

CHAPTER

1

Overview and Clinical Implications of Schizophrenia

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Schizophrenia is a chronic and seriously disabling brain disorder that produces significant residual cognitive, functional, and social deficits. Considered the most disabling of all mental disorders (Mueser & McGurk, 2004), schizophrenia occurs in about 1% of the world population, or more than 20 million people worldwide (Silverstein, Spaulding, & Menditto, 2006). In the United States, schizophrenia occurs in a little over 1% of American adults (National Institute of Mental Health [NIMH], 2009a). Typically, onset of adult schizophrenia begins in men in their early to mid-20's and later 20's in women (American Psychiatry Association [APA], 2000), rarely developing before age 16 (Lindenmayer & Khan, 2006), or after age 45 (Almeida, Howard, Levy, & David, 1995). Schizophrenia affects men and women in equal numbers (Mueser & McGurk, 2004).

A Brief Historical Perspective

From pre-Biblical times forward, mental illness has been explained in a variety of ways. What was common across the centuries was the belief that mental illnesses were a result of external forces such as God's will, demonic possession, witchcraft, dog bites, or poisons. It was not until the 17th century that a medically based etiology of mental illness was introduced (Stone, 2006). The modern conceptualization of schizophrenia today is based on the work of Swiss psychiatrist Eugene Bleuler (1857–1939) and German psychiatrist Émil Kraepelin (1856–1926) (Mueser & McGurk, 2004). Bleuler first introduced the term schizophrenia and identified the primary symptoms of the disorder, including ambivalence, autism, disturbance of affect, and disordered association, as well as secondary symptoms of delusions and hallucinations (Castle & Buckley, 2008). Kraepelin was the first to conceptualize what had been

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previously believed to be a group of disorders under a single early onset, long-term debilitating brain disorder (Lavretsky, 2008).

Many of the past approaches used to “treat” schizophrenia are now considered horrifying atrocities. From early America’s practice of burning the mentally ill at the stake for being possessed to more recent approaches initiated in the 1930s—such as barbiturate sleep therapy, insulin-induced comas, and psychosurgeries—we have desperately tried “treatments” that have inflicted substantial harm to individuals without any evaluation or scientific support for their use (Lavretsky, 2008). One of the most famous of these “interventions” was the frontal lobotomy or leucotomy that involved a severing of the nerves located in the frontal lobe. Between the 1930s and the 1950s, an estimated 50,000 Americans received lobotomies (National Public Radio, 2005). While these procedures reduced a person’s agitation, a lobotomy also resulted in significant and disabling cognitive impairments. In the 1940s, electroconvulsant therapy (ECT) (applying electric current to the brain) gained in popularity and was frequently used in American hospitals to treat mental illnesses. Today, ECT is still used, but only for treating chronic schizophrenia in people with the most severe and persistent drug-resistant psychosis, catatonia, and unmanageable aggression (McClintock, Ranganwala, & Husain, 2008). It was just in 1952 that the first antipsychotic medication—Thorazine—was introduced. Since then, antipsychotic medications revolutionized treatment for people with schizophrenia, enhancing their ability to live outside institutions. During the 1960s, deinstitutionalization began moving thousands of people out of state hospitals and into the community. Unfortunately, the promise of adequately funded and readily available community mental health services has never been realized, resulting in large numbers of people with mental illness who are homeless or reinstitutionalized in jails and prisons.

Etiology of Schizophrenia

Today, the role of genetics, neurobiological pathophysiology (brain malfunctions or abnormalities), environmental triggers, and neurocognitive factors are all continuing to be researched as possible contributors or causal factors in the development of schizophrenia (Beck, Rector, Stolar, & Grant, 2009). While the cause of schizophrenia is still unknown, current science primarily points to a polygenetic neurodevelopmental predisposition compounded by environmentally -based biological and social risk factors (Arnold, Talbot, & Hahn, 2005).

Evidence of schizophrenia being an inherited disorder originated in adoption studies conducted in the 1960s. Of all the genetic risk factors known today, family history is still the strongest predictor of developing schizophrenia. For example, having a first-degree family member with schizophrenia increases a person’s risk for developing the disorder by 10 times (Mueser & McGurk, 2004). Having two parents who are affected by schizophrenia increases an individual’s

risk of developing the disorder themselves to nearly 50% (McGuffin, Owen, & Farmer, 1995).

Over the last few decades, researchers have identified several genes, single nucleotide polymorphisms (SNPs or “snips,” which are variations in DNA sequences), and chromosomal regions theorized to play a potential role in the development of schizophrenia. However, researchers have not yet conclusively identified the responsible genes or their specific mechanisms of transmission (Beck et al., 2009), leaving the precise contribution of genetics in developing schizophrenia still unclear (Tandon, Keshavan, & Nasrallah, 2008).

