

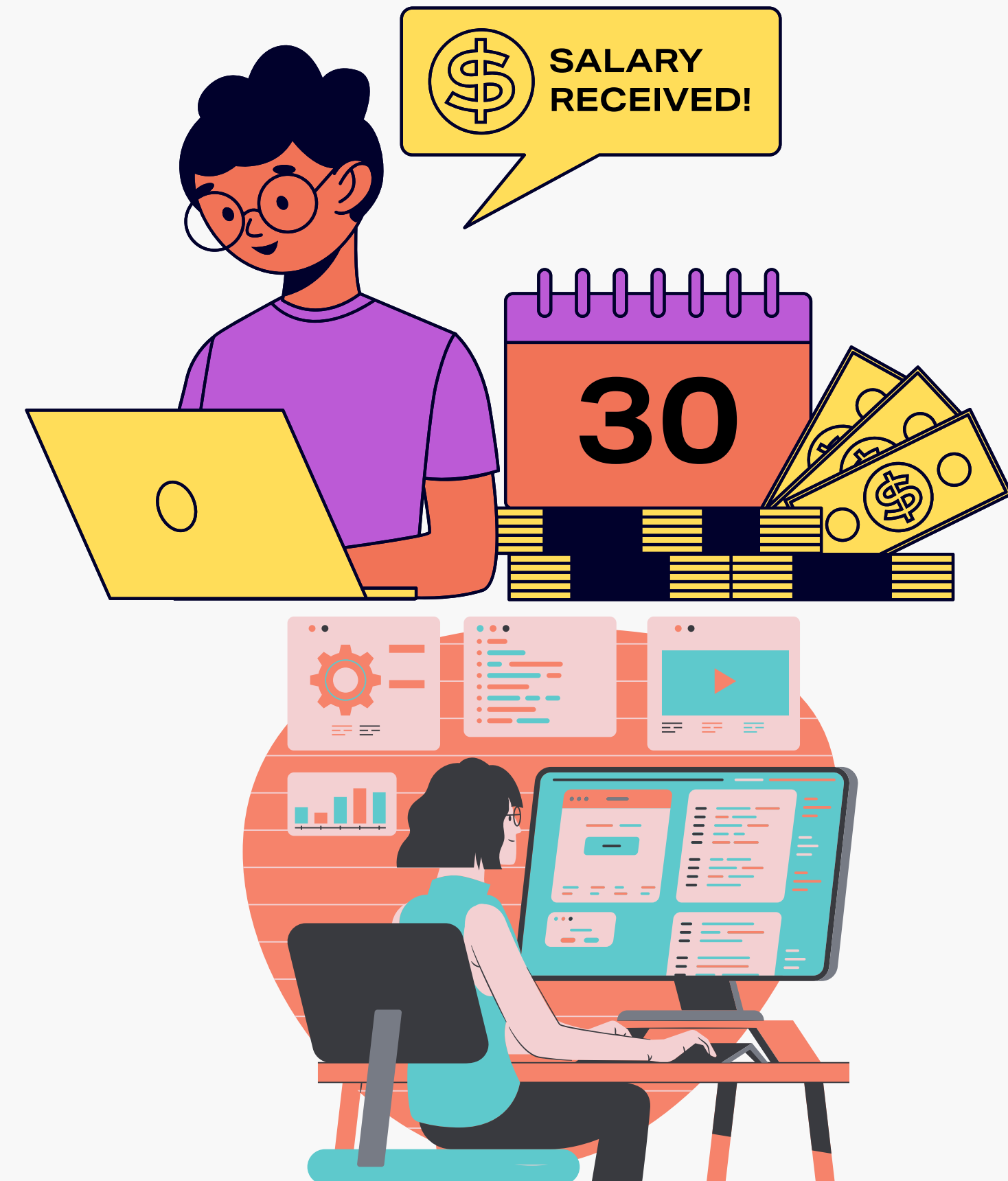
March 16, 2023

Business Experimentation &  
Causal Methods

# Does Salary Disclosure on Job Postings Affect Overall Application Rates?

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## Past Research Emphasis:

- Information on other people's actions increases the likelihood of job application rate (*Gee, 2017*).
- How employee salary history disclosures affect employer demand (*Agan, Cowgill, Gee, 2021*).

