1992). Verapamil versus lithium in acute mania. *American Journal of Psychiatry, 149*, 121–122.

- Gelenberg, A. J., Kane, J. M., Keller, M. B., Lavori, P., Rosenbaum, J. F., Cole, K., & Lavelle, J. (1989). Comparison of standard and low serum levels of lithium for maintenance treatment of bipolar disorder. *New England Journal of Medicine*, *321*, 1489–1493.
- General Accounting Office. (1977). *Returning the mentally disabled to the community: Government needs to do more*. Washington, DC: Author.
- Gerbaldo, H., Cassady, S., & Helisch, A. (1995). Negative symptoms and the course of positive symptoms in deficit schizophrenia. *Psychopathology*, *28*, 121B126.
- Gerber, P. D., Barrett, J., Manheimer, E., Whiting, R., & Smith, R. (1989). Recognition of depression by internists in primary care: A comparison of internist and "gold standard" psychiatric assessments. *Journal of General Internal Medicine*, *4*, 7–13.
- Geyer, M. A., Wilkinson, L. S., Humby, T., & Robbins, T. W. (1993). Isolation rearing of rats produces a deficit in prepulse inhibition of acoustic startle similar to that in schizophrenia. *Biological Psychiatry*, *34*, 361–372.
- Glassman, A. H., & Shapiro, P. A. (1998). Depression in the course of coronary artery disease. *American Journal of Psychiatry*, *155*, 4–11.
- Goddard, A. W., & Charney, D. S. (1997). Toward an integrated neurobiology of panic disorder. *Journal of Clinical Psychiatry*, *58*(Suppl. 2), 4–11.
- Goldberg, D. P., & Lecrubier, Y. (1995). Form and frequency of mental disorders across centres. In T. B. Ustun & N. Sartorius (Eds.), *Mental illness in general health care: An international study* (pp. 323–334). New York: John Wiley & Sons.
- Goldman, H. H. (1998a). Deinstitutionalization and community care: Social welfare policy as mental health policy. *Harvard Review of Psychiatry*, *6*, 219–222.
- Goldman, H. H. (1998b). *Organizing mental health services: An evidence-based approach*. Stockholm: Swedish Council on Technology Assessment in Health Care.
- Goldman, H. H. (1999). The obligation of mental health services to the least well off. *Psychiatric Services*, *50*, 659–663.
- Goldman, H., Lehman, A., Morrissey, J., Newman, S., Frank, R., & Steinwachs, D. (1990a). Design for the national evaluation of the Robert Wood Johnson Foundation program on chronic mental illness. *Hospital and Community Psychiatry*, *41*, 1217–1221.
- Goldman, H., Morrissey, J., & Ridgely, M. S. (1990b). Form and function of mental health authorities at RWJ Foundation program sites: Preliminary observations. *Hospital and Community Psychiatry*, *41*, 1222–1230.
- Goldman, H. H., Morrissey, J. P., & Ridgely, M. S. (1994a). Evaluating the Robert Wood Johnson Foundation program on chronic mental illness. *Milbank Quarterly*, *72*, 37–47.
- Goldman, H., Morrissey, J., & Ridgely, M. S. (1994b). Evaluating the program on chronic mental illness (RWJ PCMI). *Milbank Quarterly*, *72*, 37–48.
- Goldman-Rakic, P. S., & Selemon, L. D. (1997). Functional and anatomical aspects of prefrontal pathology in schizophrenia. *Schizophrenia Bulletin*, *23*, 437–458.
- Goldstein, M. J. (1995a). Psychoeducation and relapse prevention. *International Clinical Psychopharmacology*, *9*(Suppl. 5), 59–69.
- Goldstein, M. J. (1995b). Transactional processes associated with relatives' expressed emotion. *International Journal of Mental Health*, *24*, 76–96.
- Goldstein, M. J., Rodnick, E. H., Evans, J. R., May, P. R., & Steinberg, M. R. (1978). Drug and family therapy in the aftercare of acute schizophrenics. *Archives of General Psychiatry*, *35*, 1169–1177.
- Goodman, L. A., Rosenberg, S. D., Mueser, K. T., & Drake, R. E. (1997). Physical and sexual assault history in women with serious mental illness: Prevalence, correlates, treatment, and future research directions. *Schizophrenia Bulletin*, *23*, 685–696.
- Goodnick, P. J., & Extein, I. L. (1989). Bupropion and fluoxetine in depressive subtypes. *Annals of Clinical Psychiatry*, *1*, 119–122.
- Goodwin, F., & Jamison, K. (1990). *Manic-depressive illness*. New York: Oxford University Press.
- Gorman, J. M., & Coplan, J. D. (1996). Comorbidity of depression and panic disorder. *Journal of Clinical Psychiatry*, *57*(Suppl. 10), 34–43.
- Gottesman, I. I. (1991). *Schizophrenia genesis—The origins of madness*. New York: W. H. Freeman.
- Grace, A. A. (1991). Phasic versus tonic dopamine release and the modulation of dopamine system responsivity: A hypothesis for the etiology of schizophrenia. *Neuroscience*, *41*, 1–24.
- Grace, A. A. (1992). The depolarization block hypothesis of neuroleptic action: Implications for the etiology and treatment of schizophrenia. *Journal of Neural Transmission. Supplementum*, *36*, 91–131.

Mental Health: A Report of the Surgeon General

- Green, M. F., Marshall, B. D., Jr., Wirshing, W. C., Ames, D., Marder, S. R., McGurk, S., Kern, R. S., & Mintz, J. (1997). Does risperidone improve verbal working memory in treatment-resistant schizophrenia? *American Journal of Psychiatry*, *154*, 799–804.
- Greenberg, P. E., Stiglin, L. E., Finkelstein, S. N., & Berndt, E. R. (1993). The economic burden of depression in 1990. *Journal of Clinical Psychiatry*, *54*, 405–418.
- Greenberg, R. M. (1997). ECT in the elderly. *New Directions in Mental Health Services*, *76*, 85–96.
- Greist, J. H., Jefferson, J. W., Kobak, K. A., Katzelnick, D. J., & Serlin, R. C. (1995). Efficacy and tolerability of serotonin transport inhibitors in obsessive-compulsive disorder. A meta-analysis. *Archives of General Psychiatry*, *52*, 53–60.
- Gruenberg, E. (1974). The social breakdown syndrome and its prevention. In S. Arieti (Ed.), *American handbook of psychiatry* (2nd ed., pp. 697–711). New York: Basic Books.
- Guarnaccia, P. J., Parra, P., Deschamps, A., Milstein, G., & Argiles, N. (1992). Si dios quiere: Hispanic families' experiences of caring for a seriously mentally ill family member. *Culture, Medicine and Psychiatry*, *16*, 187–215.
- Guelfi, J. D., White, C., Hackett, D., Guichoux, J. Y., & Magni, G. (1995). Effectiveness of venlafaxine in patients hospitalized for major depression and melancholia. *Journal of Clinical Psychiatry*, *56*, 450–458.
- Gunasekara, N. A., & Spencer, C. M. (1998). Quetiapine—A review of its use in schizophrenia. *Central Nervous System Drugs*, *9*, 325–340.
- Gunderson, J. G., Frank, A. F., Katz, H. M., Vannicelli, M. L., Frosch, J. P., & Knapp, P. H. (1984). Effects of psychotherapy in schizophrenia: II. Comparative outcome of two forms of treatment. *Schizophrenia Bulletin*, *10*, 564–598.
- Gupta, S., Andreasen, N. C., Arndt, S., Flaum, M., Hubbard, W. C., & Ziebell, S. (1997). The Iowa longitudinal study of recent onset psychosis: One-year follow-up of first episode patients. *Schizophrenia Research*, *23*, 1–13.
- Hafner, H., & an der Heiden, W. (1997). Epidemiology of schizophrenia. *Canadian Journal of Psychiatry*, *42*, 139–151.
- Hafner, H., an der Heiden, W., Behrens, S., Gattaz, W. F., Hambrecht, M., Loffler, W., Maurer, K., Munk-Jorgensen, P., Nowotny, B., Riecher-Rossler, A., & Stein, A. (1998). Causes and consequences of the gender difference in age at onset of schizophrenia. *Schizophrenia Bulletin*, *24*, 99–113.
- Hamera, E. K., Peterson, K. A., Young, L. M., & Schaumloffel, M. M. (1992). Symptom monitoring in schizophrenia: Potential for enhancing self-care. *Archives of Psychiatric Nursing*, *6*, 324–330.
- Harding, C. M., Brooks, G. W., Ashikaga, T., Strauss, J. S., & Breier, A. (1987). The Vermont longitudinal study of persons with severe mental illness, II: Long-term outcome of subjects who retrospectively met DSM-III criteria for schizophrenia. *American Journal of Psychiatry*, *144*, 727–735.
- Harding, C., Strauss, J. S., & Zubin, J. (1992). Chronicity in schizophrenia: Revisited. *British Journal of Psychiatry*, *161*, 27–37.
- Harrow, M., Sands, J. R., Silverstein, M. L., & Goldberg, J. F. (1997). Course and outcome for schizophrenia versus other psychotic patients: A longitudinal study. *Schizophrenia Bulletin*, *23*, 287–303.
- Harvey, P. D., Lombardi, J., Leibman, M., White, L., Parella, M., Powchik, P., & Davidson, M. (1996). Cognitive impairment and negative symptoms in geriatric chronic schizophrenic patients: A follow-up study. *Schizophrenia Research*, *22*, 223–231.
- Hasan, S., & Buckley, P. (1998). Novel antipsychotics and the neuroleptic malignant syndrome: A review and critique. *American Journal of Psychiatry*, *155*, 1113–1116.
- Hatfield, A. B. (1992). Leaving home: Separation issues in psychiatric illness. *Psychosocial Rehabilitation Journal*, *15*, 37–47.
- Hatfield, A. B., Spaniol, L., & Zipple, A. M. (1987). Expressed emotion: A family perspective. *Schizophrenia Bulletin*, *13*, 221–226.
- Havassy, B. E., & Arns, P. G. (1998). Relationship of cocaine and other substance dependence to well-being of high-risk psychiatric patients. *Psychiatric Services*, *49*, 935–940.
- Haykal, R. F., & Akiskal, H. S. (1990). Bupropion as a promising approach to rapid cycling bipolar II patients. *Journal of Clinical Psychiatry*, *51*, 450–455.

- Heller, T., Roccoforte, J. A., & Cook, J. A. (1997a). Predictors of support group participation among families of persons with mental illness. *Family Relations*, *46*, 437–442.
- Heller, T., Roccoforte, J. A., Hsieh, K., Cook, J. A., & Pickett, S. A. (1997b). Benefits of support groups for families of adults with severe mental illness. *American Journal of Orthopsychiatry*, *67*, 187–198.
- Helzer, J. E., Robins, L. N., & McEvoy, L. (1987). Post-traumatic stress disorder in the general population. Findings of the Epidemiologic Catchment Area survey. *New England Journal of Medicine*, *317*, 1630–1634.
- Hermann, R. C., Dorwart, R. A., Hoover, C. W., & Brody, J. (1995). Variation in ECT use in the United States. *American Journal of Psychiatry*, *152*, 869–875.
- Hermann, R. C., Ettner, S. L., Dorwart, R. A., Langman-Dorwart, N., & Kleinman, S. (1999). Diagnoses of patients treated with ECT: A comparison of evidence-based standards with reported use. *Psychiatric Services*, *50*, 1059–1065.
- Herz, M. I., & Lambert, J. S. (1995). Prodromal symptoms and relapse prevention in schizophrenia. *Schizophrenia Bulletin*, *21*, 541–551.
- Herz, M. I., & Melville, C. (1980). Relapse in schizophrenia. *American Journal of Psychiatry*, *137*, 801–805.
- Himmelhoch, J. M., Thase, M. E., Mallinger, A. G., & Houck, P. (1991). Tranylcypromine versus imipramine in anergic bipolar depression. *American Journal of Psychiatry*, *148*, 910–916.
- Hirschfeld, R. M., Keller, M. B., Panico, S., Arons, B. S., Barlow, D., Davidoff, F., Endicott, J., Froom, J., Goldstein, M., Gorman, J. M., Marek, R. G., Maurer, T. A., Meyer, R., Phillips, K., Ross, J., Schwenk, T. L., Sharfstein, S. S., Thase, M. E., & Wyatt, R. J. (1997). The National Depressive and Manic-Depressive Association consensus statement on the undertreatment of depression. *Journal of the American Medical Association*, *277*, 333–340.
- Hirschfeld, R., & Shea, T. (1992). Personality. In E. Paykel (Ed.), *Handbook of affective disorders* (pp. 185–194). New York: Guilford Press.
- Ho, B. C., Andreasen, N., & Flaum, M. (1997). Dependence on public financial support early in the course of schizophrenia. *Psychiatric Services*, *48*, 948–950.
- Ho, B. C., Nopoulos, P., Flaum, M., Arndt, S., & Andreasen, N. C. (1998). Two-year outcome in first-episode schizophrenia: Predictive value of symptoms for quality of life. *American Journal of Psychiatry*, *155*, 1196–1201.
- Hoffman, F. L., & Mastrianni, X. (1993). The role of supported education in the inpatient treatment of young adults: A two-site comparison. *Psychosocial Rehabilitation Journal*, *17*, 109–119.
- Hogarty, G. E., Anderson, C. M., & Reiss, D. J. (1987). Family psychoeducation, social skills training, and medication in schizophrenia: The long and short of it. *Psychopharmacology Bulletin*, *23*, 12–13.
- Hogarty, G. E., Greenwald, D., Ulrich, R. F., Kornblith, S. J., DiBarry, A. L., Cooley, S., Carter, M., & Flesher, S. (1997). Three-year trials of personal therapy among schizophrenic patients living with or independent of family, II: Effects on adjustment of patients. *American Journal of Psychiatry*, *154*, 1514–1524.
- Hollander, E. (1996). Obsessive-compulsive disorder-related disorders: The role of selective serotonergic reuptake inhibitors. *International Clinical Psychopharmacology*, *11*(Suppl. 5), 75–87.
- Hollister, J. M., Laing, P., & Mednick, S. A. (1996). Rhesus incompatibility as a risk factor for schizophrenia in male adults. *Archives of General Psychiatry*, *53*, 19–24.
- Hollon, S. D., DeRubeis, R. J., Evans, M. D., Wiemer, M. J., Garvey, M. J., Grove, W. M., & Tuason, V. B. (1992). Cognitive therapy and pharmacotherapy for depression. Singly and in combination. *Archives of General Psychiatry*, *49*, 774–781.
- Holmes, T. H., & Rahe, R. H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, *11*, 213–218.
- Hornig, C. D., & McNally, R. J. (1995). Panic disorder and suicide attempt. A reanalysis of data from the Epidemiologic Catchment Area study. *British Journal of Psychiatry*, *167*, 76–79.
- Horne, R. L., Pettinati, H. M., Suger, A. A., & Varga, E. (1985). Comparing bilateral to unilateral electroconvulsive therapy in a randomized study with EEG monitoring. *Archives of General Psychiatry*, *42*, 1087–1092.
- Howland, R. H., & Thase, M. E. (1993). A comprehensive review of cyclothymic disorder. *Journal of Nervous and Mental Disease*, *181*, 485–493.

