

# College Students' Beliefs about Myths in Psychology

## THE MYTHBUSTERS

Koren Valima, Brooklyn Leichtnam, Keith Jorgensen, Nick Fruit, & Emily Helwig | Faculty Advisor: Dr. Michael Axelrod

### INTRODUCTION

- The purpose of this study was to investigate undergraduate students' beliefs about myths in psychology.
- Research investigating undergraduate students' beliefs about myths in psychology is limited (Furnham, 2018).
- College students and parents often have a hard time distinguishing between research-supported ideas and discredited myths (Hupp, Stary, & Jewell, 2017).
- Understanding the types of psychological myths people endorse as true is important because perpetuating these myths can be potentially harmful. For example, Hupp et al. (2017) found college students and parents tended to believe several myths that might interfere in the selection of effective treatments, which may otherwise put children's safety at risk.
- Furthermore, certain myths could be indirectly harmful, especially those that could be socially divisive or detrimental to the health and well-being of oneself or others (Furnham & Hughes, 2014).
- We hypothesized that most college students would be able to discern myths from research-supported statements. However, we did believe students would endorse some myths as true, especially those that had long histories of exposure via the mass media, parents, and peers (e.g., school homicides are on the rise, low self-esteem is a major source of psychological problems; Furnham & Hughes, 2014).

### METHODS

- Participants were 195 undergraduate students at a medium-sized university in the upper Midwest.
- Participants' demographics were generally representative of the university's demographics.
- Participants completed a 40-item, paper-pencil questionnaire that included myths and research supported statements. The questionnaire's format was similar to the *Opinions About Kids Scale (OAKS)*; Hupp et al., 2017).
- Items were selected by the researchers using myths included in the book series *Great Myths of Psychology* (Lilienfeld et al., 2010)
- Participants indicated whether they had:
  - heard the myth or research-supported statement before
  - believed the myth or research-supported statement to be true
  - level of confidence in answer of believing or not believing in the myth or research-supported statement

### RESULTS

Statement	Endorsed True (%)	Statement	Endorsed True (%)
1. Epidurals create a high risk of harm during delivery (Myth)	17.5	21. Sibling relationships are stable throughout life (Myth)	11.0
2. We only use 10% of our brainpower (Myth)	29.0	22. Only deeply depressed people commit suicide (Myth)	6.5
3. Multitasking inhibits academic performance (True)*	64.5	23. An only child is likely to be selfish, spoiled, and socially incompetent (Myth)	33.5
4. Mental illness is caused by an imbalance of chemicals in the brain (Myth)*	76.5	24. Divorce ruins most kids' lives (Myth)	18.5
5. Letting babies cry it out during bedtime is harmful to their development (Myth)	23.5	25. Right-brained people are more creative (Myth)*	35.0
6. Sugar intake causes children to be hyper (Myth)*	69.0	26. The bigger the brain, the better (Myth)	9.0
7. People tend to act strangely during full moons (Myth)	26.0	27. Women can't get pregnant by two different men on the same day (Myth)*	36.0
8. People are either right-brained or left-brained (Myth)	30.5	28. Brain training will make you smarter (Myth)*	75.5
9. Vaccines caused an increase in the rates of Autism (Myth)	10.5	29. People's typical handshakes are revealing of their personality traits (True)	66.0
10. Most people experience a midlife crisis in their early 40s or early 50s (Myth)*	54.0	30. We all need 8 hours of sleep (Myth)	29.0
11. Bed wetting is a sign of serious emotional problems (Myth)	24.5	31. Lecturing is broadly inferior to other teaching methods (Myth)*	41.5
12. Opposites attract, we are most romantically attracted to people who differ from us (Myth)	32.5	32. It is best to speak to an elder as you would to a small child-loudly, slowly, and with exaggerated emphasis (Myth)	17.0
13. Beer makes the brain release the pleasure chemical dopamine (Myth)*	55.0	33. Fetuses respond different to their mother's voices compared to strangers (True)	86.5
14. Most toddlers go through a terrible two's stage (Myth)*	64.5	34. Older people do not lose interest in sex (True)	67.0
15. Memory does not work like a video recorder (True)*	59.0	35. Dogs resemble their owners (True)*	54.5
16. Psychiatric labels cause harm by stigmatizing people (Myth)*	62.5	36. Brain power declines with age (Myth)*	50.5
17. Using Power Point in the classroom improves student learning (Myth)*	58.0	37. Wisdom comes with age so older adults are wise (Myth)*	41.0
18. Strokes affect people of all ages (True)	83.0	38. Electro convulsive shock therapy is a physically dangerous and brutal treatment (Myth)*	64.0
19. School homicides are on the rise (Myth)*	80.0	39. Older adults would choose to live alone than living with kids and grandkids (True)*	16.0
20. Lobotomies are an effective treatment for mental disorders (Myth)	13.5	40. Low self-esteem is a major cause of psychological problems (Myth)*	75.5

\* Indicates myths that were endorsed as true by  $\geq 35\%$  of participants or research supported statements that were endorsed as true by  $\leq 65\%$  of participants.

### DISCUSSION

- Subjects tended to correctly identify 16 myths as false and 4 research supported statements as true. Subjects tended to believe 16 myths were true and believe 4 research supported statements were false.
- Findings replicate previous studies on misconceptions about psychological myths. Furnham & Hughes (2014) reported a large number of psychological myths were widely believed, which is contrary to claims of psychological knowledge and research findings being commonsensical.
- Seven myths were believed to be true by 60% or more of the sample.
- Subjects tended to believe myths that used causal language. Four myths that used causal language were endorsed as true by 60% or more of subjects. These myths included "Mental illness is caused by an imbalance of chemicals in the brain" and "Low self-esteem is a major cause of psychological problems".
- However, subjects correctly identified myths like "vaccines caused an increase in the rates of autism" and "only deeply depressed people commit suicide". Although speculative, these results might be due to these specific myths being dispelled by the media. These are also myths that people may talk about more often because of their interest by the media.
- Most of the potentially harmful and socially divisive myths were less often endorsed as true.

### IMPLICATIONS

- There are some dangers associated with believing in certain psychological myths. For example, having certain diagnostic labels help individuals obtain disability services and seek out proper treatments. Professionals who believe labels are stigmatizing may be reluctant to use them in diagnostic contexts.
- Universities should consider addressing the misuse of causal language in scientific literature and emphasize to students that correlation does not mean correlation.
- Finally, this study adds to the growing body of literature on college students' pseudoscientific beliefs in the field of psychology.

### REFERENCES

- Furnham, A. (2018). Myths and misconceptions in developmental and neuro-psychology. *Psychology, 9*, 249-259.
- Furnham, A., & Hughes, D. J. (2014). Myths and misconceptions in popular psychology: Comparing psychology students and the general public. *Teaching of Psychology, 41*, 256-261. doi: 10.1177/0098628314537984
- Hupp, S., Stary, A., Jewell, J. (2017, January/February). Science vs. silliness for parents: Debunking the myths of child psychology. *Skeptical Inquirer, 41.1*.
- Lilienfeld, S. O., Lynn, S. J., Ruscio, J., & Beyerstein, B. L. 2010. *50 great myths of psychology: Shattering widespread misconceptions about human behavior*. West Sussex, UK: Wiley Blackwell.