A number of biological and psychosocial environmental risk factors are believed to either independently or interactively impact a genetic risk factor in developing schizophrenia (Castle & Morgan, 2008). Pre- or peri-natal risk factors include winter birth, urban birth, intrauterine infections, *in utero* exposure to maternal stress, paternal age, and obstetric complications. Additional risk factors include childhood trauma, minority ethnicity, immigrant status, urban residency, substance abuse, poverty, and social isolation (Downar & Kapur, 2008).

While the aforementioned risk factors have been linked to a significantly greater likelihood of developing schizophrenia, their importance and exactly how they contribute to the development of the disorder still remain unclear (Tandon et al., 2008). The heterogeneity of potential causes, the complex patterns of how gene-to-gene and gene-to-environment factors may interact, and the still inadequately explained etiology of functional deficits caused by schizophrenia are all offered as an explanation as to why we still do not completely understand the causes, development, and effects of the disorder today (Tandon et al., 2008). Additionally, the effects of age, comorbid health and psychiatric disorders, and environmental stressors further obscure scientists’ ability in pinpointing the exact etiology of schizophrenia (Arnold, Talbot, & Hahn, 2005).

Symptoms of Schizophrenia

Schizophrenia is characterized by clusters of positive symptoms (e.g., hallucinations, delusions, and/or catatonia), negative symptoms (e.g., apathy, flat affect, social withdrawal, loss of feeling, lack of motivation, and/or poverty of speech), and disorganized symptoms (e.g., formal thought disorder and/or bizarre behaviors). In addition, individuals with schizophrenia often experience substantial cognitive deficits including loss of executive function, as well as social dysfunction.

Clinicians wanting to assess the impact and severity of their clients’ psychotic symptoms may want to use the Positive and Negative Syndrome Scale (PANSS). The PANSS is a 30-item scale that includes 7 positive and 7 negative symptom items, and 16 general psychopathology items, all scored on a 7-point severity scale (Kay, Opler, & Lindenmayer, 1989). The symptoms that are assessed in the PANSS are detailed in Figure 1.1.

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Figure 1.1 Symptoms Considered in the Positive and Negative Syndrome Scale (PANSS) for Schizophrenia.

Positive Symptoms

1. Delusions
2. Conceptual disorganization
3. Hallucinatory behavior
4. Excitement
5. Grandiosity
6. Suspiciousness/persecution
7. Hostility

Negative Symptoms

1. Blunted affect
2. Emotional withdrawal
3. Poor rapport
4. Passive/apathetic social withdrawal
5. Difficulty in abstract thinking
6. Lack of spontaneity and flow of conversation
7. Stereotyped thinking

General Psychopathology Symptoms

1. Somatic concern
 2. Anxiety
 3. Guilt feelings
 4. Tension
 5. Mannerism and posturing
 6. Depression
 7. Motor retardation
 8. Uncooperativeness
 9. Unusual thought content
 10. Disorientation
 11. Poor attention
 12. Lack of judgment and insight
 13. Disturbance and volition
 14. Poor impulse control
 15. Preoccupation
 16. Active social avoidance
-

Positive Symptoms

Positive symptoms can include several different types of hallucinations and delusions, and also catatonia. Generally, exacerbation of one's positive symptoms tends to be episodic over time, often resulting in acute relapse and increased risk of harm to oneself or others. Frequently, psychiatric hospitalization is necessary to stabilize a person (Mueser & McGurk, 2004).

Hallucinations

Hallucinations are defined as "a sensory perception that has the compelling sense of reality of a true perception but that occurs without external stimulation of the relevant sensory organ" (APA, 1994, p. 767). Hallucinations can occur in any of a person's senses, resulting in visual, auditory, olfactory, tactile, gustatory, or a mix of experiences.

However, auditory hallucinations, or hearing sounds or voices, are the most common and occur in nearly 75% of individuals diagnosed with schizophrenia (Ford et al., 2009). Auditory hallucinations range from muffled sounds to complete conversations and can be experienced as coming either from within or from outside one's self (Nayani & David, 1996). Auditory hallucinations are often derogatory or persecutory in nature, and can be heard in the third person (the voice or voices discuss the person as he/she/it), as a running commentary (voices comment on or suggest the person's actions), or as audible thoughts (voices stating one's own thoughts out loud). Some individuals with schizophrenia also experience useful or positive voices that give advice, encourage, remind, help make decisions, or assist the person in their daily activities (Jenner, Rutten, Beuckens, Boonstra, & Sytma, 2008).

Delusions

Delusions are defined as "erroneous beliefs that usually involve a misinterpretation of perceptions or experiences" (APA, 2000, p. 299). Delusions are categorized "bizarre" if they are clearly implausible—for example, "aliens stole my thoughts"—and "non-bizarre" if they are not true, but are possible—for example, "the FBI has been keeping close tabs on me." Delusions are common, experienced by more than 90% of people with schizophrenia (Cutting, 2003).