Mental Health: A Report of the Surgeon General

- Hu, T. W., Snowden, L. R., Jerrell, J. M., & Nguyen, T. D. (1991). Ethnic populations in public mental health: Services choice and level of use. *American Journal of Public Health, 81*, 1429–1434.
- Hultman, C. M., Ohman, A., Cnattingius, S., Wieselgren, I. M., & Lindstrom, L. H. (1997). Prenatal and neonatal risk factors for schizophrenia. *British Journal of Psychiatry, 170*, 128–133.
- Inayama, Y., Yoneda, H., Sakai, T., Ishida, T., Nonomura, Y., Kono, Y., Takahata, R., Koh, J., Sakai, J., Takai, A., Inada, Y., & Asaba, H. (1996). Positive association between a DNA sequence variant in the serotonin 2A receptor gene and schizophrenia. *American Journal of Medical Genetics, 67*, 103–105.
- Ingram, R. E., Miranda, J., & Segal, Z. V. (1998). *Cognitive vulnerability to depression*. New York: Guilford Press.
- Institute of Medicine (1994). *Reducing risks for mental disorders: Frontiers for preventive intervention research*. Washington, DC: National Academy Press.
- Institute of Medicine (1995). *Development of medications for the treatment of opiate and cocaine addictions: Issues for the government and private sector*. Washington, DC: National Academy Press.
- Institute of Medicine. (1996). *Understanding violence against women*. Washington, DC: National Academy Press.
- Institute of Medicine (1998). *Violence in families: Assessing prevention and treatment programs*. Washington, DC: National Academy Press.
- Iwahashi, K., Watanabe, M., Nakamura, K., Suwaki, H., Nakaya, T., Nakamura, Y., Takahashi, H., & Ikuta, K. (1998). Positive and negative syndromes, and Borna disease virus infection in schizophrenia. *Neuropsychobiology, 37*, 59–64.
- Jablensky, A., Sartorius, N., Ernberg, G., Anker, M., Korten, A., Cooper, J. E., Day, R., & Bertelsen, A. (1992). Schizophrenia: Manifestations, incidence and course in different cultures. A World Health Organization ten-country study. *Psychological Medicine Monograph Supplement, 20*, 1–97.
- Jacobson, L., & Sapolsky, R. (1991). The role of the hippocampus in feedback regulation of the hypothalamic-pituitary-adrenocortical axis. *Endocrine Reviews, 12*, 118–134.
- Jakob, H., & Beckmann, H. (1986). Prenatal developmental disturbances in the limbic allocortex in schizophrenics. *Journal of Neural Transmission, 65*, 303–326.
- Janicak, P. G., Davis, J. M., Gibbons, R. D., Ericksen, S., Chang, S., & Gallagher, P. (1985). Efficacy of ECT: A meta-analysis. *American Journal of Psychiatry, 142*, 297–302.
- Janicak, P. G., Newman, R. M., & Davis, J. M. (1992). Psychopharmacology update: Advances in the treatment of mania and related disorders: A reappraisal. *Psychiatric Annals, 22*, 92–103.
- Janicak, P. G., Sharma, R. P., Pandey, G., & Davis, J. M. (1998). Verapamil for the treatment of acute mania: A double-blind, placebo-controlled trial. *American Journal of Psychiatry, 155*, 972–973.
- Jann, M. W., Chang, W. H., Lam, Y. W., Hwu, H. G., Lin, H. N., Chen, H., Chen, T. Y., Lin, S. K., Chien, C. P., Davis, C. M., Ereshefsky, L., Sakland, S. R., Richards, A. L., & Shulteis, W. M. (1992). Comparison of haloperidol and reduced haloperidol plasma levels in four different ethnic populations. *Progress in Neuro-Psychopharmacology and Biological Psychiatry, 16*, 193–202.
- Jenkins, J. H., & Karno, M. (1992). The meaning of expressed emotion: Theoretical issues raised by cross-cultural research. *American Journal of Psychiatry, 149*, 9–21.
- Jensen, L. H., & Kane, C. F. (1996). Cognitive theory applied to the treatment of delusions of schizophrenia. *Archives of Psychiatric Nursing, 10*, 335B341.
- Jeste, D. V., Gladsjo, J. A., Lindamer, L. A., & Lacro, J. P. (1996). Medical comorbidity in schizophrenia. *Schizophrenia Bulletin, 22*, 413–430.
- Jones, P. B., & Cannon, M. (1998). The new epidemiology of schizophrenia. *Psychiatric Clinics of North America, 21*, 1–25.
- Jones, P. B., Rantakallio, P., Hartikainen, A. L., Isohanni, M., & Sipila, P. (1998). Schizophrenia as a long-term outcome of pregnancy, delivery, and perinatal complications: A 28-year follow-up of the 1966 north Finland general population birth cohort. *American Journal of Psychiatry, 155*, 355–364.
- Jorgensen, P. (1998). Early signs of psychotic relapse in schizophrenia. *British Journal of Psychiatry, 172*, 327–330.
- Kagan, J., Reznick, J. S., & Snidman, N. (1988). Biological bases of childhood shyness. *Science, 240*, 167–171.
- Kandel, E. R. (1999). Biology and the future of psychoanalysis: A new intellectual framework for psychiatry revisited. *American Journal of Psychiatry, 156*, 505–524.

- Kane, J. M. (1985). Antipsychotic drug side effects: Their relationship to dose. *Journal of Clinical Psychiatry*, *46*, 16–21.
- Kane, J. M. (1989). The current status of neuroleptic therapy. *Journal of Clinical Psychiatry*, *50*, 322–328.
- Kane, J. M. (1992). New developments in the pharmacological treatment of schizophrenia. *Bulletin of the Menninger Clinic*, *56*, 62–75.
- Kane, J. M. (1996). Treatment-resistant schizophrenic patients. *Journal of Clinical Psychiatry*, *57*(Suppl. 9), 35–40.
- Kane, J. M. (1997). What are the therapeutic needs in schizophrenia and how are they satisfied by new antipsychotics? *International Clinical Psychopharmacology*, *12*(Suppl. 2), S3–S6.
- Kane, J. M., & Marder, S. R. (1993). Psychopharmacologic treatment of schizophrenia. *Schizophrenia Bulletin*, *19*, 287–302.
- Kane, J. M., & McGlashan, T. H. (1995). Treatment of schizophrenia. *Lancet*, *346*, 820–825.
- Kapur, S., & Mann, J. J. (1992). Role of the dopaminergic system in depression. *Biological Psychiatry*, *32*, 1–17.
- Kapur, S., Mieczkowski, T., & Mann, J. J. (1992). Antidepressant medications and the relative risk of suicide attempt and suicide. *Journal of the American Medical Association*, *268*, 3441–3445.
- Katon, W. (1996). The impact of major depression on chronic medical illness. *General Hospital Psychiatry*, *18*, 215–219.
- Katon, W. J. (1995). Will improving detection of depression in primary care lead to improved depressive outcomes? *General Hospital Psychiatry*, *17*, 1–2.
- Katon, W., von Korff, M., Lin, E., Bush, T., & Ormel, J. (1992). Adequacy and duration of antidepressant treatment in primary care. *Medical Care*, *30*, 67–76.
- Katon, W., Von Korff, M., Lin, E., Unutzer, J., Simon, G., Walker, E., Ludman, E., & Bush, T. (1997). Population-based care of depression: Effective disease management strategies to decrease prevalence. *General Hospital Psychiatry*, *19*, 169–178.
- Kaufmann, C. L. (1995). The self-help employment center. Some outcomes from the first year. *Psychosocial Rehabilitation Journal*, *18*, 145–162.
- Kaufmann, C. L., Ward-Colasante, C., & Farmer, J. (1993). Development and evaluation of drop-in centers operated by mental health consumers. *Hospital and Community Psychiatry*, *44*, 675–678.
- Keller, M. B., & Hanks, D. L. (1994). The natural history and heterogeneity of depressive disorders: Implications for rational antidepressant therapy. *Journal of Clinical Psychiatry*, *55*(Suppl. A), 25–31.
- Keller, M. B., Lavori, P. W., Kane, J. M., Gelenberg, A. J., Rosenbaum, J. F., Walzer, E. A., & Baker, L. A. (1992). Subsyndromal symptoms in bipolar disorder. A comparison of standard and low serum levels of lithium. *Archives of General Psychiatry*, *49*, 371–376.
- Keller, M. B., & Shapiro, R. W. (1982). "Double depression": Superimposition of acute depressive episodes on chronic depressive disorders. *American Journal of Psychiatry*, *139*, 438–442.
- Kendler, K. S., & Diehl, S. R. (1993). The genetics of schizophrenia: A current, genetic-epidemiologic perspective. *Schizophrenia Bulletin*, *19*, 261–285.
- Kendler, K. S., Heath, A. C., Martin, N. G., & Eaves, L. J. (1987). Symptoms of anxiety and symptoms of depression. Same genes, different environments? *Archives of General Psychiatry*, *44*, 451–457.
- Kendler, K. S., Kessler, R. C., Walters, E. E., MacLean, C., Neale, M. C., Heath, A. C., & Eaves, L. J. (1995). Stressful life events, genetic liability, and onset of an episode of major depression in women. *American Journal of Psychiatry*, *152*, 833–842.
- Kendler, K. S., MacLean, C. J., O'Neill, F. A., Burke, J., Murphy, B., Duke, F., Shinkwin, R., Easter, S. M., Webb, B. T., Zhang, J., Walsh, D., & Straub, R. E. (1996). Evidence for a schizophrenia vulnerability locus on chromosome 8p in the Irish study of high-density schizophrenia families. *American Journal of Psychiatry*, *153*, 1534–1540.
- Kent, J. M., Coplan, J. D., & Gorman, J. M. (1998). Clinical utility of the selective serotonin reuptake inhibitors in the spectrum of anxiety. *Biological Psychiatry*, *44*, 812–824.
- Keri, S., Szekeres, G., Kelemen, O., Antal, A., Szendi, I., Kovacs, Z., Benedek, G., & Janka, Z. (1998). Abstraction is impaired at the perceptual level in schizophrenic patients. *Neuroscience Letters*, *243*, 93–96.
- Kern, R. S., Green, M. F., Marshall, B. D., Jr., Wirshing, W. C., Wirshing, D., McGurk, S., Marder, S. R., & Mintz, J. (1998). Risperidone vs. haloperidol on reaction time, manual dexterity, and motor learning in treatment-resistant schizophrenia patients. *Biological Psychiatry*, *44*, 726–732.

Mental Health: A Report of the Surgeon General

- 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. Results from the National Comorbidity Survey. *Archives of General Psychiatry*, *51*, 8–19.
- Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry*, *52*, 1048–1060.
- Kety, S. S. (1987). The significance of genetic factors in the etiology of schizophrenia: Results from the national study of adoptees in Denmark. *Journal of Psychiatric Research*, *21*, 423–429.
- Kiev, A., Masco, H. L., Wenger, T. L., Johnston, J. A., Batey, S. R., & Holloman, L. C. (1994). The cardiovascular effects of bupropion and nortriptyline in depressed outpatients. *Annals of Clinical Psychiatry*, *6*, 107–115.
- Kim, K., & Jacobs, S. (1995). Stress of bereavement and consequent psychiatric illness. In C. M. Maure (Ed.), *Does stress cause psychiatric illness?* (pp. 187–219). Washington, DC: American Psychiatric Press.
- Kirchner, J. E., Owen, R. R., Nordquist, C., & Fischer, E. P. (1998). Diagnosis and management of substance use disorders among inpatients with schizophrenia. *Psychiatric Services*, *49*, 82–85.
- Kirkpatrick, B., Ram, R., Amador, X. F., Buchanan, R. W., McGlashan, T., Tohen, M., & Bromet, E. (1998). Summer birth and the deficit syndrome of schizophrenia. *American Journal of Psychiatry*, *155*, 1221–1226.
- Klein, D. F., & Ross, D. C. (1993). Reanalysis of the National Institute of Mental Health Treatment of Depression Collaborative Research Program General Effectiveness Report. *Neuropsychopharmacology*, *8*, 241–251.
- Klerman, G. L. (1990). The psychiatric patient's right to effective treatment: Implications of Osheroff v. Chestnut Lodge. *American Journal of Psychiatry*, *147*, 409–418.
- Klerman, G. L., Weissman, M. M., Ouellette, R., Johnson, J., & Greenwald, S. (1991). Panic attacks in the community. Social morbidity and health care utilization. *Journal of the American Medical Association*, *265*, 742–746.
- Klerman, G. L., Weissman, M. M., Rounsaville, B. J., & Sherron, E. S. (1984). *Interpersonal psychotherapy of depression*. New York: Basic Books.
- Klosterkotter, J., Albers, M., Steinmeyer, E. M., Hensen, A., & Sass, H. (1995). Positive or negative symptoms—which are more appropriate as diagnostic criteria for schizophrenia? *Acta Psychiatrica Scandinavica*, *92*, 321–326.
- Kopelowicz, A., Liberman, R. P., Mintz, J., & Zarate, R. (1997). Comparison of efficacy of social skills training for deficit and nondeficit negative symptoms in schizophrenia. *American Journal of Psychiatry*, *154*, 424–425.
- Kornstein, S. G., Schatzberg, A. F., Thase, M. E., Yonkers, K. A., McCullough, J. P., Keitner, G. I., Gelenberg, A. J., Davis, S. M., Harrison, W. M., & Keller, M. B. (in press). Gender differences in treatment response to sertraline versus imipramine in chronic depression. *American Journal of Psychiatry*.
- Kosten, T. R., & Ziedonis, D. M. (1997). Substance abuse and schizophrenia: Editors' introduction. *Schizophrenia Bulletin*, *23*, 181–186.
- Kovacs, M., Rush, A. J., Beck, A. T., & Hollon, S. D. (1981). Depressed outpatients treated with cognitive therapy or pharmacotherapy. A one-year follow-up. *Archives of General Psychiatry*, *38*, 33–39.
- Krieger, N., Rowley, D. L., Herman, A. A., Avery, B., & Phillips, M. T. (1993). Racism, sexism, and social class: Implications for studies of health, disease, and well-being. *American Journal of Preventive Medicine*, *9*(Suppl.), 82–122.
- Kukopulos, A., Reginaldi, D., Laddomada, P., Floris, G., Serra, G., & Tondo, L. (1980). Course of the manic-depressive cycle and changes caused by treatment. *Pharmakopsychiatrie Neuro-Psychopharmakologie*, *13*, 156–167.
- Kunugi, H., Takei, N., Saito, K., Akizuki, S., Murray, R. M., & Nanko, S. (1996). Relationship between impairment of prenatal brain growth and family history of psychosis in schizophrenia. *Journal of Psychiatric Research*, *30*, 475–481.
- Kunugi, H., Vallada, H., Sham, P., Hoda, F., Arranz, M., Li, T., Nanko, S., Murray, R. M., McGuffin, P., Owen, M., Gill, M., & Collier, D. (1997). Catechol-O-methyltransferase polymorphisms and schizophrenia: A transmission disequilibrium study in multiply affected families. *Psychiatric Genetics*, *7*, 97–101.
- Kupfer, D. J. (1991). Long-term treatment of depression. *Journal of Clinical Psychiatry*, *52*(Suppl.), 28–34.