## Our Research Question:

Does salary range disclosure on job postings increase candidates' overall application rate?

## Hypothesis:

Salary range disclosure on job postings increases candidates' overall application rate.

## Research Inspiration

The More You Know:  
Information Effects on Job Application Rates in a Large  
Field Experiment\*

Laura K. Gee<sup>1</sup>

LinkedIn(to) Job Opportunities: Experimental Evidence from Job  
Readiness Training\*

Laurel Wheeler<sup>†</sup>, Robert Garlick<sup>‡</sup>, Eric Johnson<sup>§</sup>, Patrick Shaw<sup>¶</sup>, Marissa Gargano<sup>||</sup>

**SALARY HISTORY AND EMPLOYER DEMAND:  
EVIDENCE FROM A TWO-SIDED AUDIT**

Amanda Y. Agan  
Bo Cowgill  
Laura K. Gee

## II Outcome & Survey Design

- **Treatment --- Disclosing Salary range**
- **Control --- Not disclosing Salary range**
- Our survey design included 10 sets of T&C questions
- Participants answered 10 questions in total
- Qualtrics evenly drew 1 question from a set of questions (It will be either Treatment Q1 or Control Q1)
- Outcome variable
  - **Treatment group:**
  - 1 -- choose the job with a salary range(top)
  - 0 -- choose the job without a salary range(bottom)
  - **Control group:**
  - 1 -- choose the job with a salary range in T version(top)
  - 0 -- choose the job without a salary range in both T&C versions(bottom)
- Demographics info(age, gender, education level, full-time working experience)

## Survey Design

Treatment Q1:

**Principal Associate, Data Analyst Risk Associate: ExceptionsOne Team**



Albany, NY

Apply on WANE Jobs

Apply on IT JobServe

\$ 127,092–149,940 a year

Full-time

**Principal Data Scientist**



Fidelity Investments Careers  
Boston, MA

Apply on Fidelity Careers - ...

Apply on LinkedIn

Apply on DiversityInc Jobs

Full-time

Control Q1:

**Principal Associate, Data Analyst Risk Associate: ExceptionsOne Team**



Albany, NY

Apply on WANE Jobs

Apply on IT JobServe

Full-time

**Principal Data Scientist**



Fidelity Investments Careers  
Boston, MA

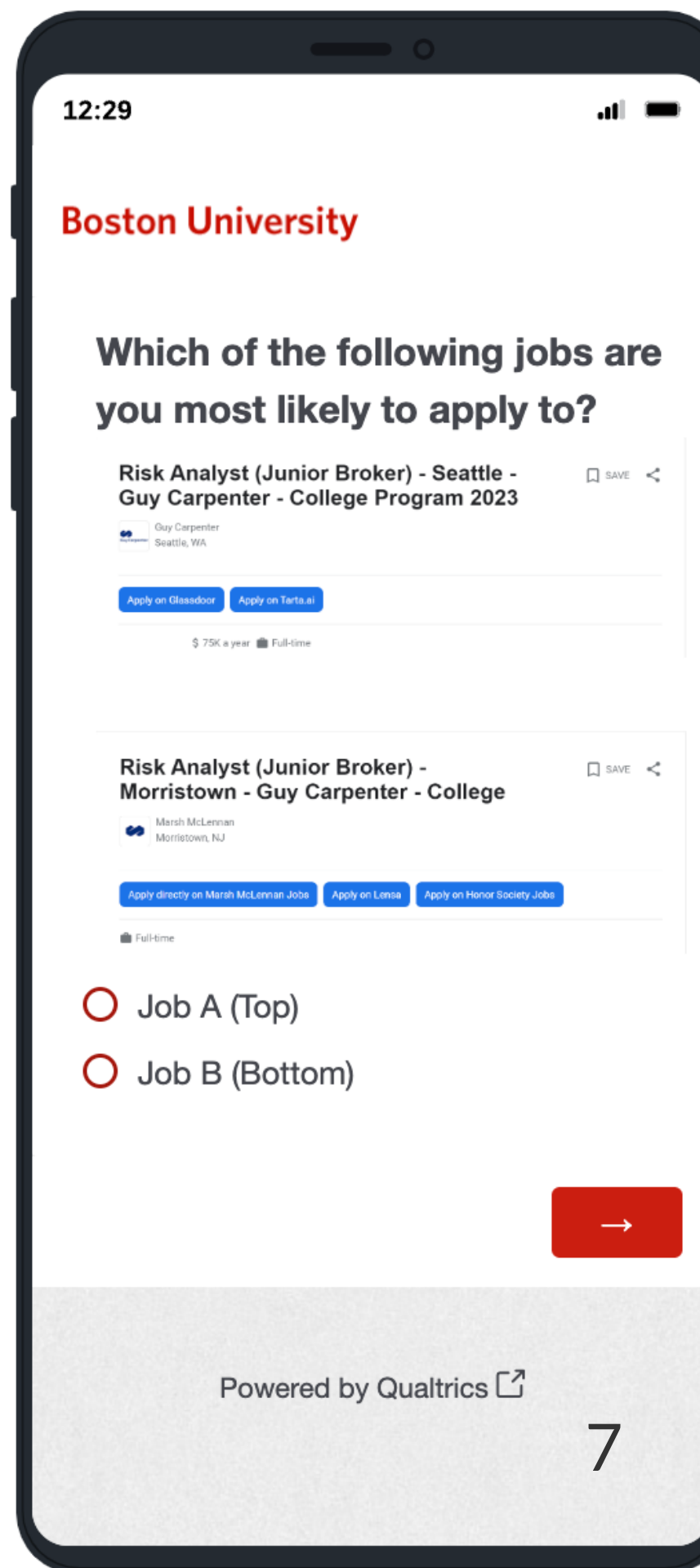
Apply on Fidelity Careers - ...