The most common type of delusions—paranoid or persecutory delusions—involve client beliefs that others are following, tormenting, ridiculing, or tricking them, and/or are out to get them. A client with a paranoid delusion might state, "The CIA is watching me all the time now. Just last week they did something to my cell phone because of the information I have on them. That's why it's no longer safe to make calls." Delusions of reference are also common, and refer to a belief that objects, behaviors of others, comments, or the media (passages from books, newspapers, TV, radio, etc.) are directly related to oneself. For example, a client could explain, "I really try not to watch much TV because I think they are talking to me and sending me their messages. Sometimes I know they really aren't, but I really think they are when I listen. It's really messed up."

Somatic delusions involve beliefs about one's body being altered or injured, such as was demonstrated in a client who said, "Look at my hand. Can't you tell that they sewed someone else's hand on me? No wonder it doesn't work right." Delusions of grandeur are beliefs of special powers, identity, or relationships. This may include a belief that one can hear others' thoughts, have power over others' minds, have a special relationship to important people, or are important persons themselves. A client could state, "I can hear my own thoughts and I can hear what other people think, too," or in another example, "You might have figured out by now that they based the character of Jack Bauer on me—it's all taken from when I was in the Secret Service and assigned to guard Bush One. Yep. I am Jack Bauer—Jack Bauer is me." (Jack Bauer is the lead character of the TV show 24.)

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Negative Symptoms

Negative symptoms are conceptualized as deficits (Noll, 2006), characterized as an “absence of behavioral and internal experiences that typify healthy individuals” (Beck et al., 2009, p. 143). Negative symptoms are marked by blank looks, monotone and monosyllabic speech, and a general lack of interest in the world (Miller, 2006). These symptoms are characterized by flat affect (overall diminished emotional expression and responsiveness), avolition (lack of interest or motivation to pursue activities or goals), anhedonia (inability to show or feel pleasure), and alogia (“poverty of speech,” or brief, empty replies) (APA, 2000; Miller, 2006).

While positive symptoms are most often associated with schizophrenia, negative symptoms are actually more common, are most highly associated with social and vocational disability, and are the most difficult to treat (Castle & Buckley, 2008). Nearly 25% of individuals with schizophrenia experience severe and persistent negative symptoms (Miller, 2006), as negative symptoms tend to remain stable or worsen over time (Mueser & McGurk, 2004).

Disorganized Symptoms

Disorganized symptoms of schizophrenia can consist of a formal thought disorder, disorganized speech, and/or disorganized behaviors. A person with a formal thought disorder exhibits “loose associations, idiosyncratic use of language, thought blocking, and poverty of content of speech” (Beck et al., 2009, p. 162). An affected person may be unable to form logical thoughts or communicate coherently. Individuals may exhibit “pressured speech” (speaking quickly or incessantly), “derailment” or “loose associations” (flight of ideas, or switching topic mid-sentence or inappropriately), “tangentiality” (comments made are unrelated to discussion), “thought blocking” (interrupted thoughts and ideas), and rhyming or “perseveration” (repeating words or ideas). In the most severe cases, an individual’s words remain intact, but what is said makes no sense and is incoherent, often referred to as “word salad.” Disorganized behaviors may involve dressing in an unusual manner (e.g., multiple layers in warm weather), inappropriate laughter, a disheveled appearance, and unpredictable agitation such as shouting or swearing, or inappropriate sexual behaviors (APA, 2000).

Progression of Schizophrenia

There is a great deal of variability in the onset and progression of schizophrenia across individuals. Schizophrenia most often develops over the course of several years, passing through three stages referred to as onset, prodromal, and first psychotic episode. This process of developing schizophrenia typically begins with increases in negative and depressive symptoms (onset), followed by increased social, functional, and cognitive dysfunction (prodromal), and then progresses several years later with the first psychotic episode marked by the emergence of

positive psychotic symptoms (Häfner & an der Heiden, 2008). In most cases, the onset of schizophrenia does not begin with psychotic symptoms, but can develop over the course of a few weeks, or can take a longer course (Lindemayer & Kahn, 2006).

Some individuals with schizophrenia may only experience one psychotic episode, are able to control their symptoms, and can lead functioning, productive, and happy lives (Harrison et al., 2001). In fact, at least 20% of individuals with a first psychotic episode stay in remission for 10 years (Häfner & an der Heiden, 2008). However, clinicians—especially those who work in public mental health settings—are more likely to see those individuals whose lives are devastated and dismantled by their disorder. These individuals experience repeated relapses and remissions. Some are unable to control their symptoms even when consistently taking their medications.