- Kupfer, D. J., Frank, E., McEachran, A. B., & Grochocinski, V. J. (1990). Delta sleep ratio. A biological correlate of early recurrence in unipolar affective disorder. *Archives of General Psychiatry*, *47*, 1100–1105.
- Kupfer, D. J., Frank, E., Perel, J. M., Cornes, C., Mallinger, A. G., Thase, M. E., McEachran, A. B., & Grochocinski, V. J. (1992). Five-year outcome for maintenance therapies in recurrent depression. *Archives of General Psychiatry*, *49*, 769–773.
- Kurtz, L. F. (1997). *Self-help and support groups: A handbook for practitioners*. Thousand Oaks, CA: Sage Publications.
- Lam, D. H. (1991). Psychosocial family intervention in schizophrenia: A review of empirical studies. *Psychological Medicine*, *21*, 423–441.
- Lam, Y. W., Jann, M. W., Chang, W. H., Yu, H. S., Lin, S. K., Chen, H., & Davis, C. M. (1995). Intra- and interethnic variability in reduced haloperidol to haloperidol ratios. *Journal of Clinical Pharmacology*, *35*, 128–136.
- Lamarque, V. (1996). [Hematologic effects of clozapine: A review of the international experience]. *Encephale*, *22*(6), 35–36.
- Lamb, H. R., & Weinberger, L. E. (1998). Persons with severe mental illness in jails and prisons: A review. *Psychiatric Services*, *49*, 483–492.
- Lawson, W. B., Helper, N., Holladay, J., & Cuffel, B. (1994). Race as a factor in inpatient and outpatient admissions and diagnosis. *Hospital Community Psychiatry*, *45*, 72–74.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.
- LeDoux, J. (1996). Emotional networks and motor control: A fearful view. *Progress in Brain Research*, *107*, 437–446.
- Lehman, A. F. (1995). Vocational rehabilitation in schizophrenia. *Schizophrenia Bulletin*, *21*, 645–656.
- Lehman, A. F. (1996). Evaluating outcomes of treatments for persons with psychotic disorders. *Journal of Clinical Psychiatry*, *57*(Suppl. 11), 61–67.
- Lehman, A. F. (1997). Managing schizophrenia: Interventions and outcomes. *Disease Management and Health Outcomes*, *1*, 286–295.
- Lehman, A. F. (1998). Public health policy, community services, and outcomes for patients with schizophrenia. *Psychiatric Clinics of North America*, *21*, 221–231.
- Lehman, A. F., & Newman, S. J. (1996). Housing. In W. R. Breakey (Ed.), *Integrated mental health services: Modern community psychiatry* (pp. 300–309). New York: Oxford University Press.
- Lehman, A. F., Postrado, L. T., Roth, D., McNary, S., & Goldman, H. (1994). An evaluation of continuity of care, case management, and client outcomes in the RWJ PCMI. *Milbank Quarterly*, *72*, 105–122.
- Lehman, A. F., & Steinwachs, D. M. (1998a). Patterns of usual care for schizophrenia: Initial results from the Schizophrenia Patient Outcomes Research Team (PORT) Client Survey. *Schizophrenia Bulletin*, *24*, 11–20.
- Lehman, A. F., & Steinwachs, D. M. (1998b). Translating research into practice: The Schizophrenia Patient Outcomes Research Team (PORT) treatment recommendations. *Schizophrenia Bulletin*, *24*, 1–10.
- Lenox, R. H., Newhouse, P. A., Creelman, W. L., & Whitaker, T. M. (1992). Adjunctive treatment of manic agitation with lorazepam versus halperidol: A double-blind study. *Journal of Clinical Psychiatry*, *53*, 47–52.
- Lerer, B., Moore, N., Meyendorff, E., Cho, S. R., & Gershon, S. (1987). Carbamazepine versus lithium in mania: A double-blind study. *Journal of Clinical Psychiatry*, *48*, 89–93.
- Levey, S., Howells, K., & Cowden, E. (1995). Dangerousness, unpredictability, and the fear of people with schizophrenia. *Journal of Forensic Psychiatry*, *6*, 19–39.
- Levin, S., Yurgelun-Todd, D., & Craft, S. (1989). Contribution of clinical neuropsychology to the study of schizophrenia. *Journal of Abnormal Psychology*, *98*, 341–356.
- Levinson, D. F., Mahtani, M. M., Nancarrow, D. J., Brown, D. M., Kruglyak, L., Kirby, A., Hayward, N. K., Crowe, R. R., Andreasen, N. C., Black, D. W., Silverman, J. M., Endicott, J., Sharpe, L., Mohs, R. C., Siever, L. J., Walters, M. K., Lennon, D. P., Jones, H. L., Nertney, D. A., Daly, M. J., Gladis, M., & Mowry, B. J. (1998). Genome scan of schizophrenia. *American Journal of Psychiatry*, *155*, 741–750.
- Levinson, D. F., Simpson, G. M., Singh, H., Yadalam, K., Jain, A., Stephanos, M. J., & Silver, P. (1990). Fluphenazine dose, clinical response, and extrapyramidal symptoms during acute treatment. *Archives of General Psychiatry*, *47*, 761–768.

Mental Health: A Report of the Surgeon General

- Lewis, P., Rack, P. H., Vaddadi, K. S., & Allen, J. J. (1980). Ethnic differences in drug response. *Postgraduate Medical Journal*, *56*(Suppl. 1), 46–49.
- Ley, A., Jeffery, D. P., McLaren, S., & Siegfried, N. (1999). Treatment programmes for those with both severe mental illness and substance misuse (Cochrane Review). In *The Cochrane Library*, Issue 4. Oxford, U.K.: Update Software.
- Liberman, R. P., Wallace, C. J., Blackwell, G., Kopelowicz, A., Vaccaro, J. V., & Mintz, J. (1998). Skills training versus psychosocial occupational therapy for persons with persistent schizophrenia. *American Journal of Psychiatry*, *155*, 1087–1091.
- Liberman, R. P., Wallace, C. J., Vaughn, C. E., Snyder, K. S., & Rust, C. (1980). Social and family factors in the course of schizophrenia: Toward an interpersonal problem-solving therapy for schizophrenics and their relatives. In J. Strauss, S. Fleck, & M. Bowers (Eds.), *Psychotherapy of schizophrenia: Current status and new directions* (pp. 21–54). New York: Plenum Publishing.
- Lieberman, A. A., Gowdy, E. A., & Knutson, L. C. (1991). The mental health outreach project: A case study in self-help. *Psychosocial Rehabilitation Journal*, *14*, 100–105.
- Lieberman, J. A. (1993). Understanding the mechanism of action of atypical antipsychotic drugs. A review of compounds in use and development. *British Journal of Psychiatry. Supplement*, *22*, 7–18.
- Lieberman, J. A. (1996). Atypical antipsychotic drugs as a first-line treatment of schizophrenia: A rationale and hypothesis. *Journal of Clinical Psychiatry*, *57*(Suppl. 11), 68–71.
- Lieberman, J., Jody, D., Geisler, S., Alvir, J., Loebel, A., Szymanski, S., Woerner, M., & Borenstein, M. (1993). Time course and biologic correlates of treatment response in first-episode schizophrenia. *Archives of General Psychiatry*, *50*, 369–376.
- Lieberman, J. A., Koreen, A. R., Chakos, M., Sheitman, B., Woerner, M., Alvir, J. M., & Bilder, R. (1996). Factors influencing treatment response and outcome of first-episode schizophrenia: Implications for understanding the pathophysiology of schizophrenia. *Journal of Clinical Psychiatry*, *57*(Suppl. 9), 5–9.
- Lieberman, J. A., Safferman, A. Z., Pollack, S., Szymanski, S., Johns, C., Howard, A., Kronig, M., Bookstein, P., & Kane, J. M. (1994). Clinical effects of clozapine in chronic schizophrenia: Response to treatment and predictors of outcome. *American Journal of Psychiatry*, *151*, 1744–1752.
- Liebowitz, M. R. (1997). Panic disorder as a chronic illness. *Journal of Clinical Psychiatry*, *58*(Suppl. 13), 5–8.
- Lin, K. M., Anderson, D., & Poland, R. E. (1995). Ethnicity and psychopharmacology. Bridging the gap. *Psychiatric Clinics of North America*, *18*, 635–647.
- Lin, K. M., Anderson, D., & Poland, R. E. (1997). Ethnic and cultural considerations in psychopharmacotherapy. In D. Dunner (Ed.), *Current psychiatric therapy* (2nd ed., pp. 75–81). Philadelphia: W. B. Saunders.
- Linde, K., Ramirez, G., Mulrow, C. D., Pauls, A., Weidenhammer, W., & Melchart, D. (1996). St. John's wort for depression—an overview and meta-analysis of randomised clinical trials. *British Medical Journal*, *313*, 253–258.
- Lipska, B. K., Swerdlow, N. R., Geyer, M. A., Jaskiw, G. E., Braff, D. L., & Weinberger, D. R. (1995). Neonatal excitotoxic hippocampal damage in rats causes post-pubertal changes in prepulse inhibition of startle and its disruption by apomorphine. *Psychopharmacology*, *122*, 35–43.
- Lipska, B. K., & Weinberger, D. R. (1993). Delayed effects of neonatal hippocampal damage on haloperidol-induced catalepsy and apomorphine-induced stereotypic behaviors in the rat. *Brain Research, Developmental Brain Research*, *75*, 213–222.
- Lipska, B. K., & Weinberger, D. R. (1997). *Animal models of schizophrenia*. Unpublished manuscript.
- Loebel, A. D., Botts, S. R., & Feldman, B. I. (1998). Atypical antipsychotics in the managed care era. *American Journal of Managed Care*, *4*, S37–S59.
- Long, L., & Van Tosh, L. (1988). *Program descriptions of consumer-run programs for homeless people with mental illness*. Rockville, MD: National Institute of Mental Health.
- Lopez, S. R., Nelson, K., Snyder, K., & Mintz J. (in press). Attributions and affective reactions of family members and course of schizophrenia. *Journal of Abnormal Psychology*.
- Loyd, D. W., & Tsuang, M. T. (1985). Disability and welfare—who wants it? *Journal of Clinical Psychiatry*, *46*, 273–275.

- Lu, F. G., Lim, R. F., & Mezzich, J. E. (1995). Issues in the assessment and diagnosis of culturally diverse individuals. In J. Olham & M. Riba (Eds.), *Review of psychiatry* (Vol. 14, pp. 477–509). Washington, DC: American Psychiatric Press.
- Luke, D. A. (1989). *The measurement of change in a self-help context*. Unpublished doctoral dissertation, University of Illinois, Urbana-Champaign.
- Lydiard, R. B., Brawman-Mintzer, O., & Ballenger, J. C. (1996). Recent developments in the psychopharmacology of anxiety disorders. *Journal of Consulting and Clinical Psychology, 64*, 660–668.
- Lynch, M. D., & Kruzich, J. M. (1986). Needs assessment of the chronically mentally ill: Practitioner and client perspectives. *Administration in Mental Health, 4*, 237–248.
- Maciejewski, P. W., Prigerson, H. G., & Mazure, C. M. (1999). *Sex differences in event-related risk for major depression*. Manuscript submitted for publication.
- MacMillan, H. L., Fleming, J. E., Trocme, N., Boyle, M. H., Wong, M., Racine, Y. A., Beardslee, W. R., & Offord, D. R. (1997). Prevalence of child physical and sexual abuse in the community. Results from the Ontario Health Supplement. *Journal of the American Medical Association, 278*, 131–135.
- Magee, W. J., Eaton, W. W., Wittchen, H. U., McGonagle, K. A., & Kessler, R. C. (1996). Agoraphobia, simple phobia, and social phobia in the National Comorbidity Survey. *Archives of General Psychiatry, 53*, 159–168.
- Mahurin, R. K., Velligan, D. I., & Miller, A. L. (1998). Executive-frontal lobe cognitive dysfunction in schizophrenia: A symptom subtype analysis. *Psychiatry Research, 79*, 139–149.
- Mancuso, L. (1990). Reasonable accommodation for workers with psychiatric disabilities. *Psychosocial Rehabilitation Journal, 2*, 3–19.
- March, J. S., Frances, A., Carpenter, D., & Kahn, D. A. (1997). Treatment of obsessive-compulsive disorder. The Expert Consensus Panel for obsessive-compulsive disorder. *Journal of Clinical Psychiatry, 58*, 2–72.
- Marcus, S. C., Olfson, M., Pincus, H. A., Shear, M. K., & Zarin, D. A. (1997). Self-reported anxiety, general medical conditions, and disability bed days. *American Journal of Psychiatry, 154*, 1766–1768.
- Marder, S. R., Wirshing, W. C., Mintz, J., McKenzie, J., Johnston, K., Eckman, T. A., Lebell, M., Zimmerman, K., & Liberman, R. P. (1996). Two-year outcome of social skills training and group psychotherapy for outpatients with schizophrenia. *American Journal of Psychiatry, 153*, 1585–1592.
- Mari, J. J., & Streiner, D. L. (1994). An overview of family interventions and relapse on schizophrenia: Meta-analysis of research findings. *Psychological Medicine, 24*, 565–578.
- Marks, I. M. (1969). *Fears and phobias*. New York: Academic Press.
- Maslowski, J., Jansen van Rensburg, D., & Mthoko, N. (1998). A polydiagnostic approach to the differences in the symptoms of schizophrenia in different cultural and ethnic populations. *Acta Psychiatrica Scandinavica, 98*, 41–46.
- Mason, P., Harrison, G., Croudace, T., Glazebrook, C., & Medley, I. (1997). The predictive validity of a diagnosis of schizophrenia. A report from the International Study of Schizophrenia (ISoS) coordinated by the World Health Organization and the Department of Psychiatry, University of Nottingham. *British Journal of Psychiatry, 170*, 321–327.
- Mattson, D. T., Berk, M., & Lucas, M. D. (1997). A neuropsychological study of prefrontal lobe function in the positive and negative subtypes of schizophrenia. *Journal of Genetic Psychology, 158*, 487–494.
- Maziade, M., Bouchard, S., Gingras, N., Charron, L., Cardinal, A., Roy, M. A., Gauthier, B., Tremblay, G., Cote, S., Fournier, C., Boutin, P., Hamel, M., Merette, C., & Martinez, M. (1996). Long-term stability of diagnosis and symptom dimensions in a systematic sample of patients with onset of schizophrenia in childhood and early adolescence. II: Postnegative distinction and childhood predictors of adult outcome. *British Journal of Psychiatry, 169*, 371–378.
- McCarthy, J., & Nelson, G. (1991). An evaluation of supportive housing for current and former psychiatric patients. *Hospital and Community Psychiatry, 42*, 1254–1256.
- McElroy, S. L., Keck, P. E., Jr., Pope, H. G., Jr., & Hudson, J. I. (1992). Valproate in the treatment of bipolar disorder: Literature review and clinical guidelines. *Journal of Clinical Psychopharmacology, 12*, 42S–52S.
- McEwen, B. S. (1998). Protective and damaging effects of stress mediators. *New England Journal of Medicine, 338*, 171B179.

