Survey Analysis

This report is based off of the analysis of a survey taken by two data science classes at the University of Maryland. These classes are taught by professor Maksym Morawski and Fardina Alam, and the students in each of their sections were asked to complete a survey for a homework assignment. The two professors gave the same survey involving questions about gender, political views, parental influence, and hypothetical scenarios.

The hypothetical scenarios stated a person's actions and the respondents would pick an answer based on what they thought the severity of the person's wrongdoing was. The three choices were "Not a jerk" "Mildly a Jerk" and "Strongly a jerk". An interesting question to be analyzed was whether or not the gender of the person answering the survey had an effect on their choice. More specifically, if the scenario involved a male doing something wrong to a female, would a male be more likely to side with his fellow man and answer "Not a jerk". In contrast, if the female is the one being wronged in the scenario, would a female be more likely to say the "man is more of a jerk" and vice versa for swapped genders.
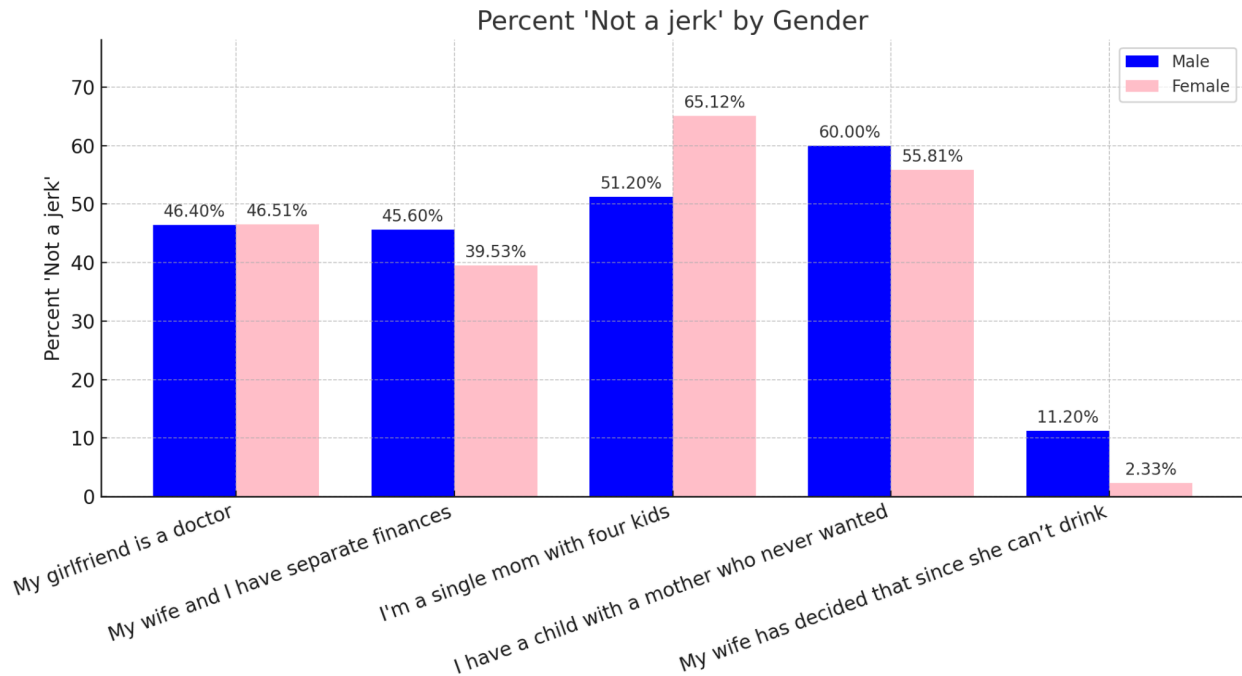
Findings

This first is a look at the possible bias in responses when the person asking "Am I a jerk" is the same gender as the survey respondent.