Apply on LinkedIn

Apply on DiversityInc Jobs

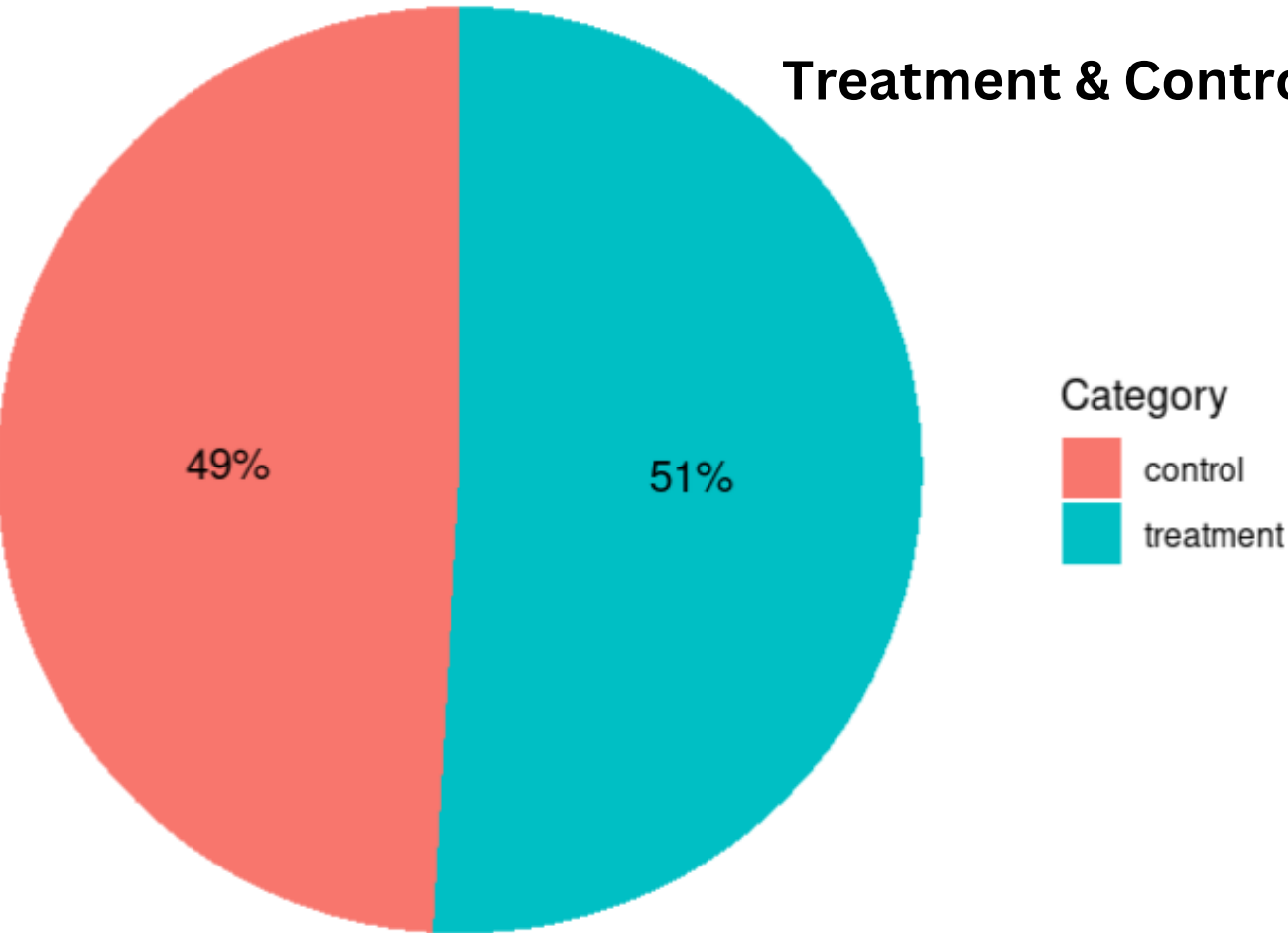
Full-time

## Interface

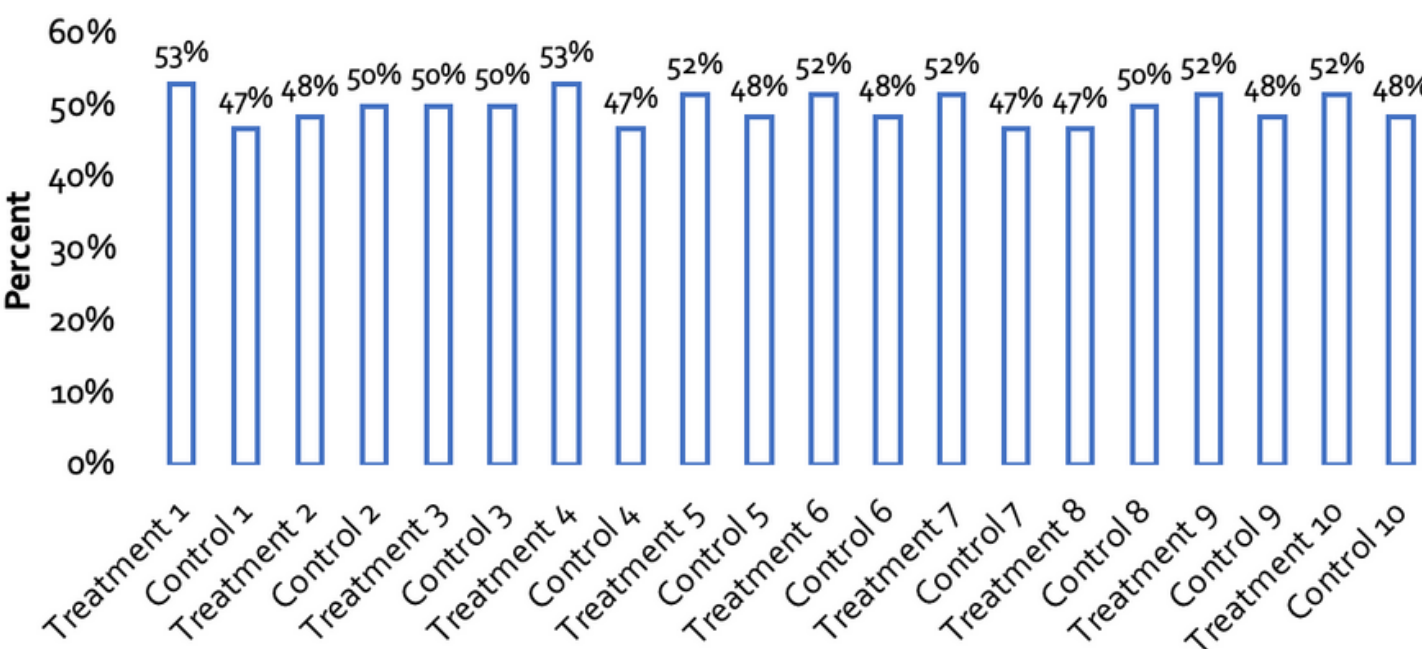