Mental Health: A Report of the Surgeon General

- McEwen, B. S., & Magarinos, A. M. (1997). Stress effects on morphology and function of the hippocampus. *Annals of the New York Academy of Sciences*, 821, 271–284.
- McFarlane, A. C., & Yehuda, R. (1996). Resilience, vulnerability, and the course of post-traumatic reactions. In B. A. van der Kolk, A. C. McFarlane, & L. Weisath (Eds.), *Traumatic stress: The effects of overwhelming experience on mind, body and society* (pp. 155–181). New York: Guilford Press.
- McFarlane, W. R. (1997). Family psychoeducation: Basic concepts and innovative applications. In S. W. Henggeler & A. B. Santos (Eds.), *Innovative approaches for difficult-to-treat populations* (pp. 211–238). Washington, DC: American Psychiatric Press.
- McFarlane, W. R., Lukens, E., Link, B., Dushay, R., Deakins, S. A., Newmark, M., Dunne, E. J., Horen, B., & Toran, J. (1995). Multiple-family groups and psychoeducation in the treatment of schizophrenia. *Archives of General Psychiatry*, 52, 679–687.
- McGuffin, P., Owen, M. J., & Farmer, A. E. (1995). Genetic basis of schizophrenia. *Lancet*, 346, 678–682.
- McGuire, P. K., Quedsted, D. J., Spence, S. A., Murray, R. M., Frith, C. D., & Liddle, P. F. (1998). Pathophysiology of “positive” thought disorder in schizophrenia. *British Journal of Psychiatry*, 173, 231–235.
- McInnis, M. G., McMahon, F. J., Chase, G. A., Simpson, S. G., Ross, C. A., & DePaulo, J. R. (1993). Anticipation in bipolar affective disorder. *American Journal of Human Genetics*, 53, 385–390.
- McLeod, J. D., & Kessler, R. C. (1990). Socioeconomic status differences in vulnerability to undesirable life events. *Journal of Health and Social Behavior*, 31, 162–172.
- Mead, S. (1997). Stepping stone crisis respite program. *NEC Newsletter*, 10.
- Mechanic, D. (1998). Cultural and organizational aspects of application of the Americans With Disabilities Act to persons with psychiatric disabilities. *Milbank Quarterly*, 76, 5–23.
- Medalia, A., Aluma, M., Tryon, W., & Merriam, A. E. (1998). Effectiveness of attention training in schizophrenia. *Schizophrenia Bulletin*, 24, 147–152.
- Mednick, S. A., Machon, R. A., Huttunen, M. O., & Bonett, D. (1988). Adult schizophrenia following prenatal exposure to an influenza epidemic. *Archives of General Psychiatry*, 45, 189–192.
- Meltzer, H. Y. (1997). Treatment-resistant schizophrenia—The role of clozapine. *Current Medical Research Opinion*, 14, 1–20.
- Mendlewicz, J., & Rainer, J. D. (1977). Adoption study supporting genetic transmission in manic-depressive illness. *Nature*, 268, 327–329.
- Meredith, L. S., Wells, K. B., & Camp, P. (1994). Clinician specialty and treatment style for depressed outpatients with and without medical comorbidities. *Archives of Family Medicine*, 3, 1065–1072.
- Meredith, L. S., Wells, K. B., Kaplan, S. H., & Mazel, R. M. (1996). Counseling typically provided for depression. Role of clinician specialty and payment system. *Archives of General Psychiatry*, 53, 905–912.
- Merikangas, K. R., Mehta, R. L., Molnar, B. E., Walters, E. E., Swendsen, J. D., Aguilar-Gaziola, S., Bijl, R., Borges, G., Caraveo-Anduaga, J. J., Dewit, D. J., Kolody, B., Vega, W. A., Wittchen, H. U., & Kessler, R. C. (1998). Comorbidity of substance use disorders with mood and anxiety disorders: Results of the international consortium in psychiatric epidemiology. *Addictive Behaviors*, 23, 893–907.
- Meterissian, G. B., & Bradwejn, J. (1989). Comparative studies on the efficacy of psychotherapy, pharmacotherapy, and their combination in depression: Was adequate pharmacotherapy provided? *Journal of Clinical Psychopharmacology*, 9, 334–339.
- Miller, D. D. (1996). Schizophrenia: Its etiology and impact. *Pharmacotherapy*, 16, 2–5.
- Miller, I. W., Norman, W. H., & Keitner, G. I. (1990). Treatment response of high cognitive dysfunction depressed inpatients. *Comprehensive Psychiatry*, 31, 62–71.
- Miller, L., & Miller, L. (1997). A.N.G.E.L.S., Inc.: A consumer-run supported employment agency. *Psychiatric Rehabilitation Journal*, 21, 160–163.
- Miner, C. R., Rosenthal, R. N., Hellerstein, D. J., & Muenz, L. R. (1997). Prediction of compliance with outpatient referral in patients with schizophrenia and psychoactive substance use disorders. *Archives of General Psychiatry*, 54, 706–712.
- Miranda, J., Azocar, F., Komaromy, M., & Golding, J. M. (1998). Unmet mental health needs of women in public-sector gynecologic clinics. *American Journal of Obstetrics and Gynecology*, 178, 212–217.

- Miranda, J., & Green, B. L. (1999). The need for mental health services research focusing on poor young women. *Journal of Mental Health Policy and Economics*, 2, 73–89.
- Mischel, W., & Shoda, Y. (1998). Reconciling processing dynamics and personality dispositions. *Annual Review of Psychology*, 49, 229–258.
- Mitchell, A. J. (1998). The role of corticotropin releasing factor in depressive illness: A critical review. *Neuroscience and Biobehavioral Reviews*, 22, 635–651.
- Moller, H. J., & von Zerssen, D. (1995). Course and outcome of schizophrenia. In S. R. Hirsch & D. R. Weinberger (Eds.), *Schizophrenia* (pp. 106–127). London: Blackwell Science.
- Monking, H. S. (1994). Self-help groups for families of schizophrenia patients. *Social Psychiatry and Psychiatry Epidemiology*, 29, 149–154.
- Montgomery, S. A., Dufour, H., Brion, S., Gailledreau, J., Laqueille, X., Ferrey, G., Moron, P., Parant-Lucena, N., Singer, L., Danion, J. M., Beuzen, J. N., & Pierredon, M. A. (1988). The prophylactic efficacy of fluoxetine in unipolar depression. *British Journal of Psychiatry. Supplement*, 69–76.
- Morrissey, J., Calloway, M., Bartko, T., Ridgely, M. S., Goldman, H., & Paulson, R. (1994). Mental health authorities and service system change from the RWJ PCMI. *Milbank Quarterly*, 72, 49–80.
- Mosher, L. R. (1999). Soteria and other alternatives to acute psychiatric hospitalization: A personal and professional review. *Journal of Nervous and Mental Disease*, 187, 142–149.
- Mosher, L. R., & Menn, A. (1978). Community residential treatment for schizophrenia: Two year follow-up. *Hospital and Community Psychiatry*, 29, 715–723.
- Mowbray, C. T., Leff, S., Warren, R., McCrohan, N. M., & Bybee, D. (1997). Enhancing vocational outcomes for persons with psychiatric disabilities: A new paradigm. In S. W. Henggeler & A. B. Santos (Eds.), *Innovative approaches for difficult-to-treat populations* (pp. 311–350). Washington, DC: American Psychiatric Press.
- Mowbray, C. T., Moxley, D. P., Thrasher, S., Bybee, D., McCrohan, N., Harris, S., & Clover, G. (1996). Consumers as community support providers: Issues created by role innovation. *Community Mental Health Journal*, 32, 47–67.
- Mowbray, C. T., Solomon, M., Ribisl, K. M., Ebejer, M. A., Deiz, N., Brown, W., Bandla, H., Luke, D. A., Davidson, W. S., Jr., & Herman, S. (1995). Treatment for mental illness and substance abuse in a public psychiatric hospital. Successful strategies and challenging problems. *Journal of Substance Abuse Treatment*, 12, 129–139.
- Mowbray, C. T., & Tan, C. (1993). Consumer-operated drop-in centers: Evaluation of operations and impact. *Journal of Mental Health Administration*, 20, 8–19.
- Mueser, K. T., Bond, G. R., Drake, R. E., & Resnick, S. G. (1998a). Models of community care for severe mental illness: A review of research on case management. *Schizophrenia Bulletin*, 24, 37–74.
- Mueser, K. T., Drake R. D., & Miles K. M. (1997a). The course and treatment of substance use disorders in persons with severe mental illnesses. *NIDA Research Monograph*, 172, 86–109.
- Mueser, K. T., Drake, R. E., & Bond, G. R. (1997b). Recent advances in psychiatric rehabilitation for patients with severe mental illness. *Harvard Review of Psychiatry*, 5, 123–137.
- Mueser, K. T., Drake, R. E., & Wallach, M. A. (1998b). Dual diagnosis: A review of etiological theories. *Addictive Behaviors*, 23, 717–734.
- Mueser, K. T., Yarnold, P. R., Levinson, D. F., Singh, H., Bellack, A. S., Kee, K., Morrison, R. L., & Yadalam, K. G. (1990). Prevalence of substance abuse in schizophrenia: Demographic and clinical correlates. *Schizophrenia Bulletin*, 16, 31–56.
- Mukherjee, S., Sackeim, H. A., & Schnur, D. B. (1994). Electroconvulsive therapy of acute manic episodes: A review of 50 years' experience. *American Journal of Psychiatry*, 151, 169–176.
- Munoz, R. F., Hollon, S. D., McGrath, E., Rehm, L. P., & VandenBos, G. R. (1994). On the AHCP depression in primary care guidelines. Further considerations for practitioners. *American Psychologist*, 49, 42–61.
- Munoz, R. F., Ying, Y. W., Bernal, G., Perez-Stable, E. J., Sorensen, J. L., Hargreaves, W. A., Miranda, J., & Miller, L. S. (1995). Prevention of depression with primary care patients: A randomized controlled trial. *American Journal of Community Psychology*, 23, 199–222.
- Murray, C. J., & Lopez, A. D. (1996). Evidence-based health policy—lessons from the Global Burden of Disease Study. *Science*, 274, 740–743.

Mental Health: A Report of the Surgeon General

- Murray, P. (1996). Recovery, Inc., as an adjunct to treatment in an era of managed care. *Psychiatric Services, 47*, 1378–1381.
- Murray, R. M., Jones, P., O'Callaghan, E., Takei, N., & Sham, P. (1992). Genes, viruses and neurodevelopmental schizophrenia. *Journal of Psychiatric Research, 26*, 225–235.
- Murray, R. M., & Lewis, S. W. (1987). Is schizophrenia a neurodevelopmental disorder? *British Medical Journal (Clinical Research Ed.), 295*, 681–682.
- Myers, E. D., & Branthwaite, A. (1992). Out-patient compliance with antidepressant medication. *British Journal of Psychiatry, 160*, 83–86.
- Myhrman, A., Rantakallio, P., Isohanni, M., Jones, P., & Partanen, U. (1996). Unwantedness of a pregnancy and schizophrenia in the child. *British Journal of Psychiatry, 169*, 637–640.
- Nakamura, M., Inoue, A., Hemmi, H., & Suzuki, J. (1995). Positive associations between dopamine D4 receptor polymorphism and schizophrenia. A study on two schizophrenic groups with loading and unloading. *Proceedings of the Japan Academy Series B-Physical and Biological Sciences, 71*, 214–243.
- Narrow, W. E., Regier, D. A., Rae, D. S., Manderscheid, R. W., & Locke, B. Z. (1993). Use of services by persons with mental and addictive disorders. Findings from the National Institute of Mental Health Epidemiologic Catchment Area program. *Archives of General Psychiatry, 50*, 95–107.
- Nathan, P. J. (1999). The experimental and clinical pharmacology of St. John's Wort (*Hypericum perforatum L.*). *Molecular Psychiatry, 4*, 333–388.
- National Institute of Mental Health. (1998). *Genetics and mental disorders: Report of the National Institute of Mental Health's genetics workgroup*. Rockville, MD: Author.
- National Institute on Disability and Rehabilitation Research. (1992). *Strategies to secure and maintain employment for people with long-term mental illness*. Washington, DC: Author.
- National Institutes of Health, & National Institute of Mental Health. (1985). Consensus conference. Electroconvulsive therapy. *Journal of the American Medical Association, 254*, 2103–2108.
- National Resource Center on Homelessness and Mental Illness. (1989). *Self-help programs for people who are homeless and mentally ill*. Delmar, NY: Policy Research Associates.
- Nazroo, J. Y., Edwards, A. C., & Brown, G. W. (1997). Gender differences in the onset of depression following a shared life event: A study of couples. *Psychological Medicine, 27*, 9–19.
- Neborsky, R., Janowsky, D., Munson, E., & Depry, D. (1981). Rapid treatment of acute psychotic symptoms with high- and low-dose haloperidol. Behavioral considerations. *Archives of General Psychiatry, 38*, 195–199.
- Nelson, G., Hall, G. B., & Walsh-Bowers, R. (1998). The relationship between housing characteristics, emotional well-being and the personal empowerment of psychiatric consumer/survivors. *Community Mental Health, 34*, 57–69.
- Nelson, J. C. (1994). Are the SSRI's really better tolerated than the TCA's for treatment of major depression? *Psychiatric Annals, 24*, 628–631.
- Nemeroff, C. B. (1992). New vistas in neuropeptide research in neuropsychiatry: Focus on corticotropin-releasing factor. *Neuropsychopharmacology, 6*, 69–75.
- Nemeroff, C. B. (1998). Psychopharmacology of affective disorders in the 21st century. *Biological Psychiatry, 44*, 517–525.
- Newman, S. J., Reschovsky, J. D., Kaneda, K., & Hendrick, A. M. (1994). The effects of independent living on persons with chronic mental illness: An assessment of the Section 8 certificate program. *Milbank Quarterly, 72*, 171–198.
- Nierenberg, A. A., Feighner, J. P., Rudolph, R., Cole, J. O., & Sullivan, J. (1994). Venlafaxine for treatment-resistant unipolar depression. *Journal of Clinical Psychopharmacology, 14*, 419–423.
- Nierenberg, A. A., McLean, N. E., Alpert, J. E., Worthington, J. J., Rosenbaum, J. F., & Fava, M. (1995). Early nonresponse to fluoxetine as a predictor of poor 8-week outcome. *American Journal of Psychiatry, 152*, 1500–1503.
- Nierenberg, A. A., & White, K. (1990). What next? A review of pharmacologic strategies for treatment resistant depression. *Psychopharmacology Bulletin, 26*, 429–460.
- Nikkel, R. E., Smith, G., & Edwards, D. (1992). A consumer-operated case management project. *Hospital and Community Psychiatry, 43*, 577–579.
- Nolen-Hoeksema, S., Larson, J., & Grayson, C. (in press). Explaining the gender difference in depressive symptoms. *Journal of Personality and Social Psychology*.

