

**Title of Resource:** The Misconceptions Test

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**Introductory Psychology/Baccalaureate Program Evaluation**

**Goal 2:**

Scientific Inquiry and Critical Thinking

**Outcomes:**

**2.1** Use scientific reasoning to interpret psychological phenomena

**Indicators:**

**2.1b** Use psychology concepts to explain personal experiences and recognize the potential for flaws in behavioral explanations based on simplistic, personal theories

**Status:** Evidence-Based

We have gathered data using this instrument for four semesters. The data show significant differences in target group comparisons, but we do not have permission to release the specific data for the website.

**Overview:**

A simple strategy for determining the impact of the introductory course is to determine whether they demonstrate greater skepticism about common misconceptions by the end of the course. This strategy proposes a pre-post testing design to assess the growth. Based on the work of Scott Lilienfeld, we test piloted 32 misconceptions to find out how students rated their belief. From that list, we selected the most extreme examples of belief in misconceptions to maximize the potential effect the intro psychology class might have on changing misconceptions.

**Instructions:**

What kind of impact is introductory psychology likely to make in whether students fall for the common misconceptions? Erroneous beliefs about human behavior are rampant in our culture. Many of those beliefs do not have empirical support. This 20-question true-false quiz allows teachers to measure whether introductory students develop a stronger appreciation for empirical evidence as a function of taking introductory psychology.

The most effective use is as a pre-post measurement with the first measurement taken at the beginning of the first day of introductory class. The range of response allows students to demonstrate either firm or mild belief/disbelief in assorted misconceptions. At the conclusion of the class, they can be reassessed for predictable gains that reflect the increasing value of empirical evidence.

Analyzing the data can be done in two ways. The mild and firm belief percentages can be collapsed to create a percentage of disbelief or belief. The result can be reported as the percentage of students who showed accurate support for the position that is supported by empirical data, the mean score across the four points can be determined. In that case, attention must be paid to items that are reverse coded (marked with T) and transformed appropriately.

When gathering program evaluation data, departments may choose not to test all introductory students. Instead, classes can be randomly sampled to provide some indication of how intro students progress in their beliefs.

An additional use related to the Misconceptions scale is that the pre-test of the intro students can also provide a meaningful program evaluation contrast at the baccalaureate level by contrasting intro scores to the beliefs of students as they are about to graduate. The difference between students who are new to the discipline compared to those who are about to graduate should produce an impressive significant difference to reveal the impact of the major on misconceptions.

Misconceptions Test was derived from and inspired by the work of Lillienfeld and an earlier strategy developed by Annette Taylor.

Lilienfeld, S. O., Lynn, S. B., Rusci,, J., & Beyerstein, B. L. (2010). *Fifty great myths of popular psychology: Shattering widespread misconceptions about human behavior*. New York: Wiley-Blackwell.

Taylor, A. K., & Kowalski, P. (2014). Students' misconceptions in psychology: How you ask matters...sometimes. *Journal of the Scholarship of Teaching and Learning*, 12, 62-77.

## Misconceptions Test

### What Do You Believe?

Use these options to express what you believe about the following behavioral phenomena:

- A. I am confident this statement is true.
- B. I am somewhat confident this statement is true.
- C. I am somewhat confident this statement is false.
- D. I am confident that this statement is false.

1. Most people use only about 10% of their brain power.
2. We cannot tell a person's personality by merely looking at handwriting.
3. The most likely cause of ulcers is stress.
4. Tongue maps (e.g., showing specialized areas for bitter, sweet, salty sensations) do not accurately portray the experience of taste.
5. Negative reinforcement is a type of punishment.
6. Subliminal messages do not affect buying behavior.
7. Individuals commonly repress traumatic memories.
8. People tend to be either predominantly "right-brained" or "left-brained."
9. Opposites attract.
10. The more people who are present at an emergency, the more likely someone will intervene to help.
11. Most people who suffered physical abuse as children do not go on to become abusers themselves.
12. Different learning styles do not appear to influence learning ability.
13. People with schizophrenia have a split personality.
14. For most people, adolescence is not a time of psychological turmoil.
15. A positive outlook can prevent cancer.

16. To be effective, mental health therapy must examine root causes from childhood.
17. People can learn new information while they are asleep.
18. Criminals rarely escape punishment by pleading insanity at the time of the crime.
19. Psychiatric hospital admissions increase during the full moon.
20. Human adults can grow new brain cells.

**Answer Key:**

1. Most people use only about 10% of their brain power. F
2. We cannot tell a person's personality by merely looking at handwriting. T
3. The most likely cause of ulcers is stress. F
4. Tongue maps (e.g., showing specialized areas for bitter, sweet, salty sensations) do not accurately portray the experience of taste. T
5. Negative reinforcement is a type of punishment. F
6. Subliminal messages do not affect buying behavior. T
7. Individuals commonly repress traumatic memories. F
8. People tend to be either predominantly "right-brained" or "left-brained." F
9. Opposites attract. F
10. The more people who are present at an emergency, the more likely someone will intervene to help. F
11. Most people who suffered physical abuse as children do not go on to become abusers themselves. T
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