outline

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# Pilot

## Methods

All participants were recruited on Amazon Mechanical Turk for a study on decision-making. We excluded participants a priori if they did not meet the following inclusion criteria: failed all three comprehension check questions about the task they would be completing, were not using a computer to complete the survey (which would prohibit their performance on the task), did not identify their nationality as American or did not live in the United States (to control for gender differences in competitiveness across cultures), indicated “Other” for gender, or failed to finish the survey in its entirety. The final sample consisted of 320 participants (55.94% women), with an average age of 37.21 (*SD* = 11.56) years.

After passing the filter questions, participants completed three rounds of a one-minute matching task. To complete the task, they were first presented a legend with numbers and corresponding letters. Then, participants were presented a series of two-digit numbers and had to use the legend to enter the letters that corresponded to the numbers presented to them as quickly as possible. In rounds 1 and 2 of the task, participants were required to follow a piece-rate and tournament payment scheme, respectively. In round 3, participants had the option to choose between the two payment schemes, which served as the primary dependent variable. After completing the third round, participants completed a series of follow-up questions to be used for testing our secondary hypotheses and conducting exploratory analyses, including a decile-based measure of confidence (both relative to one’s randomly assigned partner in round 2 and relative to the sample of men and women, respectively, in the study) and risk aversion. We also asked about participants’ perceptions of which gender performed better. Finally, we asked about participants’ perceptions of the effects of practice, if offered, on task performance improvement, along with participants’ hypothetical willingness to practice the task beforehand, if given the opportunity (first as a yes/no, then if yes, in minutes willing to practice).

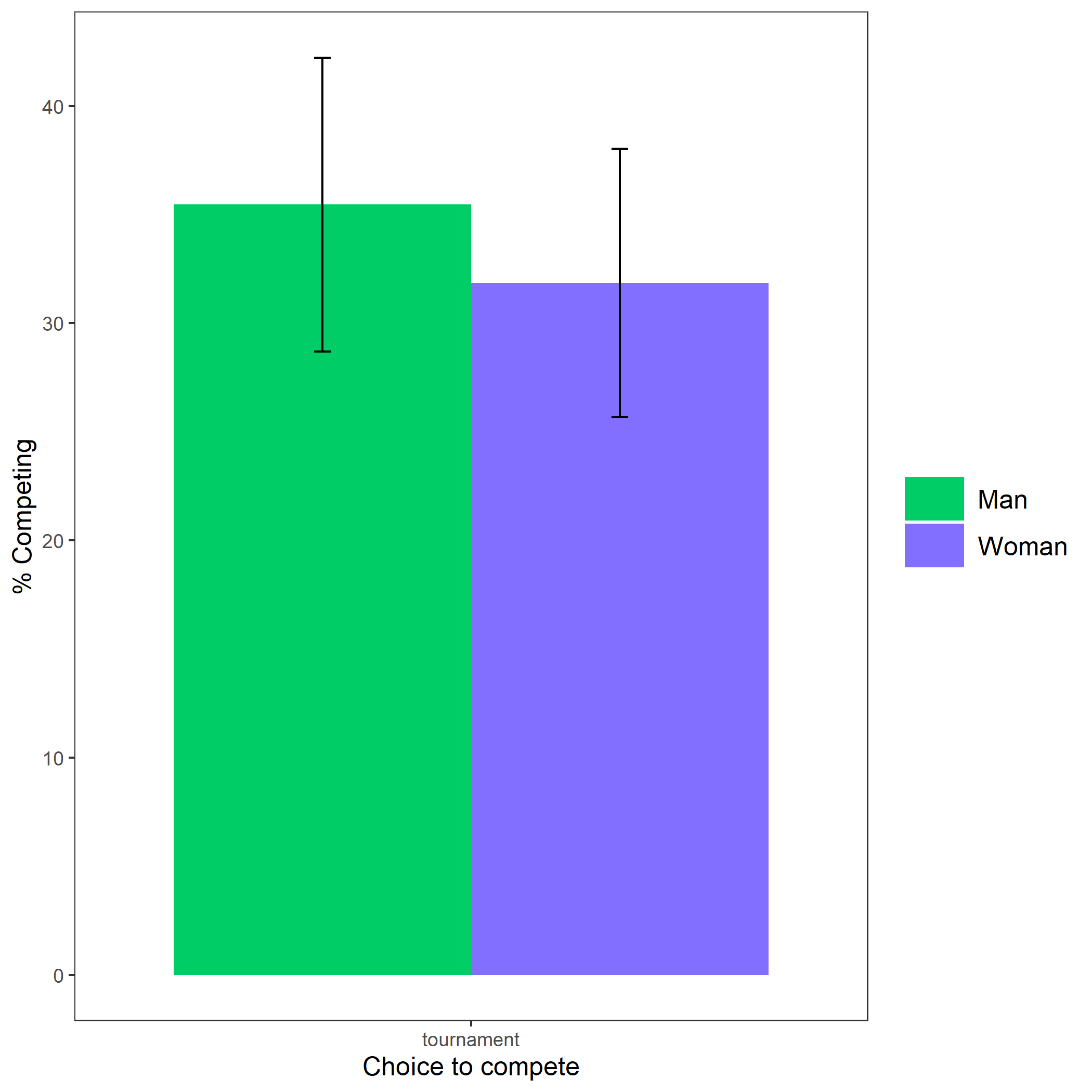
## Results

### Summary

Women were more likely to say they would have taken the opportunity to practice the task than men, despite no gender differences in performance or choice to compete.