- Noordsy, D. L., Schwab, B., Fox, L., & Drake, R. E. (1996). The role of self-help programs in the rehabilitation of persons with severe mental illness and substance use disorders. *Community Mental Health Journal, 32*, 71–81.
- Nopoulos, P., Flaum, M., & Andreasen, N. C. (1997). Sex differences in brain morphology in schizophrenia. *American Journal of Psychiatry, 154*, 1648–1654.
- Norman, R. M., & Malla, A. K. (1995). Prodromal symptoms of relapse in schizophrenia: A review. *Schizophrenia Bulletin, 21*, 527–539.
- Nowotny, B., Hafner, H. & Loffler, W. (1996). [How the onset of schizophrenia breaks into the social development]. *Zeitschrift Fur Klinische Psychologie-Forschung Und Praxis, 25*, 208–220.
- Nuechterlein, K. H., Dawson, M. E., Ventura, J., Gitlin, M., Subotnik, K. L., Snyder, K. S., Mintz, J., & Bartzokis, G. (1994). The vulnerability/stress model of schizophrenic relapse: A longitudinal study. *Acta Psychiatrica Scandinavica. Supplementum, 382*, 58–64.
- Nutt, D. J., Bell, C. J., & Malizia, A. L. (1998). Brain mechanisms of social anxiety disorder. *Journal of Clinical Psychiatry, 59*(Suppl. 17), 4–11.
- Olfson, M., & Klerman G. L. (1992). The treatment of depression: Prescribing practices of primary care physicians and psychiatrists. *Journal of Family Practice, 35*, 627–635.
- Olfson, M., & Klerman, G. L. (1993). Trends in the prescription of antidepressants by office-based psychiatrists. *American Journal of Psychiatry, 150*, 571–577.
- Olie, J. P., & Bayle, F. J. (1997). [New chemotherapy approaches to psychoses]. *Encephale, 23*, 2–9.
- Onstad, S., Skre, I., Torgersen, S., & Kringlen, E. (1991). Subtypes of schizophrenia—evidence from a twin-family study. *Acta Psychiatrica Scandinavica, 84*, 203–206.
- Owen, C., Rutherford, V., Jones, M., Wright, C., Tennant, C., & Smallman, A. (1996). Housing accommodation preferences of people with psychiatric disabilities. *Psychiatric Services, 47*, 628–632.
- Pande, A. C., & Saylor, M. E. (1993). Severity of depression and response to fluoxetine. *International Clinical Psychopharmacology, 8*, 243–245.
- Patterson, T. L., Klapow, J. C., Eastham, J. H., Heaton, R. K., Evans, J. D., Koch, W. L., & Jeste, D. V. (1998). Correlates of functional status in older patients with schizophrenia. *Psychiatry Research, 80*, 41–52.
- Patterson, T. L., Semple, S. J., Shaw, W. S., Halpain, M., Moscona, S., Grant, I., & Jeste, D. V. (1997). Self-reported social functioning among older patients with schizophrenia. *Schizophrenia Research, 27*, 199–210.
- Pearce, J., Hawton, K., & Blake, F. (1995). Psychological and sexual symptoms associated with the menopause and the effects of hormone replacement therapy. *British Journal of Psychiatry, 167*, 163–173.
- Pearlstein, T., Rosen, K., & Stone, A. B. (1997). Mood disorders and menopause. *Endocrinology and Metabolism Clinics of North America, 26*, 279–294.
- Peet, M. (1994). Induction of mania with selective serotonin re-uptake inhibitors and tricyclic antidepressants. *British Journal of Psychiatry, 164*, 549–550.
- Penn, D. L., & Mueser, K. T. (1996). Research update on the psychosocial treatment of schizophrenia. *American Journal of Psychiatry, 153*, 607–617.
- Peralta, V., & Cuesta, M. J. (1998). Factor structure and clinical validity of completing models of positive symptoms in schizophrenia. *Biological Psychiatry, 44*, 107–114.
- Perry, P. J., Sanger, T., & Beasley, C. (1997). Olanzapine plasma concentrations and clinical response in acutely ill schizophrenic patients. *Journal of Clinical Psychopharmacology, 17*, 472–477.
- Persons, J. B., Thase, M. E., & Crits-Christoph, P. (1996). The role of psychotherapy in the treatment of depression: Review of two practice guidelines. *Archives of General Psychiatry, 53*, 283–290.
- Peselow, E. D., Filippi, A. M., Goodnick, P., Barouche, F., & Fieve, R. R. (1989). The short- and long-term efficacy of paroxetine HCl: B. Data from a double-blind crossover study and from a year-long term trial vs. imipramine and placebo. *Psychopharmacology Bulletin, 25*, 272–276.
- Phelan, J. C., Bromet, E., & Link, B. (1998). Psychiatric illness and family stigma. *Schizophrenia Bulletin, 24*, 115–126.
- Phillips, K. A. (1991). Body dysmorphic disorder: The distress of imagined ugliness. *American Journal of Psychiatry, 148*, 1138–1149.
- Pitman, R. K., Green, R. C., Jenike, M. A., & Mesulam, M. M. (1987). Clinical comparison of Tourette's disorder and obsessive compulsive disorder. *American Journal of Psychiatry, 144*, 1166–1171.

Mental Health: A Report of the Surgeon General

- Placidi, G. F., Lenzi, A., Lazzarini, F., Cassano, G. B., & Akiskal, H. S. (1986). The comparative efficacy and safety of carbamazepine versus lithium: A randomized, double-blind 3-year trial in 83 patients. *Journal of Clinical Psychiatry*, *47*, 490–494.
- Plotsky, P. M., Owens, M. J., & Nemeroff, C. B. (1995). Neuropeptide alterations in mood disorders. In F. E. Bloom & D. J. Kupfer (Eds.), *Psychopharmacology: The fourth generation of progress* (pp. 971–981). New York: Raven Press.
- Polak, P., & Warner, R. (1996). The economic life of seriously mentally ill people in the community. *Psychiatric Services*, *47*, 270–274.
- Polusny, M. A., & Follette, V. M. (1995). Long-term correlates of child sexual abuse: Theory and review of empirical literature. *Applied and Preventive Psychology*, *4*, 143–166.
- Portin, P., & Alanen, Y. O. (1997). A critical review of genetic studies of schizophrenia. II. Molecular genetic studies. *Acta Psychiatrica Scandinavica*, *95*, 73–80.
- Portin, P., & Alanen, Y. O. (1998). Perinatal complications, genetic risk and schizophrenia. *Acta Psychiatrica Scandinavica*, *97*, 382–383.
- Post, R. M. (1990). Non-lithium treatment for bipolar disorder. *Journal of Clinical Psychiatry*, *51*(Suppl.), 9–16.
- Post, R. M. (1992). Transduction of psychosocial stress into the neurobiology of recurrent affective disorder. *American Journal of Psychiatry*, *149*, 999–1010.
- Post, R. M., Leverich, G. S., Altshuler, L., & Mikalaukas, K. (1992). Lithium-discontinuation-induced refractoriness: Preliminary observations. *American Journal of Psychiatry*, *149*, 1727–1729.
- Potter, W. Z., & Rudorfer, M. V. (1993). Electroconvulsive therapy—a modern medical procedure [editorial]. *New England Journal of Medicine*, *328*, 882–883.
- Potter, W. Z., Rudorfer, M. V., & Manji, H. (1991). The pharmacologic treatment of depression. *New England Journal of Medicine*, *325*, 633–642.
- Powell, T. J. (Ed.). (1994). *Understanding the self-help organization: Frameworks and findings*. Thousand Oaks, CA: Sage.
- Preskorn, S. H. (1995). Comparison of the tolerability of bupropion, fluoxetine, imipramine, nefazodone, paroxetine, sertraline, and venlafaxine. *Journal of Clinical Psychiatry*, *56*(Suppl. 6), 12–21.
- Preskorn, S. H., & Burke, M. (1992). Somatic therapy for major depressive disorder: Selection of an antidepressant. *Journal of Clinical Psychiatry*, *53*(Suppl.), 5–18.
- Preti, A., Miotto, P., & Zen, T. (1998). Perinatal complications, genetic risk and schizophrenia [Letter]. *Acta Psychiatrica Scandinavica*, *97*, 381–383.
- Priebe, S., Warner, R., Hubschmid, T., & Eckle, I. (1998). Employment, attitudes toward work, and quality of life among people with schizophrenia in three countries. *Schizophrenia Bulletin*, *24*, 469–477.
- Prien, R. F., & Kocsis, J. H. (1995). Long-term treatment of mood disorders. In F. E. Bloom & D. J. Kupfer (Eds.), *Psychopharmacology: The fourth generation of progress* (pp. 1067–1079). New York: Raven Press.
- Prien, R. F., & Kupfer, D. J. (1986). Continuation drug therapy for major depressive episodes: How long should it be maintained? *American Journal of Psychiatry*, *143*, 18–23.
- Prien, R. F., Kupfer, D. J., Mansky, P. A., Small, J. G., Tuason, V. B., Voss, C. B., & Johnson, W. E. (1984). Drug therapy in the prevention of recurrences in unipolar and bipolar affective disorders. Report of the NIMH Collaborative Study Group comparing lithium carbonate, imipramine, and a lithium carbonate–imipramine combination. *Archives of General Psychiatry*, *41*, 1096–1104.
- Quitkin, F. M., McGrath, P. J., Stewart, J. W., Ocepek-Welikson, K., Taylor, B. P., Nunes, E., Deliyannides, D., Agosti, V., Donovan, S. J., Petkova, E., & Klein, D. F. (1996). Chronological milestones to guide drug change. When should clinicians switch antidepressants? *Archives of General Psychiatry*, *53*, 785–792.
- Quitkin, F. M., Stewart, J. W., McGrath, P. J., Nunes, E., Ocepek-Welikson, K., Tricamo, E., Rabkin, J. G., Ross, D., & Klein, D. F. (1993a). Loss of drug effects during continuation therapy. *American Journal of Psychiatry*, *150*, 562–565.
- Quitkin, F. M., Stewart, J. W., McGrath, P. J., Tricamo, E., Rabkin, J. G., Ocepek-Welikson, K., Nunes, E., Harrison, W., & Klein, D. F. (1993b). Columbia atypical depression. A subgroup of depressives with better response to MAOI than to tricyclic antidepressants or placebo. *British Journal of Psychiatry. Supplement* *21*, 30–34.

