

Schizophrenia

Case Study Part 1: Anna

Anna Yannucci is a 26-year-old single white female who was referred to the outpatient mental health facility following a 2-week stay at a psychiatric unit of a local hospital. A report from the hospital indicated that her father, Thomas Yannucci, took Anna to the hospital from an apartment where she had been staying for 2 weeks with a 45-year-old man. Her father believed that this man was a drug user who barely knew his daughter. Mr. Yannucci had learned where Anna was staying when she called him one day to ask for money. He went to the apartment and found that his daughter was apparently not eating well, not changing or washing her clothes, not going outside, and not communicating coherently. When her father arrived, Anna was sitting still, watching television absently. When spoken to, she replied in polite but short phrases and did not initiate conversation. She seemed "lost in her own little world." Mr. Yannucci brought Anna home from the apartment and later that day drove her to the emergency services unit of the hospital. Mr. Yannucci stated that his daughter "behaves like this much of the time" but he thought that she had lately become even more difficult to communicate with. He added that she always "sat around, spaced out" when she was in her own apartment.

Schizophrenia is a mental disorder characterized by a person's abnormal patterns of thought and perception (APA, 2013). It is a *psychotic* disorder; that is, a mental state in which the person's thoughts and perceptions are severely impaired. Schizophrenia includes two types of symptoms. *Positive* symptoms represent exaggerations of normal behavior and include hallucinations, delusions, disorganized thinking, and tendencies toward agitation. *Negative* symptoms represent the absence of what would be considered normal behavior and include flat affect (the absence of expression), social withdrawal, noncommunication, passivity, and ambivalence in decision-making. In DSM-IV, five subtypes of schizophrenia were listed, based on its particular symptom presentation, but these have been eliminated from DSM-5 because of their low validity and reliability (APA, 2013).

PREVALENCE AND COMORBIDITY

A systematic review of 65 prevalence studies published between 1990 and 2013 concluded that the worldwide prevalence of schizophrenia is approximately 0.5% (Simeone, Ward, Rotella, Collins, & Windisch, 2015). The authors add that differences in prevalence estimates in various regions of the world may be due to research methodology issues or actual differences. National surveys in

the United States indicate that schizophrenia tends to be diagnosed in African Americans about twice as often as whites and Latinos (Barnes, 2013; Durbin, Rudoler, Durbin, Laporte, & Callaghan, 2014). This imbalance may result from practitioners attributing and weighing particular symptoms differently for clients of different ethnic backgrounds. White clinicians tend to interpret the suspicious attitudes of African Americans as symptomatic of schizophrenia, representing delusions or negative symptoms, when these attitudes may in fact be protective in situations of perceived discrimination (Luhmann, 2010). White clients with similar symptoms are more likely to be diagnosed as having mood disorders.

People with schizophrenia have a high rate of comorbidity for other DSM disorders. Two large-scale studies, one in Europe and the other in the United States, found that approximate lifetime comorbidities were 73.9% for mood disorders, 60.1% for personality disorders, 54% for substance use disorders, and 50.1% for anxiety disorders (Kerner, 2015; McMillan, Enns, Cox, & Sareen, 2009).

ASSESSMENT

Schizophrenia requires two of the following five symptoms, including at least one of the first three, for a total duration of 6 months or more: delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behavior, and negative symptoms. In childhood, visual hallucinations and disorganized speech may be more common than delusions and hallucinations.

The assessment of schizophrenia is accomplished through client interviews, interviews with significant others, and history gathering. Some instruments are available to help assess symptoms, but there are no tests currently available that conclusively determine when schizophrenia is present. See Box 5.1 for assessment guidelines.