Respondents: { 125 Male, 43 Female }

Questions that specify "I" or reader can infer "I" in the scenario:
- My girlfriend is a doctor… ("I" is male)
- My wife and I have separate finances… ("I" is male)
- I'm a single mom with four kids… ("I" is female)
- I have a child with a mother who never wanted anything to do… ("I" is male)
- My wife has decided that since she can't drink… ("I" is male)

The graph below shows the comparison between the percentage of males that voted "Not a jerk" and the percentage of females who voted "Not a Jerk"
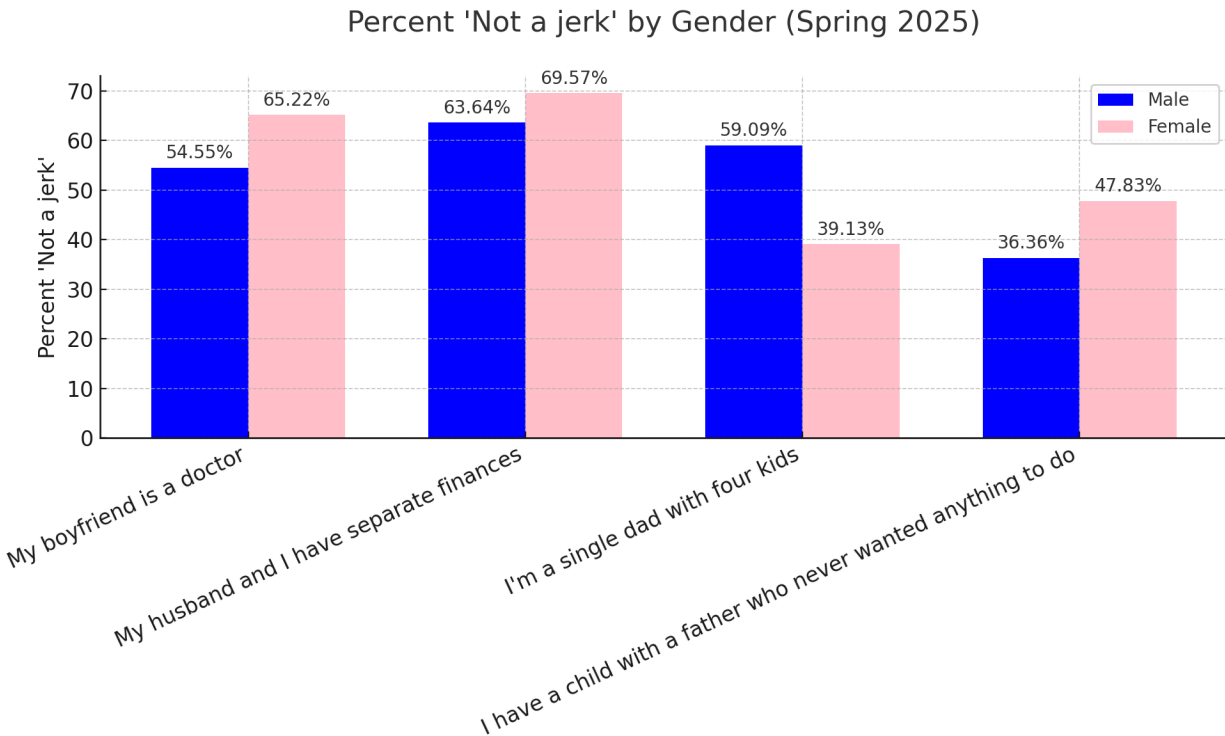
Percent 'Not a jerk' by Gender

Every question other than "My girlfriend is a doctor", which was a very marginal difference, showed the gender of "I" favored "Not a jerk" over its counterpart. The average difference in percentage between the gender of the person asking "Am I a jerk" and the opposite gender was 6.59%. So yes based on this dataset, people are slightly more likely to side with their own gender.

Below is a look at a very similar survey taken in Spring 2025 by students in CMSC 320 with most of the scenario questions being gender swapped.
Respondents: { 66 Male, 23 Female } (Other genders were omitted)

- My boyfriend is a doctor… ("I" is female)
- My husband and I have separate finances… ("I" is female)
- I'm a single dad with four kids… ("I" is male)
- I have a child with a father who never wanted anything to do… ("I" is female)

Percent 'Not a jerk' by Gender (Spring 2025)