- Rabins, P. V., Black, B., German, P., Roca, R., McGuire, M., Brant, L., & Cook, J. (1996). The prevalence of psychiatric disorders in elderly residents of public housing. *Journals of Gerontology. Series A, Biological Sciences and Medical Sciences*, *51*, M319–M324.
- Ramirez, L. F. (1996). Ethnicity and psychopharmacology in Latin America. *Mt. Sinai Journal of Medicine*, *63*, 330–331.
- Randolph, F., Blasinsky, M., Leginski, W., Parker, L. B., & Goldman, H. H. (1997). Creating integrated service systems for homeless persons with mental illness: The ACCESS Program. Access to community care and effective services and supports. *Psychiatric Services*, *48*, 369–373.
- Rantakallio, P., Jones, P., Moring, J., & Von Wendt, L. (1997). Association between central nervous system infections during childhood and adult onset schizophrenia and other psychoses: A 28-year follow-up. *International Journal of Epidemiology*, *26*, 837–843.
- Rauch, S. L., Savage, C. R., Alpert, N. M., Miguel, E. C., Baer, L., Breiter, H. C., Fischman, A. J., Manzo, P. A., Moretti, C., & Jenike, M. A. (1995). A positron emission tomographic study of simple phobic symptom provocation. *Archives of General Psychiatry*, *52*, 20–28.
- Regier, D. A., Farmer, M. E., Rae, D. S., Locke, B. Z., Keith, S. J., Judd, L. L., & Goodwin, F. K. (1990). Comorbidity of mental disorders with alcohol and other drug abuse. Results from the Epidemiologic Catchment Area (ECA) Study. *Journal of the American Medical Association*, *264*, 2511–2518.
- Regier, D. A., Hirschfeld, R. M., Goodwin, F. K., Burke, J. D., Jr., Lazar, J. B., & Judd, L. L. (1988). The NIMH Depression Awareness, Recognition, and Treatment Program: Structure, aims, and scientific basis. *American Journal of Psychiatry*, *145*, 1351–1357.
- Regier, D. A., Narrow, W. E., Rae, D. S., Manderscheid, R. W., Locke, B. Z., & Goodwin, F. K. (1993). The de facto US mental and addictive disorders service system. Epidemiologic Catchment Area prospective 1-year prevalence rates of disorders and services. *Archives of General Psychiatry*, *50*, 85–94.
- Regier, D. A., Rae, D. S., Narrow, W. E., Kaelber, C. T., & Schatzberg, A. F. (1998). Prevalence of anxiety disorders and their comorbidity with mood and addictive disorders. *British Journal of Psychiatry. Supplement*, *34*, 24–28.
- Reidy, D. E. (1993). *Stigma is social death: Mental health consumers/survivors talk about stigma in their lives*. Unpublished manuscript. Education for Community Initiatives, 187 High Street, Suite 303, Holyoke, MA 01040; (413)533–3584.
- Ribeyre, J. M., & Dollfus, S. (1996). [Stability of positive/negative symptoms in schizophrenia.] *Encephale*, *22*, 29–31.
- Ridgely, M. S., Goldman, H. H., & Willenbring, M. (1990). Barriers to the care of persons with dual diagnoses: Organizational and financing issues. *Schizophrenia Bulletin*, *16*, 123–132.
- Ridgely, M., Morrissey, J., Paulson, R., Goldman, H., & Calloway, M. (1996). Characteristics and activities of case managers in the RWJ Foundation Program on chronic mental illness. *Psychiatric Services*, *47*, 737–743.
- Rifkin, A., Doddi, S., Karajgi, B., Borenstein, M., & Wachspress, M. (1991). Dosage of haloperidol for schizophrenia. *Archives of General Psychiatry*, *48*, 166–170.
- Robert Wood Johnson Foundation. (1990). Public attitudes toward people with chronic mental illnesses. Boston: Robert Wood Johnson Foundation Program on Chronic Mental Illnesses.
- Robins, L. N., & Regier, D. A. (1991). *Psychiatric disorders in America: The Epidemiologic Catchment Area Study*. New York: Free Press.
- Rogan, M. T., & LeDoux, J. E. (1996). Emotion: Systems, cells, synaptic plasticity. *Cell*, *85*, 469–475.
- Roose, S. P., Glassman, A. H., Attia, E., & Woodring, S. (1994). Comparative efficacy of selective serotonin reuptake inhibitors and tricyclics in the treatment of melancholia. *American Journal of Psychiatry*, *151*, 1735–1739.
- Roper Organization. (1986). *Roper report*. New York: Author.
- Rosenbach, M. L., Hermann, R. C., & Dorwart, R. A. (1997). Use of electroconvulsive therapy in the Medicare population between 1987 and 1992. *Psychiatric Services*, *48*, 1537–1542.
- Rosenheck, R. A. (1999). Principles for priority setting in mental health services and their implications for the least well off. *Psychiatric Services*, *50*, 653–658.

Mental Health: A Report of the Surgeon General

- Rosenheck, R., Cramer, J., Allan, E., Erdos, J., Frisman, L. K., Xu, W., Thomas, J., Henderson, W., & Charney, D. (1999). Cost-effectiveness of clozapine in patients with high and low levels of hospital use. Department of Veterans Affairs Cooperative Study Group on Clozapine in Refractory Schizophrenia. *Archives of General Psychiatry*, *56*, 565–572.
- Rosenheck, R., Cramer, J., Xu, W., Thomas, J., Henderson, W., Frisman, L., Fye, C., & Charney, D. (1997). A comparison of clozapine and haloperidol in hospitalized patients with refractory schizophrenia. Department of Veterans Affairs Cooperative Study Group on Clozapine in Refractory Schizophrenia. *New England Journal of Medicine*, *337*, 809–815.
- Rosenheck, R., Morrissey, J., Lan, J., Calloway, M., Johnsen, M., Goldman, H., Randolph, F., Blasinsky, M., Fontana, A., Calsyn, R., & Teague, G. (1998a). Service system integration, access to services, and housing outcomes in a program for homeless persons with severe mental illness. *American Journal of Public Health*, *88*, 1610–1615.
- Rosenheck, R., Tekell, J., Peters, J., Cramer, J., Fontana, A., Xu, W., Thomas, J., Henderson, W., & Charney, D. (1998b). Does participation in psychosocial treatment augment the benefit of clozapine? Department of Veterans Affairs Cooperative Study Group on Clozapine in Refractory Schizophrenia. *Archives of General Psychiatry*, *55*, 618–625.
- Rosnow, M., & Rucker, P. (1985). *Listening to the homeless: A study of homeless mentally ill people in Milwaukee*. Milwaukee, WI: Wisconsin Office of Mental Health.
- Rost, K., Smith, G., Mathews, D., & Guise, B. (1994). The deliberate misdiagnosis of major depression in primary care. *Archives of Family Medicine*, *3*, 333–337.
- Rothbart, M. K., & Ahadi, S. A. (1994). Temperament and the development of personality. *Journal of Abnormal Psychology*, *103*, 55–66.
- Rowland, R. R., Gilliland, C., & Moxley, D. P. (1993). A consumer-initiated job search training program. *Journal of Rehabilitation*, *59*, 61–66.
- Roy, M. A., & DeVriendt, X. (1994). [Positive and negative symptoms in schizophrenia: A current overview]. *Canadian Journal of Psychiatry*, *39*, 407–414.
- Rudorfer, M. V., Henry, M. E., & Sackheim, H. A. (1997). Electroconvulsive therapy. In A. Tasman, J. Kay, & J. A. Lieberman (Eds.), *Psychiatry* (pp. 1535–1556). Philadelphia: W. B. Saunders.
- Ruiz, S., Chu, P., Sramek, J., Rotavu, E., & Herrera, J. (1996). Neuroleptic dosing in Asian and Hispanic outpatients with schizophrenia. *Mt. Sinai Journal of Medicine*, *63*, 306–309.
- Rush, A. J., Stewart, R. S., Garver, D. L., & Waller, D. A. (1998). Neurobiological bases for psychiatric disorders. In R. N. Rosenberb & D. E. Pleasure (Eds.), *Comprehensive neurology* (2nd ed., pp. 555–603). New York: John Wiley and Sons.
- Russo, J., Vitaliano, P. P., Brewer, D. D., Katon, W., & Becker, J. (1995). Psychiatric disorders in spouse caregivers of care recipients with Alzheimer's disease and matched controls: A diathesis-stress model of psychopathology. *Journal of Abnormal Psychology*, *104*, 197–204.
- Ryglewicz, H., & Glynn, L. (1993). Project change revisited: An experiment in entry or reentry into college. *Psychosocial Rehabilitation Journal*, *17*, 69–81.
- Sachs, G. S., Lafer, B., Stoll, A. L., Banov, M., Thibault, A. B., Tohen, M., & Rosenbaum, J. F. (1994). A double-blind trial of bupropion versus desipramine for bipolar depression. *Journal of Clinical Psychiatry*, *55*, 391–393.
- Sackeim, H. A. (1994). Continuation therapy following ECT: Directions for future research. *Psychopharmacology Bulletin*, *30*, 501–521.
- Sackeim, H. A., Prudic, J., Devanand, D. P., Kiersky, J. E., Fitzsimons, L., Moody, B. J., McElhiney, M. C., Coleman, E. A., & Settembrino, J. M. (1993). Effects of stimulus intensity and electrode placement on the efficacy and cognitive effects of electroconvulsive therapy. *New England Journal of Medicine*, *328*, 839–846.
- Salzman, C. (1998). St. John's wort. *Harvard Review of Psychiatry*, *5*, 333–335.
- Sapolsky, R. M. (1996). Stress, glucocorticoids, and damage to the nervous system: The current state of confusion. *Stress*, *1*, 1–19.
- Saraceno, B., & Barbui, C. (1997). Poverty and mental illness. *Canadian Journal of Psychiatry*, *42*, 285–290.
- Sautter, F. J., McDermott, B. E., Cornwell, J., Johnson, J., Borges, A., Wilson, A. F., Vasterling, J. J., & Foundas, A. L. (1995). A preliminary study of the neuropsychological heterogeneity of familial schizophrenia. *Schizophrenia Research*, *18*, 1–7.
- Schatzberg, A. F., & Rothschild, A. J. (1992). Psychotic (delusional) major depression: Should it be included as a distinct syndrome in DSM-IV? *American Journal of Psychiatry*, *149*, 733–745.

- Scheid, T. L. (1998). The Americans With Disabilities Act, mental disability, and employment practices. *Journal of Behavioral Health Services Research, 25*, 312–324.
- Schone, W., & Ludwig, M. (1993). A double-blind study of paroxetine compared with fluoxetine in geriatric patients with major depression. *Journal of Clinical Psychopharmacology, 13*, 34S–39S.
- Schou, M. (1989). Lithium prophylaxis: Myths and realities. *American Journal of Psychiatry, 146*, 573–576.
- Schulberg, H. C., Madonia M., Block M., Coulehan, J. L., Scott, C. P., Rodriguez, E., & Black, A. (1995). Major depression in primary care practice: Clinical characteristics and treatment implications. *Psychosomatics, 36*, 129–137.
- Schultz, S. K., Miller, D. D., Oliver, S. E., Arndt, S., Flaum, M., & Andreasen, N. C. (1997). The life course of schizophrenia: Age and symptom dimensions. *Schizophrenia Research, 23*, 15–23.
- Schutt, R. K., & Goldfinger, S. M. (1996). Housing preferences and perceptions of health and functioning among homeless mentally ill persons. *Psychiatric Services, 47*, 381–386.
- Schwarzkopf, S. B., Nasrallah, H. A., Olson, S. C., Bogerts, B., McLaughlin, J. A., & Mitra, T. (1991). Family history and brain morphology in schizophrenia: An MRI study. *Psychiatry Research, 40*, 49–60.
- Scott J. (1992). Chronic depression: Can cognitive therapy succeed when other treatments fail? *Behavioral Psychotherapy, 20*, 25–36.
- Scott, J., & Dixon, L. (1995a). Psychological interventions for schizophrenia. *Schizophrenia Bulletin, 21*, 621–630.
- Scott, J. E., & Dixon, L. B. (1995b). Assertive Community Treatment and case management for schizophrenia. *Schizophrenia Bulletin, 21*, 657–668.
- Sederer, L. I., & Dickey, B. (1995). Acute and chronic psychiatric care: Establishing boundaries. *Psychiatric Quarterly, 66*, 263–274.
- Sedlak, A. J., & Broadhurst, D. D. (1996). *Executive summary of the third national incidence study of child abuse and neglect*. Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families, National Center for Child Abuse and Neglect.
- Seilheimer, T. A., & Doyal, G. T. (1996). Self-efficacy and consumer satisfaction with housing. *Community Mental Health Journal, 32*, 549–559.
- Selemon, L. D., Rajkowska, G., & Goldman-Rakic, P. S. (1998). Elevated neuronal density in prefrontal area 46 in brains from schizophrenic patients: Application of a three-dimensional, stereologic counting method. *Journal of Comparative Neurology, 392*, 402–412.
- Seligman, M. E. (1991). *Learned optimism*. New York: Alfred A. Knopf.
- Seligman, M. E. (1995). The effectiveness of psychotherapy. The Consumer Reports study. *American Psychologist, 50*, 965–974.
- Selye, H. (1956). *The stress of life*. New York: McGraw-Hill.
- Serretti, A., Macciardi, F., Cusin, C., Lattuada, E., Lilli, R., & Smeraldi, E. (1998). Dopamine receptor D4 gene is associated with delusional symptomatology in mood disorders. *Psychiatry Research, 80*, 129–136.
- Shapiro, D. R., Quitkin, F. M., & Fleiss, J. L. (1989). Response to maintenance therapy in bipolar illness. Effect of index episode. *Archives of General Psychiatry, 46*, 401–405.
- Shear, M. K. (1995). Psychotherapeutic issues in long-term treatment of anxiety disorder patients. *Psychiatric Clinics of North America, 18*, 885–894.
- Sheehan, D. V., Ballenger, J., & Jacobsen, G. (1980). Treatment of endogenous anxiety with phobic, hysterical, and hypochondriacal symptoms. *Archives of General Psychiatry, 37*, 51–59.
- Sheline, Y. I. (1996). Hippocampal atrophy in major depression: A result of depression-induced neurotoxicity? *Molecular Psychiatry, 1*, 298–299.
- Shenton, M. E., Kikinis, R., Jolesz, F. A., Pollak, S. D., LeMay, M., Wible, C. G., Hokama, H., Martin, J., Metcalf, D., Coleman, M., & McCarley, R. W. (1992). Abnormalities of the left temporal lobe and thought disorder in schizophrenia: A quantitative magnetic resonance imaging study. *New England Journal of Medicine, 327*, 604–612.
- Shern, D., Wilson, N., Coen, D., Patrick, M., Foster, D., Bartsch, D., & Demmler, J. (1994). Client outcomes. II: Longitudinal data from the Colorado Treatment Outcomes study. *Milbank Quarterly, 72*, 123–148.
- Shore, D. (1998). Recent developments in atypical antipsychotic medications. *Schizophrenia Bulletin, 24*, 33.
- Shore, M., & Cohen, M. (1990). The Robert Wood Johnson Program on chronic mental illness: An overview. *Hospital and Community Psychiatry, 1*, 1212–1216.