### Pre-registered analyses

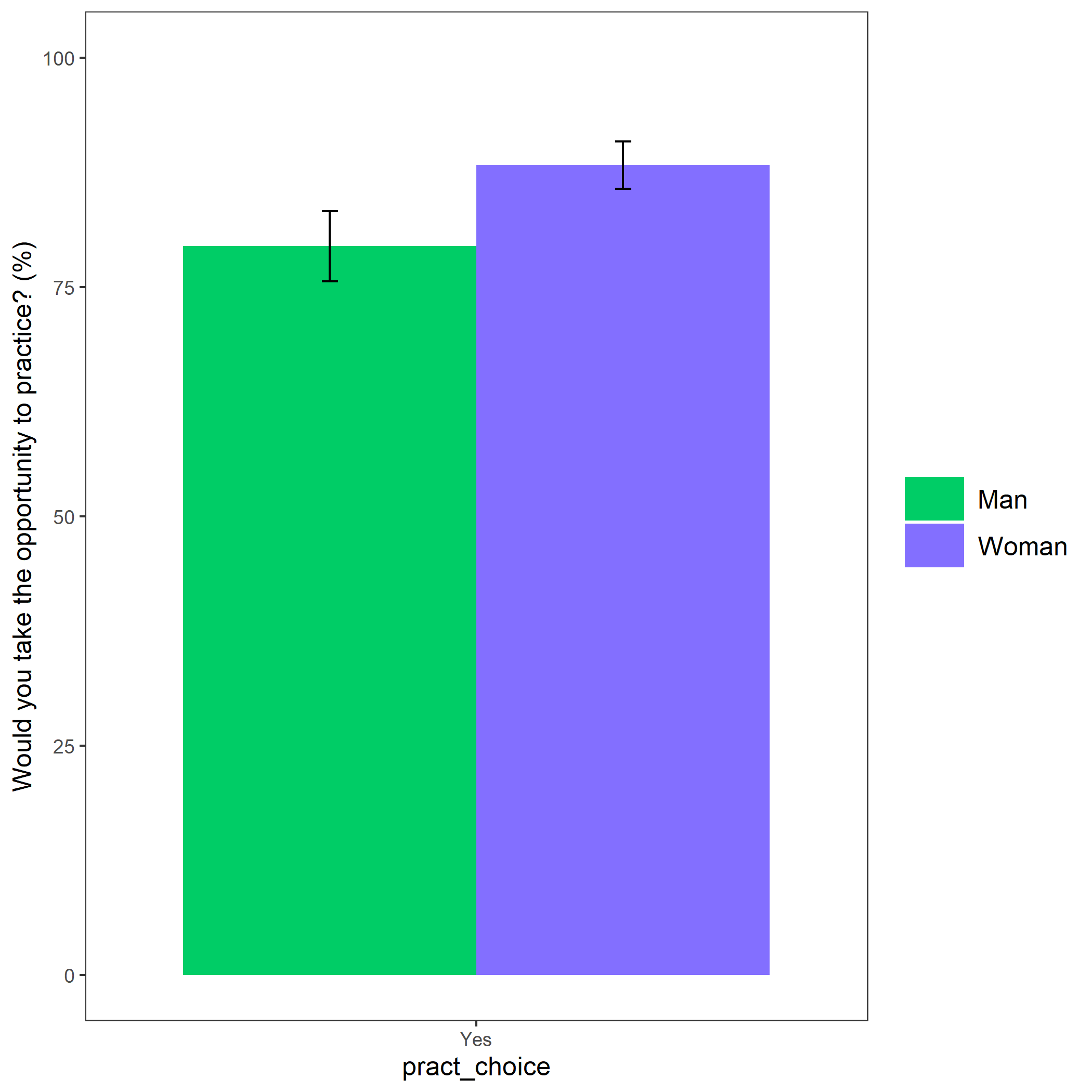
Primary hypothesis 1: Using a logistic regression with gender predicting willingness to compete in round 3, we do not find significant evidence of gender differences in the choice to compete, , 95% CI , , , .



Choice to compete by gender

### Exploratory analyses

Using a logistic regression, we find that gender predicts (hypothetical) willingness to practice the task, , 95% CI , , , .



Desire to prepare by gender

# Study 1

## Methods

Like the pilot study, participants were recruited on Amazon Mechanical Turk for a study on decision-making. The exclusion criteria were nearly identical to those in the pilot study, with the exception that participants were not excluded if they failed the comprehension check questions. The final sample consisted of 1012 participants (53.66% women), with an average age of 37.66 (*SD* = 13.16) years.