Holding important clinical implications for early medical and evidence-based psycho-social interventions, the course of schizophrenia during its first two years is strongly predictive of its future course. The strongest predictor of the course of the disorder is a person's age when their psychosis develops and the level of social development attained by onset (Mueser & McGurk, 2004). A longer duration of psychotic symptoms, a younger age at onset, substance use, and a lack of social relationships are all significantly associated with poorer prognosis in how schizophrenia runs its course in an individual (Harrison et al., 2001). Clinicians may observe that the disorder can manifest itself in male and female clients somewhat differently. In general, men are more likely than women to become self-neglectful, socially withdrawn, and experience communication deficits, while women experience higher rates of positive symptoms and depression than do men (Seeman, 2008).

Diagnosing Schizophrenia

A clinical diagnosis of schizophrenia is made when alternative causes of psychosis have been ruled out and specific criteria within designated time frames are met. The specific criteria used for diagnosing schizophrenia are found in the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition, text revision (*DSM-IV-TR*) (American Psychiatric Association [APA], 2000) and/or the International Statistical Classification of Diseases and Related Health Problems, tenth revision (*ICD-10*) (World Health Organization [WHO], 2007). The *DSM-IV* and *ICD-10* criteria are detailed in Figures 1.2 and 1.3.

The most widely accepted approach in the assessment and diagnosis of schizophrenia is the use of the structured clinical interview (Rudnick & Roe, 2008), which may include the Present State Examination (PSE), Schedule for Affective Disorders and Schizophrenia (SADS), Diagnostic Interview Schedule (DIS), Structured Clinical Interview for DSM-IV (SCID), or the Comprehensive Assessment of Symptoms and

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Figure 1.2 DSM-IV-TR Diagnosis 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 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 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 onset (or when the onset is in childhood or adolescence, the 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 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).

Subtypes

295.10 Schizophrenia, Disorganized Type

295.20 Schizophrenia, Catatonic Type

295.30 Schizophrenia, Paranoid Type

295.60 Schizophrenia, Residual Type

295.90 Schizophrenia, Undifferentiated Type

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History (CASH) (Lindenmayer & Khan, 2006). Diagnosis should include a thorough assessment of a client's medical conditions, symptoms, trauma history, family history, substance use, cognitive functioning, life skills, cognitive assessment, and abilities (Silverstein, Spaulding, & Menditto, 2006). Lack of insight, experiencing interfering symptoms, guardedness, suggestibility, and/or thought distortions may all impact the reliability of gathered assessment information (Rudnick & Roe, 2008), making the use of multiple sources of assessment information over time the most likely route to obtaining an accurate diagnosis.

Figure 1.3 ICD-10 Diagnosis Criteria for Schizophrenia.

Characteristic Symptomatology

1. One month or more, in which a significant portion of time is taken up, one very clear symptom or two less clear
 - A. Passivity phenomena
 - B. Delusions of control, influence, or passivity, clearly referred to body or limb movements or specific thoughts, actions, or sensations; delusional perception
 - C. Voices commenting or other types of hallucinatory voices coming from some part of the body
 - D. Persistent bizarre delusions
- Or**
2. At least two of the following
 - E. Persistent hallucinations every day for 1 month when accompanied either by fleeting or half-formed delusions without clear affective content
 - F. Thought stopping/blocking and incoherence or irrelevant speech, or neologisms
 - G. Grossly disorganized behavior
 - H. Catatonic behavior
 - I. Negative symptoms
 - J. A significant and consistent change in the overall quality of some aspects of personal behavior, manifest as loss of interest, aimlessness, idleness, a self-absorbed attitude, and social withdrawal

Duration

One of one or two of two present for 1 month

Exclusion

The diagnosis is not made in the presence of extensive depressive or manic symptoms unless it is clear that schizophrenic symptoms antedated the affective disturbance. The disturbance is not due to substance intoxication, dependence, or withdrawal, or overt brain disease.

Subtypes

- F20.0 Paranoid schizophrenia
- F20.1 Hebephrenic schizophrenia
- F20.2 Catatonic schizophrenia
- F20.3 Undifferentiated schizophrenia
- F20.4 Post schizophrenic depression
- F20.5 Residual schizophrenia
- F20.6 Simple schizophrenia
- F20.8 Other schizophrenia
- F20.9 Schizophrenia unspecified

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Subtypes of Schizophrenia

There are five primary subtypes of schizophrenia: paranoid, disorganized, residual, catatonic, and undifferentiated. Each subtype is defined according to a person's predominant presenting characteristics at a given time, and a person may present with more than one subtype over time (Rudnik & Roe, 2008).