Mental Health: A Report of the Surgeon General

- Shore, M., & Cohen, M. (1994). Introduction. *Milbank Quarterly*, 72, 31–35.
- Shrivastava, R. K., Cohn, C., Crowder, J., Davidson, J., Dunner, D., Feighner, J., Kiev, A., & Patrick, R. (1994). Long-term safety and clinical acceptability of venlafaxine and imipramine in outpatients with major depression. *Journal of Clinical Psychopharmacology*, 14, 322–329.
- Simon, G. E., & Von Korff, M. (1995). Recognition, management, and outcomes of depression in primary care. *Archives of Family Medicine*, 4, 99–105.
- Simon, G. E., VonKorff, M., Wagner, E. H., & Barlow, W. (1993). Patterns of antidepressant use in community practice. *General Hospital Psychiatry*, 15, 399–408.
- Simons, A. D., Murphy, G. E., Levine, J. L., & Wetzel, R. D. (1986). Cognitive therapy and pharmacotherapy for depression. Sustained improvement over one year. *Archives of General Psychiatry*, 43, 43–48.
- Sisley, A., Jacobs, L. M., Poole, G., Campbell, S., & Esposito, T. (1999). Violence in America: A public health crisis—domestic violence. *Journal of Trauma*, 46, 1105–1112.
- Small, J. G., Klapper, M. H., Kellams, J. J., Miller, M. J., Milstein, V., Sharpley, P. H., & Small, I. F. (1988). Electroconvulsive treatment compared with lithium in the management of manic states. *Archives of General Psychiatry*, 45, 727–732.
- Small, J. G., Klapper, M. H., Milstein, V., Kellams, J. J., Miller, M. J., Marhenke, J. D., & Small, I. F. (1991). Carbamazepine compared with lithium in the treatment of mania. *Archives of General Psychiatry*, 48, 915–921.
- Smith, R. C., Chua, J. W., Lipetsker, B., & Bhattacharyya, A. (1996a). Efficacy of risperidone in reducing positive and negative symptoms in medication-refractory schizophrenia: An open prospective study. *Journal of Clinical Psychiatry*, 57, 460–466.
- Smith, T. E., Bellack, A. S., & Liberman, R. P. (1996b). Social skills training for schizophrenia: Review and future directions. *Clinical Psychology Review*, 16, 599–617.
- Smoller, J. W., & Tsuang, M. T. (1998). Panic and phobic anxiety: Defining phenotypes for genetic studies. *American Journal of Psychiatry*, 155, 1152–1162.
- Snowden, L. R. (in press). African American service use for mental health problems. *Journal of Community Psychology*.
- Snowden, L. R., & Cheung, F. A. (1990). Use of inpatient mental health services by members of ethnic minority groups. *American Psychologist*, 45, 347–355.
- Sohng, S. S. (1996). Supported housing for the mentally ill elderly: Implementation and consumer choice. *Community Mental Health Journal*, 32, 135–148.
- Solomon, D. A., Keitner, G. I., Miller, I. W., Shea, M. T., & Keller, M. B. (1995). Course of illness and maintenance treatments for patients with bipolar disorder. *Journal of Clinical Psychiatry*, 56, 5–13.
- Solomon, P., & Draine, J. (1995). The efficacy of a consumer case management team: 2-year outcomes of a randomized trial. *Journal of Mental Health Administration*, 22, 135–146.
- Soumerai, S. B., McLaughlin, T. J., Ross-Degnan, D., Casteris, C. S., & Bollini, P. (1994). Effects of a limit on Medicaid drug-reimbursement benefits on the use of psychotropic agents and acute mental health services by patients with schizophrenia. *New England Journal of Medicine*, 331, 650–655.
- Spanier, C., Frank, E., McEachran, A. B., Grochocinski, V. J., & Kupfer, D. J. (1996). The prophylaxis of depressive episodes in recurrent depression following discontinuation of drug therapy: Integrating psychological and biological factors. *Psychological Medicine*, 26, 461–475.
- Spaulding, W. D. (1997). Cognitive models in a fuller understanding of schizophrenia. *Psychiatry*, 60, 341–346.
- Sperling, W., Barocka, A., Kalb, R., Suss, S., & Katalinic, A. (1997). Influence of season on manifestation of schizophrenic subtypes. *Psychopathology*, 30, 200–207.
- Spiker, D. G. (1985). The pharmacological treatment of delusional depression. *American Journal of Psychiatry*, 142, 430–436.
- Spiker, D. G., & Kupfer, D. J. (1988). Placebo response rates in psychotic and nonpsychotic depression. *Journal of Affective Disorders*, 14, 21–23.
- Srebnik, D., Livingston, J., Gordon, L., & King, D. (1995). Housing choice and community success for individuals with serious and persistent mental illness. *Community Mental Health Journal*, 31, 139–152.
- Stahl, S. M. (1996). *Essential psychopharmacology: Neuroscientific basis and clinical applications*. New York: Cambridge University Press.

- Stanton, A. H., Gunderson, J. G., Knapp, P. H., Frank, A. F., Vannicelli, M. L., Schnitzer, R., & Rosenthal, R. (1984). Effects of psychotherapy in schizophrenia: I. Design and implementation of a controlled study. *Schizophrenia Bulletin, 10*, 520–563.
- Steffens, D. C., & Krishnan, K. R. (1998). Structural neuroimaging and mood disorders: Recent findings, implications for classification, and future directions. *Biological Psychiatry, 43*, 705–712.
- Stein, L. I., & Test, M. A. (1980). Alternative to mental hospital treatment. I. Conceptual model, treatment program, and clinical evaluation. *Archives of General Psychiatry, 37*, 392–397.
- Stewart, J. W., Quitkin, F. M., McGrath, P. J., Amsterdam, J., Fava, M., Fawcett, J., Reimherr, F., Rosenbaum, J., Beasley, C., & Roback, P. (1998). Use of pattern analysis to predict differential relapse of remitted patients with major depression during 1 year of treatment with fluoxetine or placebo. *Archives of General Psychiatry, 55*, 334–343.
- Strachan, A. M. (1986). Family intervention for the rehabilitation of schizophrenia: Toward protection and coping. *Schizophrenia Bulletin, 12*, 678–698.
- Strakowski, S. M., Lonczak, H. S., Sax, K. W., West, S. A., Crist, A., Mehta, R., & Thienhaus, O. J. (1995). The effects of race on diagnosis and disposition from a psychiatric emergency service. *Journal of Clinical Psychiatry, 56*, 101–107.
- Straub, R. E., MacLean, C. J., Martin, R. B., Ma, Y., Myakishev, M. V., Harris-Kerr, C., Webb, B. T., O'Neill, F. A., Walsh, D., & Kendler, K. S. (1998). A schizophrenia locus may be located in region 10p15-p11. *American Journal of Medical Genetics, 81*, 296–301.
- Stuppaeck, C. H., Geretsegger, C., Whitworth, A. B., Schubert, H., Platz, T., Konig, P., Hinterhuber, H., & Fleischhacker, W. W. (1994). A multicenter double-blind trial of paroxetine versus amitriptyline in depressed inpatients. *Journal of Clinical Psychopharmacology, 14*, 241–246.
- Sullivan, G. M., Coplan, J. D., & Gorman, J. M. (1998). Psychoneuroendocrinology of anxiety disorders. *Psychiatric Clinics of North America, 21*, 397–412.
- Suppes, T., Baldessarini, R. J., Faedda, G. L., Tondo, L., & Tohen, M. (1993). Discontinuation of maintenance treatment in bipolar disorder: Risks and implications. *Harvard Review of Psychiatry, 1*, 131–144.
- Suppes, T., McElroy, S. L., Gilbert, J., Dessain, E. C., & Cole, J. O. (1992). Clozapine in the treatment of dysphoric mania. *Biological Psychiatry, 32*, 270–280.
- Susser, E., Hoek, H. W., & Brown, A. (1998). Neurodevelopmental disorders after prenatal famine: The story of the Dutch Famine Study. *American Journal of Epidemiology, 147*, 213–216.
- Susser, E., Neugebauer, R., Hoek, H. W., Brown, A. S., Lin, S., Labovitz, D., & Gorman, J. M. (1996). Schizophrenia after prenatal famine. Further evidence. *Archives of General Psychiatry, 53*, 25–31.
- Susser, E. S., & Lin, S. P. (1992). Schizophrenia after prenatal exposure to the Dutch Hunger Winter of 1944–1945. *Archives of General Psychiatry, 49*, 983–988.
- Svrakic, D. M., Whitehead, C., Przybeck, T. R., & Cloninger, C. R. (1993). Differential diagnosis of personality disorders by the seven-factor model of temperament and character. *Archives of General Psychiatry, 50*, 991–999.
- Symonds, L. L., Olichney, J. M., Jernigan, T. L., Corey-Bloom, J., Healy, J. F., & Jeste, D. V. (1997). Lack of clinically significant gross structural abnormalities in MRIs of older patients with schizophrenia and related psychoses. *Journal of Neuropsychiatry and Clinical Neurosciences, 9*, 251–258.
- Tanzman, B. (1993). An overview of surveys of mental health consumers' preferences for housing and support services. *Hospital and Community Psychiatry, 44*, 450–455.
- Tarrier, N., Barrowclough, C., Porceddu, K., & Fitzpatrick, E. (1994). The Salford Family Intervention Project: Relapse rates of schizophrenia at five and eight years. *British Journal of Psychiatry, 165*, 829–832.
- Taylor, D. P., Carter, R. B., Eison, A. S., Mullins, U. L., Smith, H. L., Torrente, J. R., Wright, R. N., & Yocca, F. D. (1995). Pharmacology and neurochemistry of nefazodone, a novel antidepressant drug. *Journal of Clinical Psychiatry, 56*(Suppl. 6), 3–11.
- Tessler, R., & Gamache, G. (1994). Continuity of care, residence, and family burden in Ohio. *Milbank Quarterly, 72*, 149–170.
- Tessler, R. C., & Goldman, H. H. (1982). *The chronically mentally ill*. Cambridge, MA: Ballinger.
- Thacker, H. L. (1997). Menopause. *Primary Care, 24*, 205–221.

Mental Health: A Report of the Surgeon General

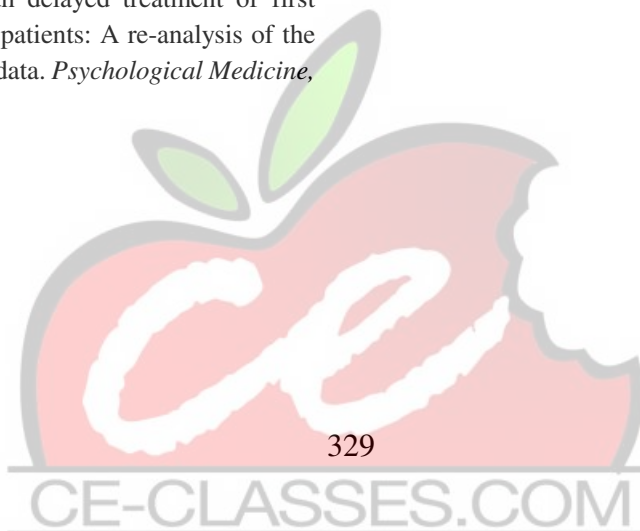
- Thakker, J., & Ward, T. (1998). Culture and classification: The cross-cultural application of the DSM-IV. *Clinical Psychology Review, 18*, 501–529.
- Thase, M. E. (1993). Maintenance treatments of recurrent affective disorders. *Current Opinions in Psychiatry, 6*, 16–21.
- Thase, M. E. (1995). Reeducative psychotherapies. In G. O. Gabbard (Ed.), *Treatment of psychiatric disorders* (pp. 1169–1204). Washington, DC: American Psychiatric Press.
- Thase, M. E. (1996). The undertreatment of patients with depression. *Depressive Disorders: Index and Review, 4*, 1.
- Thase, M. E. (1998). Depression, sleep, and antidepressants. *Journal of Clinical Psychiatry, 59*(Suppl. 4), 55–65.
- Thase, M. E., Blomgren, S. L., Birkett, M. A., Apter, J. T., & Tepner, R. G. (1997a). Fluoxetine treatment of patients with major depressive disorder who failed initial treatment with sertraline. *Journal of Clinical Psychiatry, 58*, 16–21.
- Thase, M. E., Greenhouse, J. B., Frank, E., Reynolds, C. F., III, Pilkonis, P. A., Hurley, K., Grochocinski, V., & Kupfer, D. J. (1997b). Treatment of major depression with psychotherapy or psychotherapy-pharmacotherapy combinations. *Archives of General Psychiatry, 54*, 1009–1015.
- Thase, M. E., & Howland, R. H. (1995). Biological processes in depression: An updated review and integration. In E. E. Beckham & W. R. Leber (Eds.), *Handbook of depression* (2nd ed., pp. 213–279). New York: Guilford Press.
- Thase, M. E., Mallinger, A. G., McKnight, D., & Himmelhoch, J. M. (1992). Treatment of imipramine-resistant recurrent depression, IV: A double-blind crossover study of tranylcypromine for anergic bipolar depression. *American Journal of Psychiatry, 149*, 195–198.
- Thase, M. E., & Rush, A. J. (1995). Treatment resistant depression. In F. E. Bloom & D. J. Kupfer (Eds.), *Psychopharmacology: The fourth generation of progress* (pp. 1081–1097). New York: Raven Press.
- Thase, M. E., & Rush, A. J. (1997). When at first you don't succeed: Sequential strategies for antidepressant nonresponders. *Journal of Clinical Psychiatry, 58*(Suppl. 13), 23–29.
- Thase, M. E., Simons, A. D., Cahalane, J., McCreary, J., & Harden, T. (1991). Severity of depression and response to cognitive behavior therapy. *American Journal of Psychiatry, 148*, 784–789.
- Thase, M. E., & Sullivan, L. R. (1995). Relapse and recurrence of depression: A practical approach for prevention. *CNS Drugs, 4*, 261–277.
- Thase, M. E., Trivedi, M. H., & Rush, A. J. (1995). MAOIs in the contemporary treatment of depression. *Neuropsychopharmacology, 12*, 185–219.
- Thorn, G. R., Chosak, A., Baker, S. L., & Barlow, D. H. (1999). Psychological theories of panic disorder. In D. J. Nutt, J. C. Ballenger, & J. P. Lepine (Eds.), *Panic disorder: Clinical diagnosis, management and mechanisms* (pp. 93–108). London: Martin Dunitz Ltd.
- Tignol, J. (1993). A double-blind, randomized, fluoxetine-controlled, multicenter study of paroxetine in the treatment of depression. *Journal of Clinical Psychopharmacology, 13*, 18S–22S.
- Toomey, R., Faraone, S. V., Simpson, J. C., & Tsuang, M. T. (1998). Negative, positive, and disorganized symptom dimensions in schizophrenia, major depression, and bipolar disorder. *Journal of Nervous and Mental Disease, 186*, 470–476.
- Torrey, E. F., & Yolken, R. H. (1998). At issue: Is household crowding a risk factor for schizophrenia and bipolar disorder? *Schizophrenia Bulletin, 24*, 321–324.
- Trainor, J., Shepard, M., Boydell, K. M., & Magura, S. (1997). Beyond the service paradigm: The impact and implications of consumer/survivor initiatives. *Psychiatric Rehabilitation Journal, 21*, 132–140.
- Trugman, J. M. (1998). Tardive dyskinesia: Diagnosis, pathogenesis, and management. *The Neurologist, 20*, 90–93.
- Tsuang, M., & Faraone, S. V. (1990). *The genetics of mood disorders*. Baltimore: Johns Hopkins University Press.
- Tsuang, M. T., & Faraone, S. V. (1995). The case for heterogeneity in the etiology of schizophrenia. *Schizophrenia Research, 17*, 161–175.
- Tsuang, M. T., Gilbertson, M. W., & Faraone, S. V. (1991). The genetics of schizophrenia. Current knowledge and future directions. *Schizophrenia Research, 4*, 157–171.
- Turner, J. C., & TenHoor, W. J. (1978). The NIMH Community Support Program: Pilot approach to a needed social reform. *Schizophrenia Bulletin, 4*, 319–348.

