

## ACTIVITY 1: How to Combat the Age of Misinformation with a Healthy Dose of Skepticism

### Example 1

Read the quote from the Boston Globe and answer the questions that follow.

#### **‘It’s impossible to ignore this anymore’: CTE study details devastating toll on football players.**

*Boston researchers who studied the brains of 202 deceased football players published the most detailed portrait to date Tuesday of the devastation wrought by a degenerative brain disease linked to repeated blows to the head, a grim tally they hoped removes any final doubts of the severity and long-lasting damages it causes.*

*In Tuesday’s Journal of American Medical Association, a team from the Boston University School of Medicine and VA Boston Healthcare System documented the troubling behavior, disturbed moods, and impaired thinking in people who had chronic traumatic encephalopathy, or CTE.*

*Among the 111 National Football League players whose brains were donated for the study, all but one was found to have the disease.<sup>1</sup>*

#### **Questions:**

- a) What do you think is the intended population of this study based on the article? Why?
  
  
  
  
  
  
  
  
  
  
- b) Does it alarm you that out of 111 brains of National Football League players, all but one was diseased? Explain your answer.
  
  
  
  
  
  
  
  
  
  
- c) Based on this article, do you know whether the 111 brains are a representative sample of brains from all football players? Explain your answer.

1) Staff, Felice J. Freyer Globe, et al. “It’s Impossible to Ignore This Anymore”: CTE Study Details Devastating Toll on Football Players - the Boston Globe.” *BostonGlobe.com*, <https://www.bostonglobe.com/metro/2017/07/25/boston-study-takes-deep-look-brain-disease-toll-football-players/nblZoCfstF4FNwfslnwCPI/story.html>.



## **Example 2**

Ann Landers asked her readers in 1975 whether they would still have children if they could start their marriages over. To her surprise, 70% responded by saying they would not. She received responses from at least 10,000 readers.

When Good Housekeeping asked readers to respond to Ann Lander's survey results, 95% of their readers said they still would have had children.<sup>3</sup>

### **Questions:**

a) Do you think that both Ann Landers and Good Housekeeping posed the question in the same way? Explain your answer.

b) Ann Lander's readers were responding to a letter that read:

*"My husband and I have been married for a year and are undecided as to whether or not we should have children. Do people in their 50s, 60s, and 70s regret not having had children when they were young? ... I've heard some couples say they wish they had never had children — that their lives were beautiful until the kids came along and ruined everything."*

How do you think the letter above impacted who responded to Ann Lander's appeal?

c) The Good Housekeeping article included the following when soliciting responses.

*"To (Landers') horror, seventy percent said that if they had known then what they know now, they would not have children."*

How do you think the wording of Good Housekeeping's article impacted who responded?

3) Schlueter, Roger. "If You had it to do over Again, would you have kids?" *Answer Man*, Belleville News-Democrat, 6 Apr. 2006, <http://www.bnd.com/living/liv-columns-blogs/answer-man/article75646392.html>. Accessed 12 June 2024.

- d)** Use Google to figure out how the readership might be different for Ann Lander's column versus the Good Housekeeping article. Do you think this might impact the responses? Why or why not?
- e)** Both surveys are considered voluntary response surveys, meaning that people can choose whether they respond. People with what type of opinions will generally respond to such surveys?
- f)** In a national survey based on a random sample of 1,373 respondents, 91% said they would have children if they had it to do over again.<sup>3</sup> Do you think the results of this study are more accurate? Do you think that we can fully trust this number? Why?
- g)** What have you learned from this example in terms of the information you need to know when reading statistics?

3) Schlueter, Roger. "If You had it to do over Again, would you have kids?" *Answer Man*, Belleville News-Democrat, 6 Apr. 2006, <http://www.bnd.com/living/liv-columns-blogs/answer-man/article75646392.html>. Accessed 12 June 2024.



#### **Example 4**

Faulty Polling – The way questions are phrased can have a huge impact on the way they will be answered.

#### **Questions:**

- a) Do you think that the following questions concerning government assistance will have a persuasive effect on those responding? Explain your answer.
- “Do you believe that you should be taxed so other citizens don’t have to work?”<sup>4</sup>
  
  - “Do you think that the government should help those people who cannot find work?”<sup>4</sup>
- b) What would be a more neutral question to replace the two above?

4) Reference: Calzon, Bernardita. “Misleading Statistics – Real Life Examples of Data Misuse.” *BI Blog | Data Visualization & Analytics Blog | Datapine*, 6 Jan. 2023, <https://www.datapine.com/blog/misleading-statistics-and-data/>.

**Example 5**



- a) The statement “Up to 100% leakproof gap-free fit” is circled on the Pampers above. Why do you think the “up to” part is in smaller print than the 100% leakproof?
  
- b) What does “up to 100%” mean?
  
- c) What can you learn from this?
  
- d) Have you seen similar advertisements or signs that use this tactic? If so, where?

## **Overall Takeaways**

Based on these studies, what questions do you think you should ask yourself when reading statistics online?