

Question 2—Overview

This question delved specifically into a controversial point that most teachers of introductory psychology treat comprehensively—the reality of schizophrenia as contrasted with lay information about schizophrenia. The question explicitly asked students to articulate the difference between schizophrenia and dissociative identity disorder (“multiple personality” in lay terms). Clarifying the frequency and severity of schizophrenia is a primary goal of any introductory course, so the intent of this question was to allow students to exhibit depth of understanding rather than breadth across the course. Although the question concentrated specifically on abnormal psychology, it also tapped students’ knowledge of biology and treatment issues. The mean score for this question was 4.38 out of a possible 8 points.

Scoring Guidelines for Question 2

General Considerations

1. Answers must be presented in sentences, and sentences must be cogent enough for the student’s meaning to come through. Spelling and grammatical mistakes do not reduce a student’s score, but spelling must be close enough so that the reader is convinced of the word.
2. Within a point, a student will not be penalized for misinformation unless it *directly contradicts* correct information that would otherwise have scored a point.
3. A student can only score points if information is presented in the *context* of the question. For example, it must be clear to the reader that the student is discussing characteristic symptoms of schizophrenia to score Points 1 and 2. The best way for a student to establish context is to explicitly state it (e.g., “Two characteristic symptoms of schizophrenia are ...”). In the absence of such language, the reader may infer context if the paragraph structure or order of the answer makes the context clear. One exception is that students may attempt to answer Point 5 while answering Point 4, which is acceptable.

POINTS 1 and 2: Two Characteristic Symptoms

Accept any two of the following:

- Delusions (e.g., paranoia, persecutory, reference, thought broadcasting, thought insertion, grandeur)
- Perceptual distortions (e.g., hallucinations, breakdown of cognitive filter/selective attention)
- Disorganized speech (e.g., word salad, incoherence)
- Disorganized thinking (e.g., form of thought disturbances, loosening of associations, blocking, clanging, neologisms)
- Negative symptoms
- Positive symptoms
- Disturbance in affect/emotion (e.g., flat, inappropriate, ambivalence)
- Psychomotor disturbances (e.g., catatonic stupor, rigidity, posturing, waxy flexibility)
- Disturbed reality testing (e.g., “out of touch with reality,” “psychotic”)

Notes:

1. Symptom names or examples alone are acceptable as points. Two examples within a symptom count as two points. But a symptom name with an example from the same symptom scores only 1 point. For example “perceptual distortions and auditory hallucinations” scores only 1 point; “disorganized speech and word salad” scores only 1 point; “auditory and visual hallucinations” scores 2 points.
2. Applications that accurately portray the symptoms also score.
3. Defining one characteristic symptom as another earns only 1 point. Example: “schizophrenia is characterized by paranoia which is hallucinations” scores 1 point because the student is treating this as one characteristic symptom; “schizophrenia is characterized by paranoia and hallucinations” or “schizophrenia is characterized by paranoia, which causes hallucinations” both score 2 points.
4. Mentioning a type of schizophrenia does not score. Example: “Schizophrenia is characterized by the paranoid type” does not score because it is a category name and not a characteristic symptom. “Schizophrenia is characterized by paranoia” does score because paranoia is a characteristic symptom.

Scoring Guidelines for Question 2 (continued)

5. "Hearing a voice in their head" does not score because it is not clear that it is referring to hallucinations. "Hearing voices in their head that aren't real" does score.

DO NOT SCORE:

1. Biological correlates of schizophrenia (e.g., excess dopamine, enlarged ventricles) are not characteristic symptoms used to diagnose.
2. Overly general descriptions of emotions and behaviors not mentioned above (e.g., mood swings, bizarre behaviors, speaking in run-on sentences, maladaptive behavior, scattered thoughts).
3. Other problems not necessarily characteristic of schizophrenia (e.g., aggression, violence, antisocial behavior, depression, mood swings, synesthesia).

POINT 3: Genetic Research Finding

Students must provide an example of a research finding. Simply listing a method of research does not score, but listing the research finding without the method can score.

Example:

- "Family studies support a genetic basis..." does not score; **but** "schizophrenia runs in families" scores.

Score any of the following:

- Twin studies + finding (e.g., that show higher concordance rates for identical [MZ] than fraternal [DZ] twins)
- Adoption studies + finding (e.g., that show individuals are more at risk if a biological parent exhibits schizophrenia than if their adoptive parent exhibits schizophrenia)
- Family studies + finding (e.g., schizophrenia runs in families, genetic link between parents and their children)
- Diathesis stress or vulnerability models support a genetic influence and score by themselves
- Genetic vulnerability/predisposition for schizophrenia
- The prevalence of schizophrenia is the same across cultures

DO NOT SCORE:

1. "There is a gene that causes schizophrenia." This does not score because there is no single gene that causes schizophrenia.
2. Nongenetic biological examples (example: mother's influenza during fetal development causing schizophrenia).
3. "High heritability" by itself.
4. "Predisposition" by itself.