Paranoid Type

A person with paranoid schizophrenia frequently experiences delusions and auditory hallucinations that tend to focus on persecution and result in paranoia, anxiety, and suspicion. Persons with this type of schizophrenia experience far fewer negative

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or disorganized symptoms than other subtypes, but are more often angry, tense, suspicious, guarded, and argumentative as a result of their disorder (APA, 2000; Lindenmayer & Khan, 2006). The *DSM-IV-TR* criteria for a diagnosis of paranoid schizophrenia include:

- A. Preoccupation with one or more delusions or frequent auditory hallucinations.
- B. None of the following is prominent: disorganized speech, disorganized or catatonic behavior, or flat or inappropriate affect (APA, 2000, p. 314).

Disorganized Type

In this subtype, a person primarily shows disorganized speech and inappropriate or maladaptive behaviors, and demonstrates a flat affect without any prominent positive symptoms (Lindenmayer & Khan, 2006). The *DSM-IV-TR* criteria for disorganized schizophrenia include the following:

- A. All of the following are prominent:
 1. Disorganized speech
 2. Disorganized behavior
 3. Flat or inappropriate affect
- B. The criteria for catatonic type are not met (APA, 2000, p. 315).

Catatonic Type

Of all the types of schizophrenia, catatonic schizophrenia displays perhaps the widest range of behavioral symptoms. Behaviors can range from complete immobility to meaningless activity (Lindenmayer & Khan, 2006). *DSM-IV-TR* criteria require that the person demonstrates at least two of the following behaviors:

- A. Motoric immobility as evidenced by catalepsy (including waxy flexibility) or stupor
- B. Excessive motor activity (that is apparently purposeless and not influenced by external stimuli)
- C. Extreme negativism (an apparently motiveless resistance to all instructions or maintenance of a rigid posture against attempts to be moved) or mutism
- D. Peculiarities of voluntary movement as evidenced by posturing (voluntary assumption of inappropriate or bizarre postures), stereotyped movements, prominent mannerisms, or prominent grimacing
- E. Echolalia or echopraxia (APA, 2000, pp. 315–316)

Undifferentiated Type

This diagnosis is used when presenting symptoms do not meet the specific criteria for paranoid, disorganized, or catatonic type, and the person may demonstrate a

combination of symptoms from other schizophrenia subtypes (Lindenmayer & Khan, 2006). The *DSM-IV-TR* criteria are as follows: “A type of schizophrenia in which the following criteria that meet Criterion A are present, but the criteria are not met for the Paranoid, Disorganized, or Catatonic type” (APA, 2000, p. 316).

Residual Type

A residual schizophrenia diagnosis indicates that a person once met clinical criteria for one of the other four subtypes of schizophrenia, although is no longer exhibiting the severe symptoms of the other schizophrenia category. The person may still lack motivation or interest in day-to-day living (APA, 2000; Lindenmayer & Khan, 2006). The *DSM-IV-TR* criteria follow:

- A. Absence of prominent delusions, hallucinations, disorganized speech, and grossly disorganized or catatonic behavior.
- B. There is continuing evidence of the disturbance, as indicated by the presence of negative symptoms or two or more symptoms listed in criterion A for schizophrenia, present in an attenuated form (e.g., odd beliefs, unusual perceptual experiences) (APA, 2000, pp. 316–317).

The *DSM-IV-TR* also allows that the following specifiers may be used to indicate the characteristics of symptoms after 1 year of time since the initial onset of active symptoms:

- A. Episodic with interepisode residual symptoms
- B. With prominent negative symptoms
- C. Episodic with no interepisode residual symptoms
- D. Continuous
- E. With prominent negative symptoms
- F. Single episode in partial remission
- G. Single episode in full remission
- H. Other, unspecified pattern (APA, 2000, p. 303)

Comorbid Psychiatric, Health, and Substance Use Disorders

Clinicians who treat individuals with schizophrenia often find their interventions significantly complicated by a client’s comorbid psychiatric, health, and/or substance use disorders. Because presentation of comorbid disorders is so common and can have such serious effects in the treatment of individuals with schizophrenia, it is essential that clinicians be able to assess for their presence and either treat or refer to other providers when necessary. It is estimated that over 50% of individuals with schizophrenia have one or more comorbid psychiatric, health (Weber, Cowan, Millikan, & Niebuhr, 2009), or substance use disorders (Blanchard, Brown, Horan, & Sherwood, 2000).

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Comorbid Psychiatric Disorders

According to the NIMH (2009b), nearly half of all individuals with a serious mental disorder also meet criteria for two or more other mental disorders, and the combination often increases the severity of each individual disorder. This is especially borne out in the very common and higher-than-average rates of comorbid depressive and anxiety disorders that occur in people who experience schizophrenia.

Depression and Suicide

It is estimated that more than 70% of individuals with schizophrenia also experience depression, with 25% meeting clinical criteria for a major depressive disorder (Castle & Buckley, 2008). Depression in schizophrenia has been strongly linked to the higher-than-average risk of suicide among individuals with schizophrenia (Pompili et al., 2007).