III Treatment & Randomization

Treatment & Control Pie Chart



Question Randomization Distribution



Method	Treatment & Control
Qualtrics Survey	Evenly Split on Question Level

Randomization

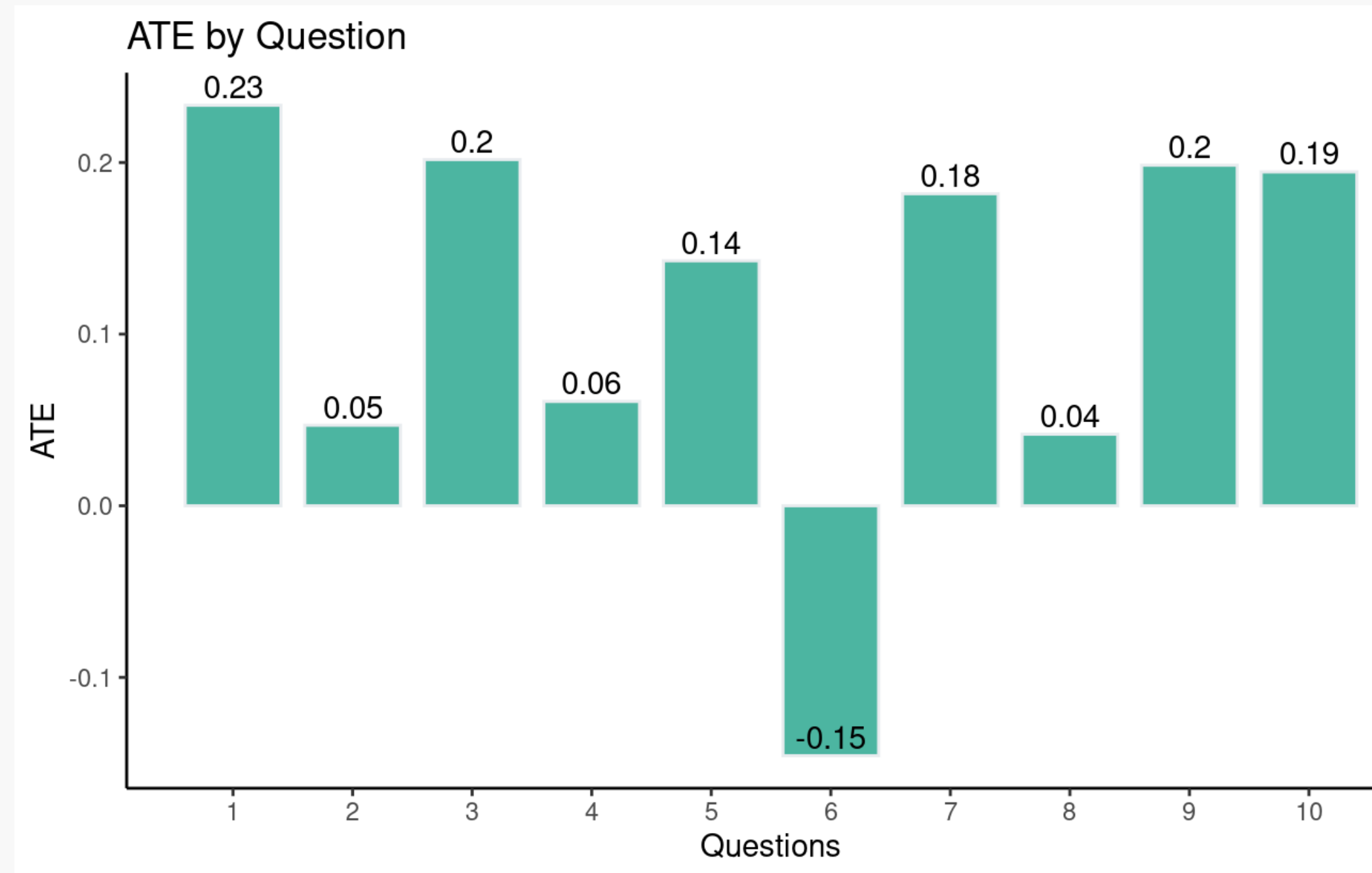
Question-level randomization where treatment and control are equally split (excluding null responses)