- Turner, R. J., & Lloyd, D. A. (1995). Lifetime trauma and mental health: The significance of cumulative adversity. *Journal of Health and Social Behavior, 36*, 360–376.
- Turner, R. J., Wheaton, B., & Lloyd, D. A. (1995). The epidemiology of stress. *American Sociological Review, 60*, 104–125.
- Ulbrich, P. M., Warheit, G. J., & Zimmerman, R. S. (1989). Race, socioeconomic status, and psychological distress: An examination of differential vulnerability. *Journal of Health and Social Behavior, 30*, 131–146.
- Umbricht, D., & Kane, J. M. (1995). Risperidone: Efficacy and safety. *Schizophrenia Bulletin, 21*, 593–606.
- U.S. Department of Education. (1998). *Disability Forum Report–3. Housing and disability: Data needs, statistics and policy. Proceedings of the Third National Disability Statistics and Policy Forum*. Washington, DC: National Institute on Disability and Rehabilitation Research.
- U.S. Department of Health and Human Services. (1996). *Physical activity and health: A report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion.
- U.S. Department of Housing and Urban Development. (1994). *Worse case need for housing assistance in the U.S. in 1990 and 1991: A report to Congress*. Washington, DC: HUD Office of Policy Development and Research.
- Vaillant, G. E. (1977). *Adaptation to life*. New York: Basic Books.
- Van Os, J., & Marcelis, M. (1998). The ecogenetics of schizophrenia: A review. *Schizophrenia Research, 32*, 127–135.
- Van Os, J., & Selten, J. P. (1998). Prenatal exposure to maternal stress and subsequent schizophrenia. The May 1940 invasion of The Netherlands. *British Journal of Psychiatry, 172*, 324–326.
- Van Os, J., Wright, P., & Murray, R. M. (1997). Follow-up studies of schizophrenia. I: Natural history and non-psychopathological predictors of outcome. *European Psychiatry, 12*, 327S–341S.
- Van Putten, T., Marder, S. R., & Mintz, J. (1990). A controlled dose comparison of haloperidol in newly admitted schizophrenic patients. *Archives of General Psychiatry, 47*, 754–758.
- Van Putten, T., Marder, S. R., Mintz, J., & Poland, R. E. (1992). Haloperidol plasma levels and clinical response: A therapeutic window relationship. *American Journal of Psychiatry, 149*, 500–505.
- Van Tosh, L., & del Vecchio, P. (in press). *Consumer/survivor-operated self-help programs: A technical report*. Washington, DC: U.S. Department of Health and Human Services.
- Vanelle, J. M. (1997). Refractory schizophrenia: Historical and currently prevailing criteria and definitions. *European Psychiatry, 12*, 321S–326S.
- Vaughan, S. C., & Oldham, J. M. (1997). Behavioral and adaptive functioning. In A. Tasman, J. Kay, & J. A. Lieberman (Eds.), *Psychiatry*, (Vol. 1, pp. 549–562). Philadelphia: W. B. Saunders.
- Viguera, A. C., & Cohen, L. S. (1998). The course and management of bipolar disorder during pregnancy. *Psychopharmacology Bulletin, 34*, 339–346.
- Vita, A., Dieci, M., Giobbio, G. M., Garbarini, M., Morganti, C., Braga, M., & Invernizzi, G. (1994). A reconsideration of the relationship between cerebral structural abnormalities and family history of schizophrenia. *Psychiatry Research, 53*, 41–55.
- Vogel, H. S., Knight, E., Laudet, A. B., & Magura, S. (1998). Double trouble in recovery. Self-help for people with dual diagnoses. *Psychiatric Rehabilitation Journal, 21*, 356–364.
- Wachtel, H. (1990). The second-messenger dysbalance hypothesis of affective disorders. *Pharmacopsychiatry, 23*, 27–32.
- Wahl, O. F., Borostovik, L., & Rieppi, R. (1995). Schizophrenia in popular periodicals. *Community Mental Health Journal, 31*, 239–248.
- Wahl, O. F., & Harman, C. R. (1989). Family views of stigma. *Schizophrenia Bulletin, 15*, 131–139.
- Walker, P. W., Cole, J. O., Gardner, E. A., Hughes, A. R., Johnston, J. A., Batey, S. R., & Lineberry, C. G. (1993). Improvement in fluoxetine-associated sexual dysfunction in patients switched to bupropion. *Journal of Clinical Psychiatry, 54*, 459–465.
- Walters, V. L., Tognolini, R. Z., Rueda, H. M., Rueda, R. M., & Torres, R. G. (1997). New strategies for old problems: Tardive dyskinesia (TD). Review and report on severe TD cases treated with clozapine, with 12, 8 and 5 years of video follow-up. *Schizophrenia Research, 28*, 231–246.

Mental Health: A Report of the Surgeon General

- Ward, K. E., Friedman, L., Wise, A., & Schulz, S. C. (1996). Meta-analysis of brain and cranial size in schizophrenia. *Schizophrenia Research, 22*, 197–213.
- Ware, N. C., & Goldfinger, S. M. (1997). Poverty and rehabilitation in severe psychiatric disorders. *Psychosocial Rehabilitation Journal, 21*, 3–9.
- Wehman, P. (1988). Supported employment: Toward equal employment opportunity for persons with severe disabilities. *Mental Retardation, 26*, 357–361.
- Wehr, T. A., & Goodwin, F. K. (1987). Can antidepressants cause mania and worsen the course of affective illness? *American Journal of Psychiatry, 144*, 1403–1411.
- Weinberger, D. R. (1987). Implications of normal brain development for the pathogenesis of schizophrenia. *Archives of General Psychiatry, 44*, 660–669.
- Weinberger, D. R. (1995). Schizophrenia as a neurodevelopmental disorder. In S. R. Hirsch & D. R. Weinberger (Eds.), *Schizophrenia* (pp. 293–323). Oxford, England, Cambridge, MA: Blackwell Science Ltd.
- Weinberger, D. R., & Lipska, B. K. (1995). Cortical maldevelopment, anti-psychotic drugs, and schizophrenia: A search for common ground. *Schizophrenia Research, 16*, 87–110.
- Weiner, R. D., & Krystal, A. D. (1994). The present use of electroconvulsive therapy. *Annual Review of Medicine, 45*, 273–281.
- Weiss, J. M. (1991). Stress-induced depression: Critical neurochemical and electrophysiological changes. In J. Madden (Ed.), *Neurobiology of learning, emotion, and affect* (pp. 123–154). New York: Raven Press.
- Weiss, E. L., Longhurst, J. G., & Mazure, C. M. (1999). Childhood sexual abuse as a risk factor for depression in women: Psychosocial and neurobiological correlates. *American Journal of Psychiatry, 156*, 816–828.
- Weissman, M. M., Bland, R. C., Canino, G. J., Faravelli, C., Greenwald, S., Hwu, H. G., Joyce, P. R., Karam, E. G., Lee, C. K., Lellouch, J., Lepine, J. P., Newman, S. C., Oakley-Browne, M. A., Rubio-Stipec, M., Wells, J. E., Wickramaratne, P. J., Wittchen, H. U., & Yeh, E. K. (1997). The cross-national epidemiology of panic disorder. *Archives of General Psychiatry, 54*, 305–309.
- Weissman, M. M., Bland, R., Joyce, P. R., Newman, S., Wells, J. E., & Wittchen, H. U. (1993). Sex differences in rates of depression: Cross-national perspectives. *Journal of Affective Disorders, 29*, 77–84.
- Wells, K. B., Katon, W., Rogers, B., & Camp, P. (1994). Use of minor tranquilizers and antidepressant medications by depressed outpatients: Results from the Medical Outcomes Study. *American Journal of Psychiatry, 151*, 694–700.
- Wells, K. B., Rogers, W., Burnam, A., Greenfield, S., & Ware, J. E., Jr. (1991). How the medical comorbidity of depressed patients differs across health care settings: Results from the Medical Outcomes Study. *American Journal of Psychiatry, 148*, 1688–1696.
- Wells, K. B., Stewart, A., Hays, R. D., Burnam, M. A., Rogers, W., Daniels, M., Berry, S., Greenfield, S., & Ware, J. (1989). The functioning and well-being of depressed patients. Results from the Medical Outcomes Study. *Journal of the American Medical Association, 262*, 914–919.
- Wells, K. B., Sturm, R., Sherbourne, C. D., & Meredith, L. S. (1996). *Caring for depression*. Cambridge, MA: Harvard University Press.
- Wender, P. H., Kety, S. S., Rosenthal, D., Schulsinger, F., Ortmann, J., & Lunde, I. (1986). Psychiatric disorders in the biological and adoptive families of adopted individuals with affective disorders. *Archives of General Psychiatry, 43*, 923–929.
- Westenberg, H. G. (1996). Developments in the drug treatment of panic disorder: What is the place of the selective serotonin reuptake inhibitors? *Journal of Affective Disorders, 40*, 85–93.
- Wetzel, H., Szegedi, A., Hain, C., Wiesner, J., Schlegel, S., & Benkert, O. (1995). Seroquel (ICI 204 636), a putative "atypical" antipsychotic, in schizophrenia with positive symptomatology: Results of an open clinical trial and changes of neuroendocrinological and EEG parameters. *Psychopharmacology, 119*, 231–238.
- Wible, C. G., Shenton, M. E., Hokama, H., Kikinis, R., Jolesz, F. A., Metcalf, D., & McCarley, R. W. (1995). Prefrontal cortex schizophrenia. A quantitative magnetic resonance imaging study. *Archives of General Psychiatry, 52*, 279–288.
- Widiger, T. A., & Costa, P. T., Jr. (1994). Personality and personality disorders. *Journal of Abnormal Psychology, 103*, 78–91.
- Wiersma, D., Nienhuis, F. J., Slooff, C. J., & Giel, R. (1998). Natural course of schizophrenic disorders: A 15-year followup of a Dutch incidence cohort. *Schizophrenia Bulletin, 24*, 75–85.

- Wilkinson, L. S., Killcross, S. S., Humby, T., Hall, F. S., Geyer, M. A., & Robbins, T. W. (1994). Social isolation in the rat produces developmentally specific deficits in prepulse inhibition of the acoustic startle response without disrupting latent inhibition. *Neuropsychopharmacology, 10*, 61–72.
- Williams, J. W., Jr., Rost, K., Dietrich, A., Ciotti, M., Zyzanski, S., & Cornell, J. (1999). Primary care physicians' approach to depressive disorders: Effects of physician specialty and practice structure. *Archives of Family Medicine, 8*, 58–67.
- Wilt, S., & Olson, S. (1996). Prevalence of domestic violence in the United States. *Journal of the American Medical Women's Association, 51*, 77–82.
- Wing, J. (1962). Institutionalization in mental hospitals. *Journal of Social and Clinical Psychology, 1*, 38–51.
- Winokur, G., Coryell, W., Keller, M., Endicott, J., & Akiskal, H. (1993). A prospective follow-up of patients with bipolar and primary unipolar affective disorder. *Archives of General Psychiatry, 50*, 457–465.
- Wiser, A. K., Andreasen, N. C., O'Leary, D. S., Watkins, G. L., Boles Ponto, L. L., & Hichwa, R. D. (1998). Dysfunctional cortico-cerebellar circuits cause "cognitive dysmetria" in schizophrenia. *Neuroreport, 9*, 1895–1899.
- Woods, B. T., & Yurgelun-Todd, D. (1991). Brain volume loss in schizophrenia: When does it occur and is it progressive? *Schizophrenia Research, 5*, 202–204.
- World Health Organization. (1997). Psychosocial rehabilitation: A consensus statement. *International Journal of Mental Health, 26*, 77–85.
- Wyatt, R. J., Damiani, L. M., & Henter, I. D. (1998). First-episode schizophrenia. Early intervention and medication discontinuation in the context of course and treatment. *British Journal of Psychiatry. Supplement, 172*, 77–83.
- Wyatt, R. J., Green, M. F., & Tuma, A. H. (1997). Long-term morbidity associated with delayed treatment of first admission schizophrenic patients: A re-analysis of the Camarillo State Hospital data. *Psychological Medicine, 27*, 261–268.
- Wyatt, R. J., & Henter, I. D. (1998). The effects of early and sustained intervention on the long-term morbidity of schizophrenia. *Journal of Psychiatric Research, 32*, 169–177.
- Yehuda, R. (1999). Biological factors associated with susceptibility to post-traumatic stress disorder. *Canadian Journal of Psychiatry, 44*, 34–39.
- Yolken, R. H., & Torrey, E. F. (1995). Viruses, schizophrenia, and bipolar disorder. *Clinical Microbiology Reviews, 8*, 131–145.
- Yuen, O., Caligiuri, M. P., Williams, R., & Dickson, R. A. (1996). Tardive dyskinesia and positive and negative symptoms of schizophrenia. A study using instrumental measures. *British Journal of Psychiatry, 168*, 702–708.
- Zaharia, M. D., Kulczycki, J., Shanks, N., Meaney, M. J., & Anisman, H. (1996). The effects of early postnatal stimulation on Morris water-maze acquisition in adult mice: Genetic and maternal factors. *Psychopharmacology, 128*, 227–239.
- Zalewski, C., Johnson-Selfridge, M. T., Ohriner, S., Zarrella, K., & Seltzer, J. C. (1998). A review of neuropsychological differences between paranoid and nonparanoid schizophrenia patients. *Schizophrenia Bulletin, 24*, 127–145.
- Zealberg, J. J., Hardesty, S. J., Meisler, N., & Santos, A. B. (1997). Mobile psychiatric emergency medical services. In S. W. Henggeler & A. B. Santos (Eds.), *Innovative approaches for difficult-to-treat populations* (pp. 263–273). Washington, DC: American Psychiatric Press.
- Zornberg, G. L., & Pope, H. G., Jr. (1993). Treatment of depression in bipolar disorder: New directions for research. *Journal of Clinical Psychopharmacology, 13*, 397–408.
- Zubin, J., & Spring, B. (1977). Vulnerability—a new view of schizophrenia. *Journal of Abnormal Psychology, 86*, 103–126.





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