Suicide is the single largest cause of premature death among individuals with schizophrenia (Fenton, McGlashan, Victor, & Blyler, 1997). The risk of death by suicide in individuals diagnosed with schizophrenia is eight times that of the general population (Harris & Barraclough, 1997). Nearly 10% of individuals who have schizophrenia commit suicide (Häfner & an der Heiden, 2008), with the rates of unsuccessful attempts at least two to five times that number (Siris, 2001).

The risk of suicide among individuals with schizophrenia is at its highest early in the course of their illness, especially in individuals who had better premorbid function and insight (Melle et al., 2006). Individual characteristics that have been most consistently linked to higher rates of suicide in persons with schizophrenia include a younger age, male, never married, white, post-psychotic depression, and having had good premorbid functioning (Pompili et al., 2007). Other predictors of suicide include previous suicide attempts and substance abuse (Hawton, Sutton, Haw, Sinclair, & Deeks, 2005). Family support, social connections, and the medication clonzapine have been shown to be protective factors against suicide in people with schizophrenia (Hennen & Baldessarini, 2005). Ongoing assessment, effectively treating positive symptoms, depression, reducing substance abuse, avoiding akathisia, addressing demoralization, and instilling hope are all important clinical elements in the prevention of suicide in this client population (Tandon, 2005).

Anxiety Disorders, Trauma Exposure, and Posttraumatic Stress Disorder Comorbid anxiety disorders are also very common, occurring in up to 50% of people with schizophrenia (Pokos & Castle, 2006). Nearly 23% of individuals with schizophrenia also have obsessive-compulsive disorder (Buckley, Miller, Lehrer, & Castle, 2009), and are more likely to have panic disorders, generalized anxiety disorder, agoraphobia, and/or social phobia than the general population (Castle & Buckley, 2008). Researchers estimate that as many as one third of individuals with schizophrenia meet clinical criteria for a diagnosis of posttraumatic stress disorder

(PTSD; Buckley et al., 2009; Miller, Lehrer, & Castle, 2009; Rosenberg & Mueser, 2008), affecting men and women in similar numbers (Mueser et al., 2004).

There is an emerging awareness that trauma exposure in individuals with schizophrenia has been characterized as “close to universal” (Rosenberg & Mueser, 2008, p. 447), and that “multiple traumatization over the lifespan is the rule, rather than the exception” (p. 447). This characterization certainly fits with the fact that lifetime rates of violent trauma in individuals with severe mental illness range from 51% to 97% (Goodman, Rosenberg, Mueser, & Drake, 1997). Clinicians may find that early traumatic events are integrated into their client’s hallucinations (Hardy et al., 2005), especially auditory voice content (Beck et al., 2009), as well as delusional thoughts (Janssen et al., 2004). Additionally, clients with both schizophrenia and trauma histories may exhibit clinically significant trauma-related symptoms such as intrusive experiences, defensive avoidance, or dissociation that require careful clinical intervention (Lyskaer & LaRocco, 2008).

The high incidence and continued risk of trauma with resulting PTSD in schizophrenia makes it essential for the clinician working with this population to assess—and reassess—trauma effects and evaluate their implications in treatment. Clinicians should be aware that studies have shown that trauma history in schizophrenia is predictive of more severe psychiatric symptoms, depression, anxiety (Rosenberg & Mueser, 2008), and worsened levels of community and psychosocial functioning (Lysaker, Hunter, Strasburger, & Davis, 2005). Also important to consider is the fact that comorbid PTSD in schizophrenia has been significantly associated with increased psychiatric hospitalization, more frequent medical visits, and decreased quality of life (Calhoun, Bosworth, Stechuchak, Strauss, & Butterfield, 2007). Research is just beginning to evaluate the effectiveness of known evidence-based trauma interventions, such as cognitive-behavioral therapy (CBT) (Mueser et al., 2008; Rosenberg, Mueser, Jankowski, Salyers, & Acker, 2004) and exposure-based CBT (Frueh et al., 2009) in treating individuals who have both PTSD and schizophrenia.

Comorbid Health Disorders and Mortality

People with schizophrenia have significantly higher-than-average rates of comorbid health disorders and mortality. As such, individuals with schizophrenia are at a far greater risk than the general population for a variety of health conditions that impact individual stability, functioning, treatment, and quality of life. An estimated 75% of persons with schizophrenia have a comorbid health condition, most notably diabetes, COPD, HIV/AIDS, and hepatitis B and C (Rystedt & Bartels, 2008). New research also suggests that women with schizophrenia may be at increased risk of developing breast cancer (Busche, Bradley, Wildgust, & Hodgen, 2009). In spite of a high need for proper medical care, people diagnosed with schizophrenia often have limited access to primary health-care screening and treatment (Nasrallah et al., 2006).