Box 5.1 Assessment Guidelines for Schizophrenia

Social workers should assess:

- The duration of active symptoms, which may rule out brief psychotic disorder or schizophreniform disorder.
- Whether the client abuses substances or is currently under the influence of a drug that may be causing symptoms.
- Any psychosocial stressors that may be contributing to symptom development.
- The possibility of mood, anxiety, and obsessive-compulsive disorders.
- The possibility of psychotic or mood disorders among relatives.
- Whether the family system has experienced stressors that may precipitate an onset of psychotic symptoms.
- Mood swings at present or in the client's history that may indicate a schizoaffective, major depressive, or bipolar disorder.
- Premorbid functioning, to determine the presence of a possible schizotypal, schizoid, or paranoid personality disorder.
- (Via medical referral) any medical conditions, neurocognitive disorders, or pervasive developmental disorders that may be contributing to symptom development.

Adapted from Volk et al., 2008.

Case Study Part 2: Anna

The admission report stated that Anna had been living with her younger sister in a condominium owned by her father for the past 6 months. Anna met the man with whom she was most recently staying at a fast-food restaurant. He had bought her lunch and then invited her to his apartment. Mr. Yannucci did not know why Anna would accept the invitation, but he added "she does crazy things sometimes." He thought that the man wanted to take advantage of his daughter financially.

Doctors at the hospital ordered a variety of neurological tests to rule out physical causes of Anna's symptoms. A toxicology screen found no traces of drugs in her system. While at the hospital Anna was cooperative, except that she refused to take any medications. When asked why, she replied simply, "I just don't want to." Staff efforts to help the client elaborate on any of her thoughts and feelings were not successful. In fact, Anna seemed to become mildly irritable when asked questions, always saying politely, but in a monotone, "I just don't have a lot to talk about right now." She rarely made direct eye contact with staff and tended to stare blankly. Anna did seem to enjoy walking about the unit, and the nursing staff reported that she often appeared to be talking to herself. Her mood was consistent, but as one nurse wrote, "the patient doesn't seem to be feeling anything."

Anna's condominium was located one mile from the mental health agency. She walked to her first appointment alone, arriving on time and with the card in her hand. Her father met her there, coming from his job at a bakery. Anna was dressed appropriately but appeared not to have changed her clothes or bathed in the recent past. She exuded such a strong, disagreeable odor that support staff at the agency complained to the director about her presence in the waiting room. Anna seemed oblivious to this condition. Upon questioning, she denied hearing voices but seemed distracted at times, as if her attention was focused somewhere far away. She minimized the issues of her personal hygiene, saying that she eats "something good every day" and bathes "when I need to." Her answers to all questions were brief. She seemed preoccupied but not upset about being at the agency.

Anna stated that she spent most of her time at home but added, "I take walks for exercise." When asked to elaborate, she said that she took walks every day to nearby fast-food restaurants or the bank to deposit and withdraw money. She did not have a job, did not attend school, and was not involved in any recreational activities. When asked about her goals in these areas, she said, "I'd like to have a job someday when I'm ready." When asked about any friends, she said, "I'd like to have friends someday," but about the present, she said, "People can't be trusted." Anna stated that she got along with her sister, but that "we don't really talk much." Thirty minutes into the interview Anna said, "It's nice meeting you, but I should go now." The social worker asked if she would mind waiting in the reception area or outside on the porch while he talked with her father. She agreed and walked outside. Throughout this interview Anna had maintained the same blank look on her face.

Mr. Yannucci remained for another half hour and provided background information. He was a 50-year-old Italian American who came to the United States when he was 10 years old. He had worked successfully in the restaurant business for the past 30 years, always maintaining strong ties to the Italian community in his city. The welfare of his family was paramount to him. He clearly did not understand what might be wrong with his daughter, and he tended to see her behavior as willful misbehaving.

"I have to be responsible for my daughter. It is a father's responsibility to care for his family. But I do not understand why she does not try harder. Anna's mother and I never got along. I was the breadwinner and she was the mother, and she became very strange not long after we married. She stayed home all the time and sometimes did not come out of her room. She cried often for no good reason and did not do enough to take care of Anna, her sister, and me. She talked about crazy things and never made sense. Sometimes she walked away from home and did not return for days. Sometimes the hospital would call me—or the police would. She was always wandering around looking for Lord knows what, finally getting into trouble when she stole food and objects out of people's yards. I did my best to help her get more rest and get outside more with good people, but it did not work. Her

behavior became worse as the years went on. Finally, she left me for good. I don't know where she is, but she lives here in town. A few times she comes to get money from me, but that's all."