We conducted **Question-level A/B testing** to randomly assign job postings to participants:

- 1. **Treatment** - job postings with a disclosed salary range
- 2. **Control** - job postings without a disclosed salary range

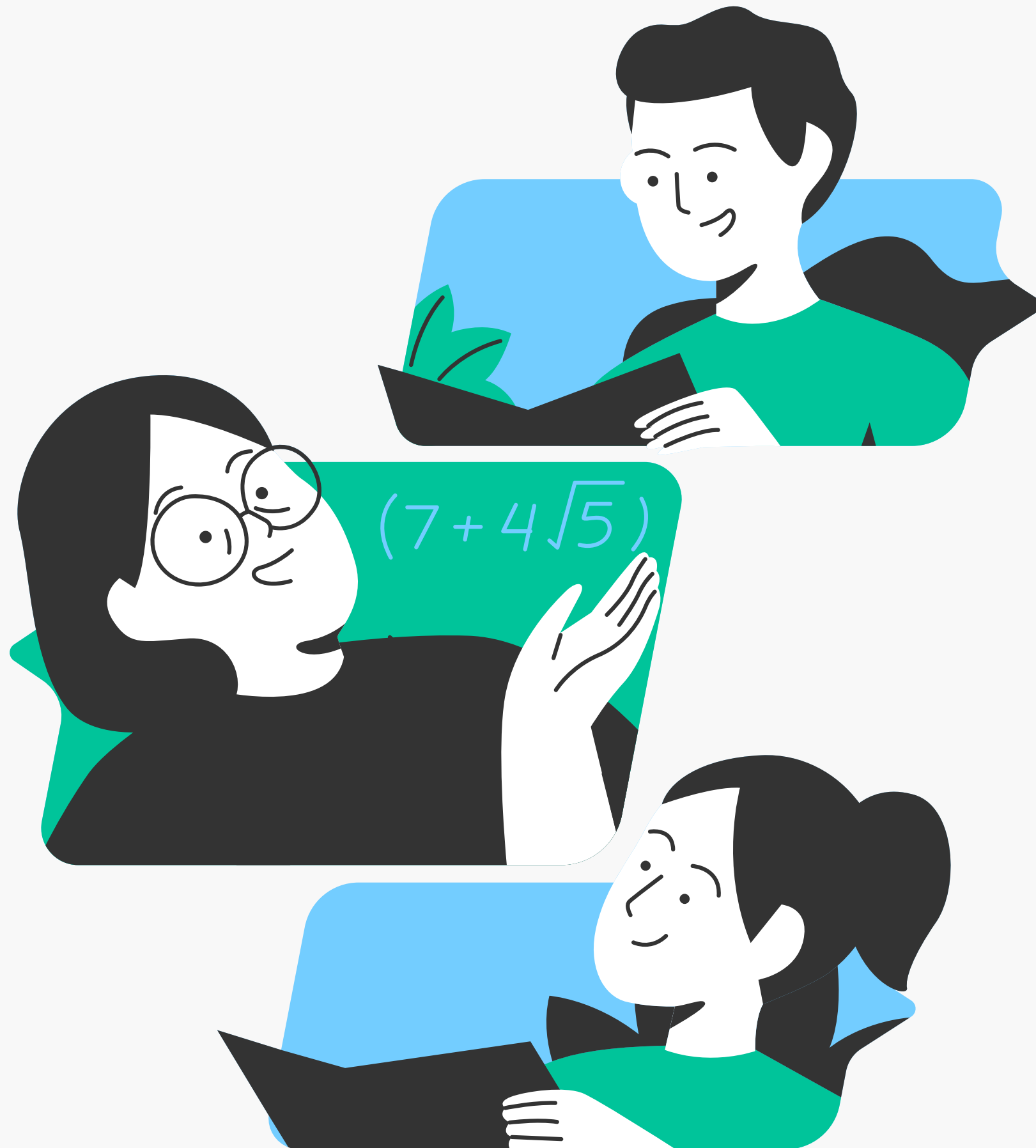
## Estimated Average Treatment Effect (ATE)

- Overall ATE is **0.1156**
- 6 out of 10 questions show above-average ATE
  - Participants are more likely to choose jobs with salary information
- 3 out of 10 questions show slight differences in ATE
- Question 6 generated a -0.15 ATE, meaning the control group is more likely to choose jobs with salary range
  - Salary range doesn't match expectation
  - Bias due to sample size





## V Research Limitations



### **Limitation 1: Sample Size**

The survey was answered by 64 individuals, consisting of MSBA students and others that are easily reachable (640 observations).

