# Correlation

VS

Causation

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Introduction:

- The goal of this project was to identify the difference between Correlation and causation

- Our survey revolved around nicknames, friends, and height. We surveyed approximately 40 14-16 year olds.

- Our survey had 10 questions, and had 4 correlations

- Unfortunately, the nickname questions had no correlation

Height vs. Friend Height

Height (In Inches)

80

70

60

50

40

30

20

10

0

1   2

Majority of Friends Taller/Shorter
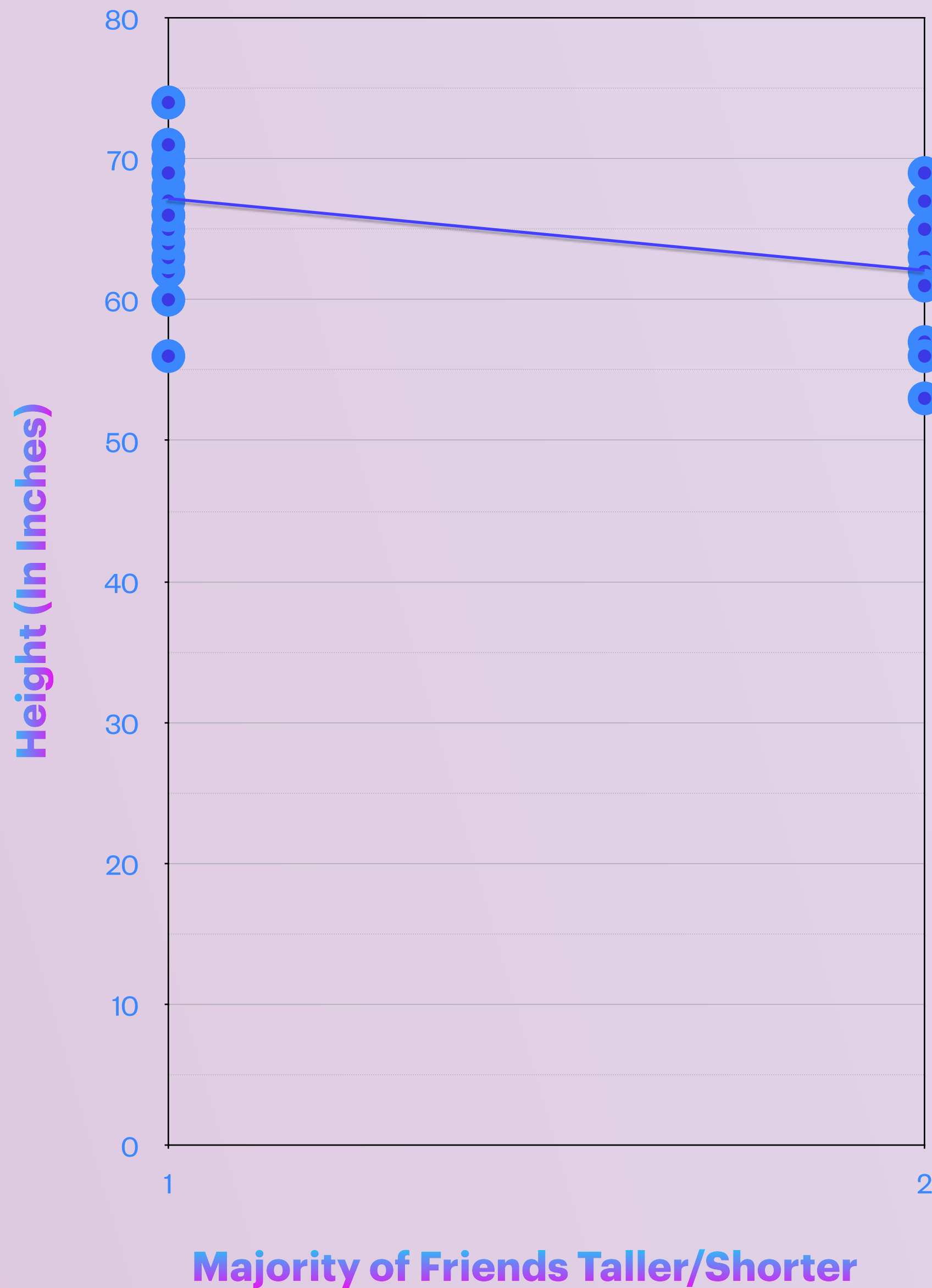
In this survey, we found that the taller someone is, the more likely it is that their friends will be shorter. This was based off of the results from the 40 people who took our survey. These do not have causation because being taller does not make a majority of your friends shorter than you.

Height vs. Perceived height

- This survey had a moderate positive Correlation and had causation.