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Since being introduced in the 1950s, psychopharmacological therapy has been the primary and most effective intervention in treating schizophrenia. Unfortunately, many of the older-generation antipsychotic medications (e.g., haldol, thorazine, fluphenazine, prolixin decanoate, stelazine, and navane) are only partially effective in treating positive symptoms, and in some cases have either no effect, or actually worsen, negative symptoms and cognitive deficits (McGorry, 2004). Older medications also produce disabling side effects such as akathisia (restlessness), dystonia (muscle cramps), parkinsonian-like symptoms (bradykinesia, resting tremors, muscular rigidity), and tardive dyskinesia (permanent involuntary movements) (Mattay & Casey, 2003).

Newer antipsychotic medications—referred to as “second-generation” or “atypical” medications—developed in the 1990s, have been thought to be more effective in relapse prevention and in some cases have reportedly had some impact on negative and cognitive symptoms (McGorry, 2004). Newer medications include Clozaril (clozapine), Zyprexa (olanzapine), Risperdal (risperidone), Seroquel (quetiapine), Geodone (ziprasidone), Abilify (aripiprazole), and Invega (paliperdone). While newer atypical medications produce fewer neurological side effects than experienced in older medications, they have been linked with creating other troubling health-related problems such as weight gain (Addington, Mansley, & Addington, 2003), cardiovascular disease (Dolder, 2008), and the development of metabolic syndrome (McEvoy et al., 2005), which includes abdominal obesity, high blood pressure, increased triglycerides, insulin resistance, and diabetes. Individuals taking atypical medications frequently complain of other, less serious side effects that interfere in normal functioning, such as sedation, dizziness, rapid heartbeat, dry mouth or excessive salivation, light sensitivity, skin rashes, menstrual problems or disruption, and sexual dysfunction that often subside after adjusting to the medication (NIMH, 2009b). Appendix C details commonly prescribed antipsychotic medications for treating schizophrenia and their side effects. In addition to antipsychotic medications, other types of adjunctive mood stabilizers, antidepressants, and benzodiazepines, are often used to treat comorbid depression, anxiety, agitation, and/or aggression in schizophrenia (Arey & Marder, 2008).

Mortality rates in persons with schizophrenia are also higher than average. The rates are two to three times that of the general population, with suicide accounting for only one third of the excess, and the remainder due to health-related causes (Auguier, Lancon, Rouillon, & Lader, 2007). High incidence of cardiovascular disease, diabetes, respiratory disorders, gastrointestinal diseases, central nervous system disorders, genitourinary diseases, other infectious diseases, and cancer are all conditions associated with mortality rates in schizophrenia (Casey & Hansen, 2009).

Clinicians working with individuals who have schizophrenia should be familiar with symptoms associated with the health disorders commonly experienced by their clients. Clients will need assistance in monitoring their health status and obtaining

needed primary medical care, which has been shown to be especially problematic for individuals with serious mental illnesses (Levinson, Miller, Druss, Dombrowski, & Rosenheck, 2003). Also, since many of the common health issues found in schizophrenia can be related to life style choices (e.g., poor diet, smoking, sedentary lifestyles), clinicians should provide assistance, education, and encouragement to clients to improve their health status (Rystedt & Bartels, 2008).

Comorbid Substance Use Disorder

Almost one half of persons with schizophrenia also have a comorbid substance abuse disorder (Buckley et al., 2009; Miller, Lehrer, & Castle, 2009). The most common types of substances abused, in order of frequency, are nicotine, alcohol, marijuana, and cocaine (Volkow, 2009).

There is general agreement that the combination of mental health and substance use disorders creates a more serious impact on individuals than would either disorder alone (Watkins, Lewellen, & Barrett, 2001), as the co-occurrence of both disorders significantly exacerbates accompanying problems of each individual disorder (Evans & Sullivan, 2001). Co-occurring schizophrenia and a substance use disorder often results in symptom exacerbation and increased functional deficits, as well as triggering impulsive and self-destructive behaviors (Kavanagh, 2008). There is emerging evidence that use of psychoactive substances, especially cocaine, may negatively interact with antipsychotic medications and increase the development of extrapyramidal symptoms such as restlessness, involuntary movements, and uncontrolled speech (Potvin, Blanchet, & Stip, 2009), and other side effects as well (Buckley et al., 2009; Miller, Lehrer, & Castle, 2009). The combined effects of these two disorders negatively impact treatment outcomes as they have been shown to also increase treatment nonadherence, psychiatric relapse, and hospitalization (RachBeisel, Scott, & Dixon, 1999). Comorbid substance abuse and schizophrenia also increases the risk of suicide (Heisel, 2008), violence (Swartz et al., 1998), victimization (Goodman et al., 2001), homelessness (Greenberg & Rosenheck, 2008), and involvement in the criminal justice system (Hills, Siegfried, & Ickowitz, 2004).