POINT 4: Dopamine Hypothesis

The dopamine hypothesis is that schizophrenia is related to overactivity of dopamine. To score this point, students must indicate this relationship. They may indicate this in a general or more specific way:

- General way—schizophrenia is related to an excess amount of dopamine. This can be stated as "overactivity/oversensitivity" or as "too much" or "excess" dopamine.
- Specific way—drugs that block dopamine decrease symptoms.
 - drugs that increase dopamine increase symptoms.
 - dopamine overactivity is related to positive symptoms.
 - describes an accurate relationship between dopamine, Parkinson's disease, and schizophrenia.

DO NOT SCORE:

1. None of the following score because the over-activity of dopamine is not indicated: "dopamine causes schizophrenia" or "dopamine levels are imbalanced/irregular" or "dopamine levels are too low or too high."

Scoring Guidelines for Question 2 (continued)

POINT 5: Psychoactive Medication

Students should indicate that the psychoactive medications for schizophrenia work by reducing dopamine activity. Score any of the following examples. Medications work by:

- being dopamine antagonists
- blocking dopamine receptors
- preventing the release of dopamine
- lowering levels of dopamine

Notes:

1. Misidentification of appropriate drug with appropriate drug effect (“Prozac lowers dopamine”) scores. Correctly identifying the appropriate drug effect, “lowers dopamine,” scores even though the drug named, “Prozac,” is not an appropriate drug.
2. Misidentification of appropriate drug mechanism with appropriate outcome on dopamine (“blocking reuptake of dopamine which lowers the excess of dopamine”) scores. Correctly identifying the appropriate drug effect, “lowers the excess of dopamine,” scores even though an incorrect mechanism, “blocking the reuptake of dopamine,” is named.

DO NOT SCORE:

1. “Medications work on dopamine.”
2. Identification of an appropriate drug alone (e.g., Clozapine).

POINT 6: Risks

Students should indicate one of the following potential risks:

- Side effects—must list some specific negative side effect (e.g., tardive dyskinesia, symptoms like Parkinson’s, tremors, seizures, restlessness, weight gain (agranular cytolysis), loss of white blood cells, damage to immune system, slow mental functioning, blurred vision, losing sense of self, drowsiness, constipation, dry mouth, sexual dysfunction, brain damage, depression/suicide, low blood pressure, reduced appetite)
- May worsen negative symptoms
- Potential for overdose
- Usually have to take additional medications to counteract the side effects
- Social discrimination—stigma of taking antipsychotics (not stigma for having the disorder)
- Potential drug interaction
- Noncompliance: therapy may not work because people may stop taking the medication, resulting in negative effects (e.g., return of symptoms)
- May not receive other treatments (e.g., psychotherapy)

DO NOT SCORE:

1. Addiction, dependency, “might not work,” drug tolerance, drug withdrawal.

Scoring Guidelines for Question 2 (continued)

POINTS 7 and 8: Schizophrenia versus Dissociative Identity Disorder (DID)

Students should specify two characteristics from the lists below **and** indicate whether these characteristics are associated with DID or schizophrenia.

- Any typical characteristic symptom (refer to Points 1 and 2 for list), cause, or treatment of schizophrenia
- Any biological correlate of schizophrenia (e.g., too much dopamine, enlarged ventricles, genetic predisposition, teratogens)
- Any typical characteristic symptom, cause, or treatment of DID:
 - more than one identity or personality
 - nonpsychotic disorder
 - disagreement about the validity of the category (iatrogenic)
 - associated with child abuse/trauma
 - does not respond to antipsychotic medication
 - more commonly diagnosed in females
 - lower incidence rate
 - memory loss
 - formed as a defense mechanism
 - nonepisodic

Notes:

1. "One characteristic that differentiates DID and schizophrenia is multiple personalities" does not score because it is not clear whether the students are referring to DID or schizophrenia with regard to multiple personalities. "DID consists of multiple personalities" does score.
2. Contrasting the same characteristic scores only 1 point. For example "schizophrenia has hallucinations and DID does not have hallucinations" scores only 1 point.

DO NOT SCORE:

1. "Changing into a different person" does not score as a specific characteristic of DID or schizophrenia because changing who you are as a person does not necessarily mean you have more than one personality or that you are delusional.