- Causation is shown, because the taller you are, the taller you perceive your height on a scale of 1-5.

- This originally wasn't the correlation we were planning to find

- At first, we planned to correlate someone's height with how often they think about height
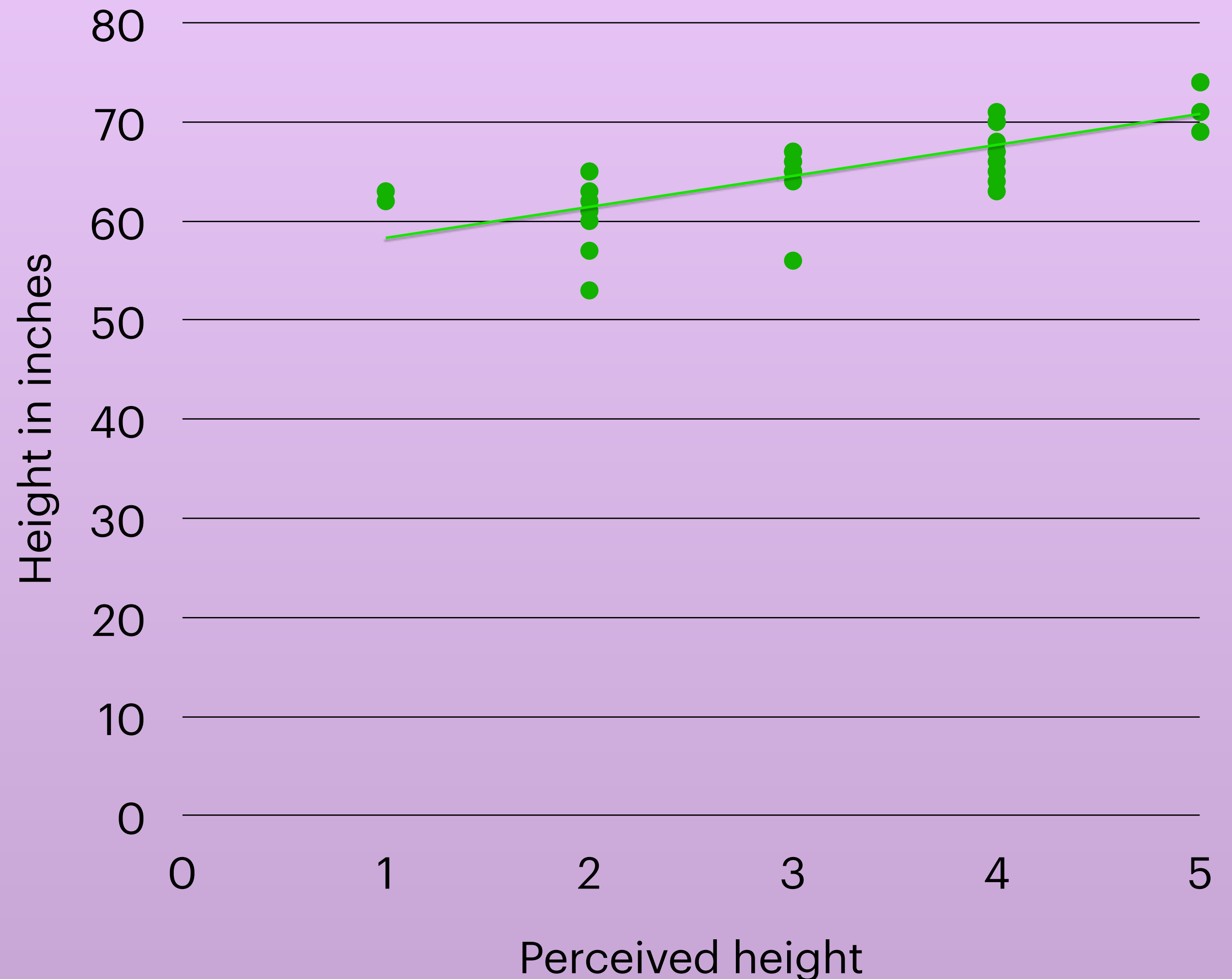
What we learned:

We learned that surveys don't always go the way you planned

We learned that there's many different ways to conduct surveys, and that there are different types of audiences for every survey

We learned how to create survey questions that contain correlation and causation.

We learned about different populations/samples to survey. Different audiences for a survey can drastically change the response.

Conclusion:

The difference between correlation and causation is that a correlation means that there is a relationship between factor A and B that is not caused by A or B. Causation means that factor A causes factor B and vice versa.

If we did this project again, we would try to format our survey and survey question in a way that generates stronger correlations and causations.

Thanks for Listening!