"Anna was a good girl growing up. She wanted to be a nurse, and she got good grades in school. Every day she came home from school and went to her room and studied. But she was not a sociable girl. She never had a boyfriend. That was good, because I didn't want her with dangerous boys. She stayed home and studied and helped take care of me and her sister Beth. She never talked much, but she behaved well and was respectful."

When asked for details about Anna's functioning as a child and adolescent, Mr. Yannucci stated, "She did not ever seem to be happy, but that's only because she was serious, which is a good thing. She didn't have friends, but that was fine, too, because she was busy at home. She never wanted to go out and play in the neighborhood, even as a young girl. Like I said, she kept to herself and studied. She didn't need much help from her mother or me. She was independent."

"I didn't want her going to college, but Anna was determined. She lived at home and went to the university, but she did not do well. She stopped going to school and started staying in her room more. She was still helping out around the house, but not as much, and it got worse. After about a year she started to loaf all the time and sat in the television room alone. She started having bad dreams, because I could hear her screaming many nights in her bedroom. Many times I would notice her talking to herself, but when I asked what she was doing she got quiet and said, 'Nothing.'"

"Two years ago I met my current wife, Margaret, and she did not care for Anna's behavior at all. Margaret thought that Anna was crazy, which is a terrible thing to say about someone. She thought that Anna should be forced to move away or go to school again, and leave us to our new life. But my wife is a good person. She thought that I was babying Anna, and that I should make her live on her own. But I can't do that. So as a compromise I got a condominium for Anna and her sister. Margaret told me that she would not marry me unless I did that. I go and see them every day. I plead with Anna to get a job and to get busy, but she will not do it. She stays home and does nothing. She is a nice girl, so why would she not want to be busy and have friends? I don't understand her. And lately she has started wandering off, just like her mother."

At this point, the interview ended. Anna returned to the room briefly and politely declined an offer to see a physician for a medication evaluation. She did agree to come back to the agency in 2 days to meet with the social worker again. "It wouldn't hurt anything" was her response to the invitation.

Directions Part I, Diagnosis Given the case information, prepare the following: a diagnosis, the rationale for the diagnosis, and additional information you would have wanted to know in order to make a more accurate diagnosis.

Questions to Consider:

1. What symptoms of problematic thinking, feeling, and behavior does Anna present?
2. Are any of the above symptoms clearly psychotic?
3. Is it possible that Anna has, or has had, a mood or schizoaffective disorder?
4. How does Anna's poor communication complicate the process of her assessment and diagnosis?
5. Is there evidence of a premorbid personality disorder in this client?
6. How would you characterize Anna's childhood and adolescent functioning, given the information presented?

See Appendix A for a template for preparing the diagnosis and Appendix B for suggested answers to the Questions to Consider.

BIOPSYCHOSOCIAL RISK AND RESILIENCE INFLUENCES

Onset

The specific causes of schizophrenia are not known, and as more research is done the disorder appears to be the outcome of an increasingly complex mix of biological, psychological, and environmental influences (Gilmore, 2010).

Genetic Influences

Genetic factors in the transmission of schizophrenia are believed to be significant, and much research is focused in this area (Eyles, Feldon, & Meyer, 2012). Its development appears to be a polygenetic rather than single-gene process, and the combined influences of 40 or more genes may interact with co-existing developmental and environmental factors to produce its symptoms. Genetic contributions to schizophrenia are supported by the higher-than-average risk influences among family members of people with the disorder (Ivleva, Thaker, & Tamminga, 2008). For example, an identical twin of a person with schizophrenia has a 47% chance of developing the disorder while a nonidentical twin has only a 12% likelihood, which is the same probability for a child with one parent who has the disorder. The sibling concordance rate is approximately 9% and that, for extended family members, is elevated to a lesser extent.