### **Limitation 2: Opinion Placement**

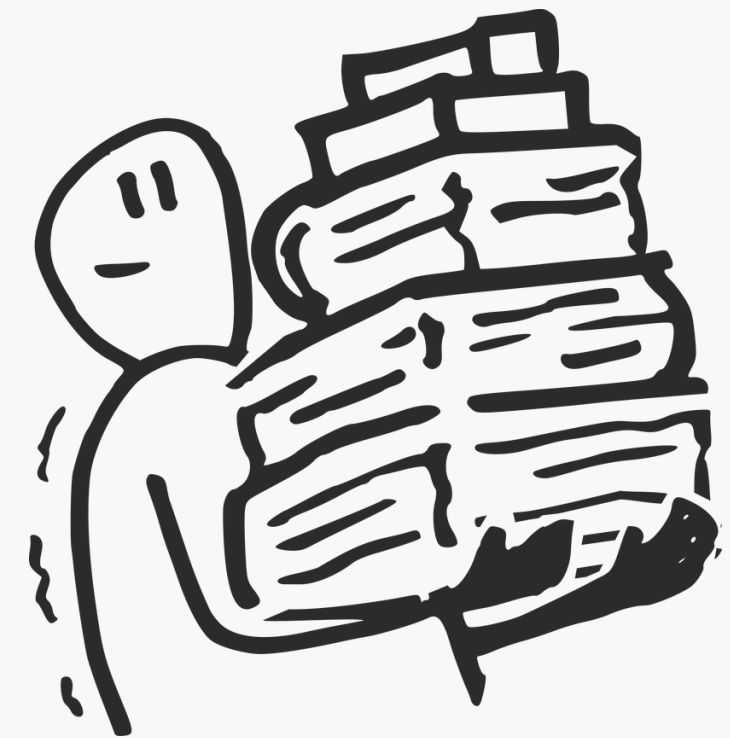
Respondents may have been influenced to choose the top answer option due to its placement and convenience.

### **Limitation 3: Self-selection bias**

Participants who choose to participate in the study may be different from those who do not participate in ways that could impact the study results.

# Bibliography

1. Stephen Miller, C. E. B. S. (2019, August 16). Why pay is driving employee satisfaction. SHRM. Retrieved March 15, 2023, from <https://www.shrm.org/resourcesandtools/hr-topics/compensation/pages/pay-drives-satisfaction.aspx>
2. Joe\_andrews8. (2019, July 16). Perhaps money can buy you happiness - at least, at work. CNBC. Retrieved March 15, 2023, from <https://www.cnbc.com/2019/07/16/perhaps-money-can-buy-you-happiness-at-least-at-work.html>
3. Rist, O. (2021, December 21). Increasing job satisfaction takes more than a salary bump. PCMAG. Retrieved March 15, 2023, from <https://www.pcmag.com/news/increasing-job-satisfaction-takes-more-than-a-salary-bump>
4. Impact of salary on job satisfaction. Eurofound. (n.d.). Retrieved March 15, 2023, from <https://www.eurofound.europa.eu/publications/article/2013/impact-of-salary-on-job-satisfaction>
5. Gee, Laura K. "The More You Know: Information Effects on Job Application Rates in a Large Field Experiment." Management Science 65, no. 5 (2018): 1949–2443. <https://gap.hks.harvard.edu/more-you-know-information-effects-job-application-rates-gender-large-field-experiment>
6. Wheeler, Laurel, Robert Garlick, Eric Johnson, Patrick Shaw, and Marissa Gargano. 2022. "LinkedIn(to) Job Opportunities: Experimental Evidence from Job Readiness Training." American Economic Journal: Applied Economics, 14 (2): 101-25. <https://www.aeaweb.org/articles?id=10.1257/app.20200025>
7. Manudeep Bhuller, Domenico Ferraro, Andreas R. Kostøl & Trond C. Vigtel, 2023. "The Internet, Search Frictions and Aggregate Unemployment." National Bureau of Economic Research. <https://www.nber.org/papers/w30911>







thank you  
so much!