Here we can see that the trend continues with a greater percentage of female voters voting "Not a jerk" if the question asker is a female, and the same is true for male voters if the asker is male. This time the average difference is 12.01%.
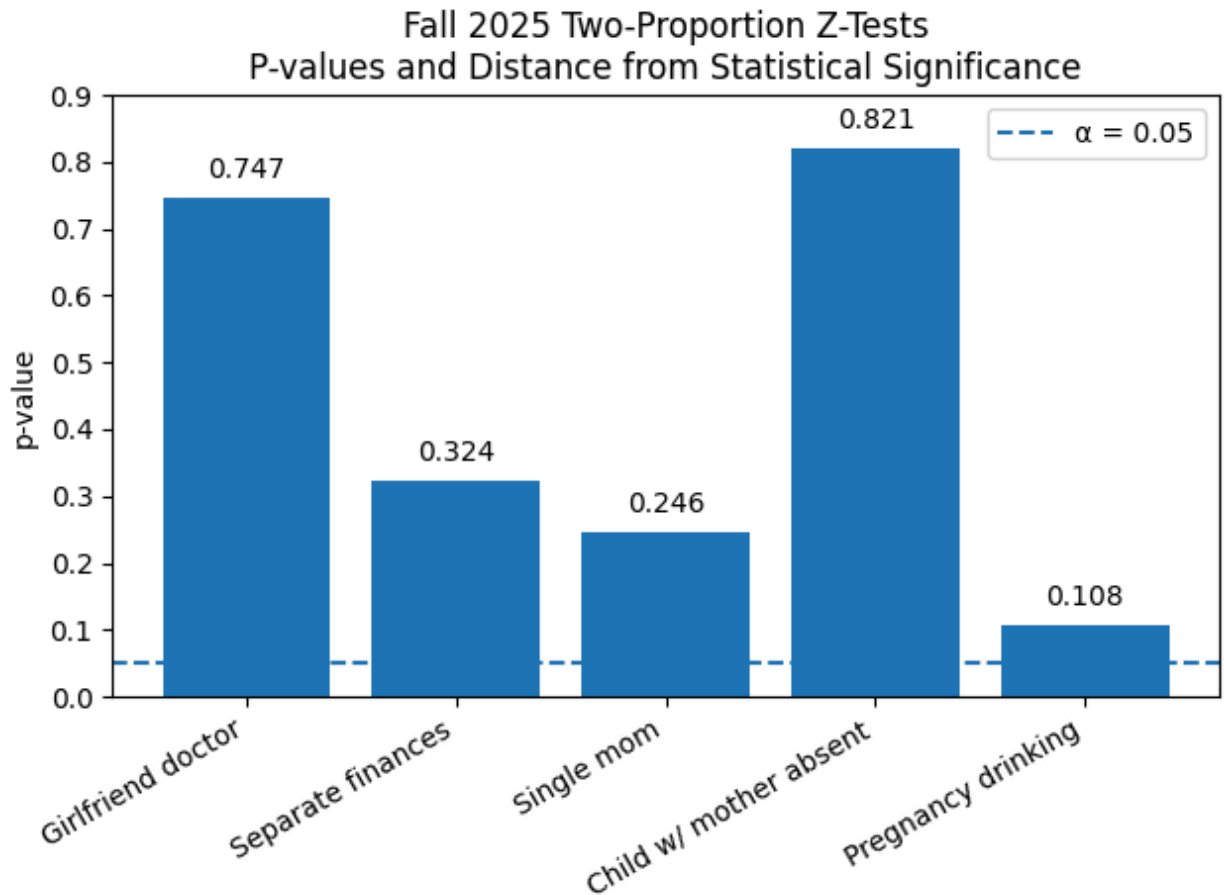
When the man called his girlfriend a bad doctor about 46% of females thought the man wasn't being a jerk, but when the woman called her boyfriend a bad doctor 65% of females thought she wasn't being a jerk. This trend continues throughout all four gender swapped questions, which suggests people do tend to side with their own gender.

A two proportion z test was conducted on the Fall 2025 dataset due to the higher number of respondents, to see if gender had an effect on questions that specify the question asker's gender

Null hypothesis - The distribution of responses is not affected by gender
Alternative hypothesis - The distribution of responses depends on gender

The test was conducted on each of the 5 questions analyzed before with a significance level of .05, and taking into account each possible response (Not, Mildly, Strongly)

Fall 2025 Two-Proportion Z-Tests
P-values and Distance from Statistical Significance

The closest scenario to breaking the significance level was the pregnancy scenario but it wasn't enough, none of the scenarios showed a significant gender bias in answers according to the test.

Conclusion

Even though the Null hypothesis was not rejected, there was still a difference in percentages that implied a slight bias depending on gender. In both the Fall 2025 and Spring 2025 surveys the responses differed with gender favoritism by 6 and 12 average percent respectively.

"Not a Jerk" was analyzed because it represented the strongest opinion that the person did nothing wrong. In every scenario except one across the two datasets, where gender was specified, the "Not a Jerk" response was favored by the gender of the question asker.