Biological Influences

Biological theories of schizophrenia implicate the brain's limbic system (center of emotional activity), frontal cortex (governing personality, emotion, and reasoning), and basal ganglia (regulating muscle and skeletal movement) as primary sites of malfunction. For example, people with schizophrenia are believed to have a relatively high concentration of the neurotransmitter dopamine in nerve cell pathways extending from the basal ganglia into the cortex and limbic system (Perez-Costas, Melendez-Ferro, & Roberts, 2010). Dopamine levels are not considered causal for the disorder, however, and other neurotransmitters, including serotonin and glutamate, have also been proposed as risk influences. Whether symptoms result from abnormal development or deterioration of function is not clear. Low levels of certain hormones, including thyroid and estrogen, have also been proposed as causal factors (Heringa, Begemann, Goverde, & Sommer, 2015; Santos et al., 2012).

It is also hypothesized that a variety of neurodevelopmental phenomena account for the onset of schizophrenia (Brown, 2011). These include impairments in central nervous system development, the quality of nerve cell connections, the manner in which nerve cell activity influences the formation of circuits underlying brain functions, and the development of neurotransmitters. Further, the brain volumes of people with schizophrenia appear to be less than those of people without the disorder, and volume tends to further decrease during the course of the disorder (Egashira et al., 2014). In genetically predisposed subjects, the change from vulnerability to developing psychosis may be marked by a reduced size and impaired function of the temporal lobe (Hagihara, Ohira, & Takau, 2014). Traumatic brain injury is also cited as a contributing cause of the disorder, but only when there is already a genetic loading (Chen, Chiu, Chu, & Linn, 2011).

A systematic review indicates that brain trauma from birth complications and intrauterine viruses represent another pathway to schizophrenia (Laurens et al., 2015). Postmortem studies show brain abnormalities indicative of developmental problems in the second or third trimester of pregnancy, such as altered cell migration in the hippocampus and prefrontal cortex. Other postulated causes of these abnormalities are related to the higher-than-expected frequencies of prenatal

exposure to influenza viruses and infections (urinary and respiratory) in people who later develop schizophrenia. People with schizophrenia tend to be born in winter or early spring, which means that their mothers were pregnant during a time of year when viruses are more prevalent. Also, older men are more likely than younger men to father sons with schizophrenia. Although the risk influence is not clear, it could be due to a mild biological degeneration in the father's reproductive system.

Biological characteristics that are protective of a person's developing schizophrenia include the absence of a family history of the disorder, normal prenatal development, a normally developed central nervous system, and an absence of extreme stress and physically traumatic events during childhood and adolescence.

Psychosocial Influences

There are no known psychological influences of specific stress events on the development of schizophrenia. There are, however, many psychological and social risks associated with its development, although it is not always clear whether these factors are causal or the result of the disorder. Such influences include living in an urban environment, being born into a relatively low socioeconomic status (SES), ongoing poverty, being the child of a single parent, the experience of childhood trauma, social marginality, low intelligence and academic achievement, and having migrated into a new culture (Brown, 2011; Gilmore, 2010). The stress factors associated with these conditions may have multiple adverse effects on the developing brain. The converse of these circumstances would be considered protective. It is important to point out, too, that many (but not all) people who eventually develop schizophrenia display what is called *premorbid* or "early warning" signs. These signs, which may reflect underlying biological but perhaps psychological processes as well, include social withdrawal, a loss of interest in life activities, deterioration in self-care, and a variety of "odd" behaviors (Pronina, Ponomarev, Poliakov, Mitrofanov, & Kropotov, 2016). The signs can exist for many years, but even when present they do not guarantee the eventual onset of schizophrenia.