Sample Student Responses for Question 2

Student Response 1 (Score: 8)

Schizophrenia is a ~~mental~~ psychological disorder that manifests specific symptoms, which are treatable in different ways.

Two symptoms characteristic of schizophrenics are delusions, or ideas that are very inaccurate, and disorganized and ~~dis~~ illogical thought processes, such as stringing random words together.

Schizophrenia ~~is~~ has some hereditability. In twin studies, it was found that ~~the~~ one identical twin was more likely to develop schizophrenia if the other identical twin developed it.

It is believed that too much dopamine in the brain leads to schizophrenia.

Medications used to treat schizophrenia are designed to decrease the amount of dopamine; therefore, they prevent dopamine from being released at the synapse. They are called antagonists.

Unfortunately, one risk of medications that are used to treat schizophrenia is the

potential development of a disorder called tardic dyskinesia, which has Parkinson's-like symptoms, and which results from too little dopamine.

Though dissociative identity disorder is often confused with schizophrenia, they are not the same thing. People who experience DID may have multiple personalities, while schizophrenics do not. Additionally, ~~while~~ while victims of DID ~~or~~ often develop the disorder as a result of severe childhood trauma, schizophrenia is not a result of childhood trauma, though the stress hypothesis theorizes that schizophrenia is brought out in late adolescence and early adulthood because of the new stresses of college, jobs, and finances.

Student Response 1 (continued)

10/10/09
The first part of the response is about the words 'said' and 'advent' and how they are used in the text. The student explains that 'said' is used to describe the actions of the characters and that 'advent' is used to describe the beginning of the journey. The student also discusses the use of the words 'said' and 'advent' in the context of the story and how they contribute to the overall meaning of the text. The student concludes by stating that the words 'said' and 'advent' are important to the story and that they help to create a sense of purpose and direction for the characters.

Student Response 2 (Score: 4)

One major symptom of schizophrenia is hallucinations. These are caused by false signals sent to the brain, leading it to see, smell, or most commonly hear things that actually do not exist. Another symptom is disorganized speech and thought, or the formation of new words. Twin studies provide a strong support for the genetic basis of schizophrenia. In recently conducted studies, monozygotic twins were found to have a significantly greater likelihood of developing schizophrenia if one twin exhibited basic symptoms. It has also been thought that a lack of dopamine in the system contributed to schizophrenic disorders. Medications used to treat schizophrenia affect the actions of neurotransmitters at the synapses by causing them to fire unstimulated impulses that are sent from neuron to neuron and eventually travel up the spinal cord and transmit a false signal to the brain. With the increased use of neurotransmitters, one risk is the decrease in transmission efficiency. At extreme points, schizophrenia can result in what is called the flat affect, where the body will stay motionless and rigid in one position. This effect differentiates schizophrenic disorder from dissociative identity disorder (DID). Another major difference is that schizophrenia most commonly originates during the earlier years of life, whereas DID symptoms do not generally appear until adulthood.

Student Response 2 (continued)

Commentary

The student response received a score of 4. The student correctly identified the symptoms of schizophrenia: "schizophrenia," "hallucinations" and "disorganized speech." The student also identifies a genetic predisposition. The research on monozygotic twins was found to have a significantly increased likelihood of developing schizophrenia if one twin has the disease symptoms. Point 4 did not get scored because the student incorrectly stated that the symptoms of schizophrenia are associated with an abnormality in the brain. The student correctly stated that they produce dopamine levels and identify a single cause of schizophrenia. The student also correctly identified that the body will stay motionless and rigid. . . . This effect differentiates schizophrenia disorder from dissociative identity disorder (DID). Point 8 did not score; the age of onset of symptoms does not differentiate schizophrenia from dissociative identity disorder.

Schizophrenia is a psychological disorder that some people face. Psychologists have to identify its origins to try and treat this disorder.

Symptoms of schizophrenia may be signs of multiple personalities or changes in one's behavior. A research finding that supports genetic basis for schizophrenia is that there is a chemical imbalance of neurotransmitters in the brain. The dopamine hypothesis of schizophrenia is that there is an abundance of it, causing this disorder. When medications are used the actions of the neurotransmitters at the synapses slow down attempting to treat it. A risk of medication could be that it ~~can~~ affects the neurotransmitters in the brain causing damage. Schizophrenia is not the same thing as dissociative identity disorder (DID). People facing DID confuse their identity thinking they are a different person such as a superhero. Another difference is that people with DID lose their self whereas people with

Student Response 3 (continued)

Schizophrenia go back and forth with personalities but know who they are.

Schizophrenia is a disorder that psychologists are trying to treat. People facing this disorder have symptoms and behaviors that psychologists are studying to fix.