Substance use in clients with schizophrenia, especially due to its role in the onset and exacerbation of the disorder itself, should receive routine clinical attention in screening, assessment, and treatment. Historically, treatment services for mental health and substance abuse have been separate, resulting in either sequential or parallel treatment. Today an "integrated treatment" approach, which involves focusing intervention efforts on both disorders simultaneously, is generally thought to be the most promising strategy. While there is no single model that defines exactly what constitutes "integrated treatment," it commonly includes one clinician or a team of clinicians who provide mental health and substance abuse treatment as well as other individual and/or group psychosocial interventions

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(Mueser, Noordsy, Drake, & Fox, 2003). Although an integrated treatment approach seems to make sense, the research is still developing. To date, there is not strong empirical evidence that supports integrated treatment as any more or less effective than treating co-occurring schizophrenia and substance use disorders in a parallel or sequential manner.

Other Risk Factors Associated with Schizophrenia

Clinicians working closely with individuals with schizophrenia quickly come to realize that their clients are very likely to experience a wide array of stressful social problems that can interfere with achieving psychiatric stability and negatively impact treatment outcomes. Research has shown that people with schizophrenia lack social supports and experience high rates of social isolation (Bebbington & Kuipers, 2008). The impact public stigma and discrimination has on individuals with schizophrenia is high, influencing their treatment, self-perception, and quality of life (Corrigan & Larson, 2008). Also affecting the treatment and stability of persons with schizophrenia is the fact that this client group experiences increased housing instability and has a higher likelihood of homelessness (Folsom et al., 2005), has a 90% unemployment rate (Rosenheck et al., 2006), and is significantly over-represented in the criminal justice system, both as victims and perpetrators of crime (Worcester, 2007).

Medication Nonadherence

Monitoring medication adherence and assessing for residual side effects is a critical clinical function when treating individuals with schizophrenia. While medications have been shown to produce high rates of positive symptom remission in schizophrenia (Silverstein, Spaulding, & Menditto, 2006), discontinuation or intermittent adherence to medications is frequent. Incidence rates of nonadherence to psychotropic medication among individuals with schizophrenia range from 11% to 80%, or on average around 50% (Fenton, Blyler, & Heinssen, 1997; Lacro, Dunn, Dolder, Leckband, & Jeste, 2002). Medication nonadherence is significantly associated with increased symptom exacerbation, relapse, psychiatric rehospitalization, emergency room visits, and homelessness in schizophrenic populations (Olfson et al., 2000; Theda, Beard, Richter, & Kane, 2003). A particular clinical concern is that the longer the duration of medication nonadherence, the less likely a person with schizophrenia is to have a positive treatment response from future medication adherence (Lindemayer et al., 2009). Lack of illness insight, negative attitudes toward medications, previous nonadherence, and a recent onset of illness—not medication side effects—have been identified as the highest risk factors for medication nonadherence in individuals with schizophrenia (Lacro et al., 2002).

Importance of Therapeutic Alliance in Implementing Treatment

Although psychotropic medications alone produce little to no effects in improving negative or disorganized symptoms, cognitive deficits, and/or social dysfunction (Miyamoto, Stroup, Duncan, Aoba, & Lieberman, 2003), it is well-established that antipsychotic medications, combined with a strong therapeutic alliance and coupled with empirically supported psychosocial interventions are necessary to improve outcomes for individuals with schizophrenia (Lavretsky, 2008).

A therapeutic alliance is the emotional bond developed between a clinician and his or her client characterized by being open, collaborative, trusting, and sharing consensus on treatment goals (Wittori et al., 2009). The essential importance of a therapeutic alliance in working with individuals with schizophrenia must not be underestimated. Among individuals with schizophrenia, a better therapeutic alliance is linked with higher levels of general and social functioning (Svensson & Hansson, 1999), reduced symptoms (Gehrs & Goering, 1994), less required medications, and improved medication adherence (Dolder, Lacro, Leckband, & Jeste, 2003).

Conclusion

In spite of the increased emphasis and availability of empirically supported interventions for treating schizophrenia, few individuals are receiving needed treatment and fewer still receive treatment with sound evidence supporting their effectiveness. Drake, Bond, and Essock (2009) have reported that as many as 95% of people with schizophrenia receive either no treatment, or treatment that is not evidence-based. This volume is intended to alleviate this problem, as its remaining chapters provide clinicians with detailed descriptions regarding how to provide empirically supported psychosocial interventions that—combined with a strong therapeutic alliance—promise to improve the lives of individuals with schizophrenia and offer hope for alleviating their suffering, enhancing their functioning, supporting their recovery, and improving their quality of life.

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