Course and Recovery

Schizophrenia is a chronic disorder and its complete remission is uncommon. A recent meta-analysis attempted to describe its course with regard to positive and negative symptoms, cognitive impairment, and underlying brain structure (Heilbronner, Samara, Leucht, Falkai, & Schulze, 2016). The authors concluded that the course of the disorder is characterized by a constancy or modest improvement in positive and negative symptoms and a fairly stable cognitive impairment. Progressive changes of the frontal cortex appear to develop in parallel with changes in symptoms. Some people improve more than others but only a minority of people sustains high levels of psychological and vocational functioning. Another meta-analysis utilized a definition of recovery that included both clinical and psychological improvement and the median proportion of people who met those criteria was 14% (Jaaskelainen et al., 2013).

The average life span of people with schizophrenia is approximately 15 years less than the national average in the United States, although this reduced life expectancy is largely due to factors such as high rates of smoking, medication use, side effects of medication, substance use, poor diet, poor access to health care, and other risks related to poverty (Laursen, 2011). Suicide is unfortunately the leading cause of premature death in schizophrenia, as 20% to 40% of people attempt suicide at some point in their lives and 4% to 6% succeed (Popovic et al., 2014). People most at risk for suicidal ideation during the early stages of the disorder are young males who are depressed, unmarried, unemployed, socially isolated, functionally impaired, and lacking external support.

TABLE 5.1 Biopsychosocial Risk and Resilience Influences of Schizophrenia

Risk Influences	Resilience Influences
Biological Gradual symptom onset Prominence of negative symptoms Repeated relapses of active symptoms Medication absence or noncompliance	Biological Later age of onset Brief duration of active phases Good between-episode functioning (with minimal residual symptoms) Absence of brain structure abnormalities Family history of mood disorder
Psychological Poor insight into the disorder Delay in intervention	Psychological Insight into the disorder Early and ongoing intervention
Social Significant family expressed emotion Poor social adjustment prior to the onset of schizophrenia Noncompliance with, or absence of, psychosocial interventions Absence of a support system Living in an urban area	Social Development of social skills prior to onset of the disorder Family participation in intervention Interest in independent living Participation in a range of psychosocial interventions Presence of support systems Living in a nonurban area

Sources: Bon, Repov, Pileckyte, & Skodlar, 2016; Cunningham & Peters, 2014; Gilmore, 2010; Harper, Towers-Evans, & MacCabe, 2015; Zammit et al., 2010

Although the causes of schizophrenia are uncertain, clues are available to differentiate a better or worse prognosis. These are listed in Table 5.1. A summary of issues related to the diagnosis of schizophrenia in special populations is provided in Box 5.2.

Box 5.2 Schizophrenia and Social Diversity

Children

- Schizophrenia is rare prior to adolescence, with only 10% of people experiencing its onset by that time.

Women

- Men have an earlier onset (ages 18 to 26) compared with women (ages 26 to 40).
- Women tend to have higher levels of premorbid (prepsychotic) functioning and more "positive" symptoms than do men; women also have a better prognosis with regard to their social functioning potential and response to intervention.

Minorities

- African Americans are more frequently diagnosed with schizophrenia than are whites, possibly due to clinician misinterpretation of culturally appropriate suspicion within the African-American community as a negative symptom.

Low SES

- The prevalence of schizophrenia is twice as high in lower than in higher socioeconomic classes for three possible reasons: increased stressors due to living in low SES may contribute to the onset of schizophrenia; people who develop schizophrenia lose occupational and social skills and fall into the lower classes; and others never develop skills to establish themselves in stable social roles.

Older Adults

- Older adults have not been studied as extensively with regard to antipsychotic medication effects, so at present there is little data to guide decisions about which medications to prescribe for them.
- There is no clear evidence that any particular psychosocial interventions are suited to older adult clients.

Sources: Bon, Repov, Pileckyte, & Skodlar, 2016; Cunningham & Peters, 2014; Gilmore, 2010; Harper, Towers-Evans, & MacCabe, 2015