Participants who met the inclusion criteria were immediately assigned to either a knowledge of preparation condition or a control condition. Men and women were equally assigned to each condition. Participants in the knowledge of preparation condition were told that they would have the chance to prepare for a multiplication task they would complete later on, while participants assigned to the control condition were not given this information. Then, all participants were given the opportunity to choose a payment scheme (either piece-rate or tournament) for the multiplication task. After choosing a payment scheme, participants in both conditions were given the chance to prepare before the multiplication task. If they took this opportunity, they had the chance to practice and review each of the times tables as many times as they wanted, or skip any. Once finished, participants completed as many problems as possible from the paid multiplication task for two minutes.

Before finishing the survey, participants completed a series of follow-up questions, including self-reported risk aversion, confidence based on perceived decile relative to all other participants, and perceptions of gender differences in competitiveness, performance, and willingness to practice (both within the context of the study and in general). To determine whether cheating was a factor that participants relied on while completing the task, we also asked participants about their use of calculators and perceptions of calculator use on the multiplication task.

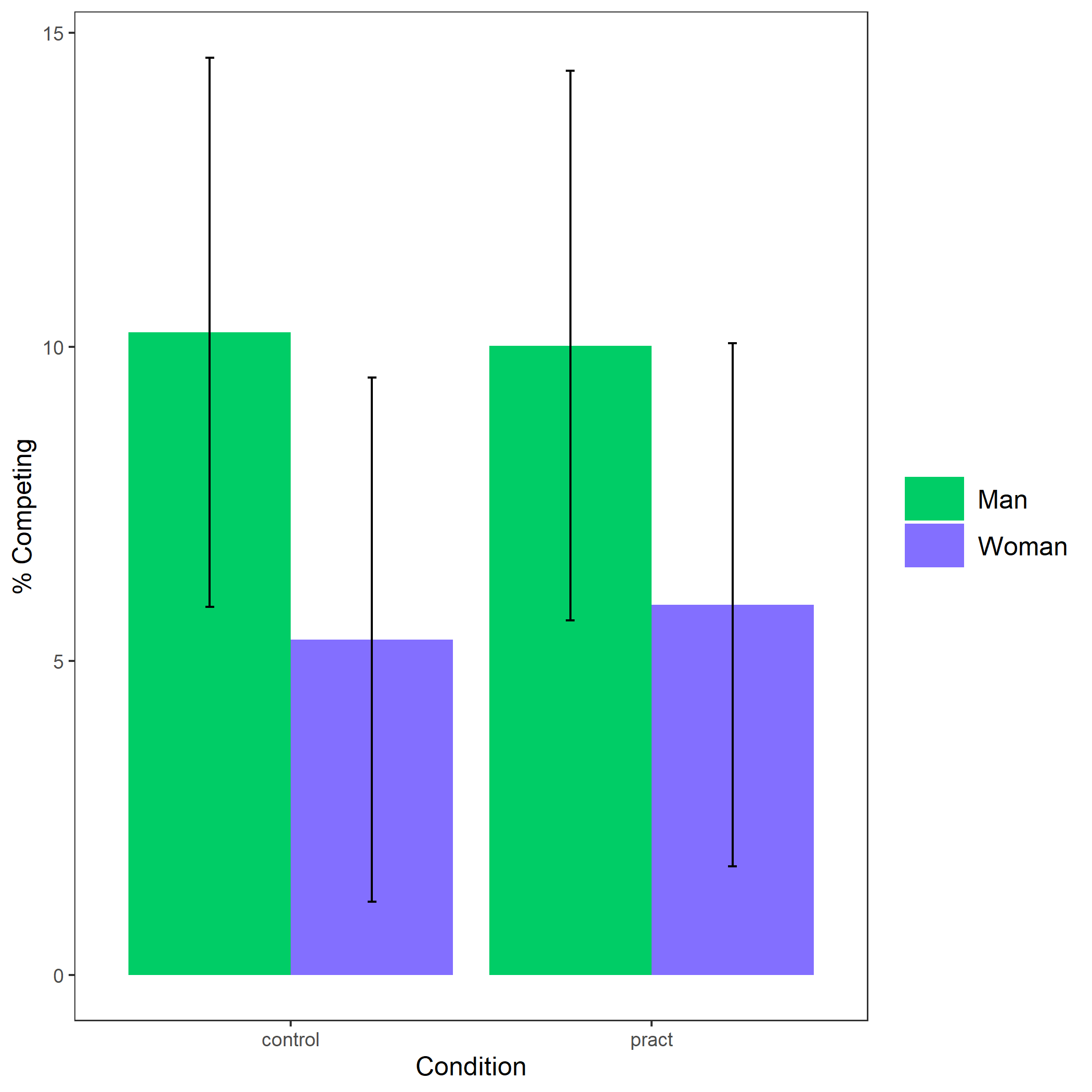
## Results

### Summary

Although we did not find support for the hypothesized interaction between gender and condition on the choice to compete, we found evidence for the hypothesized effect of gender on the choice to prepare. Despite choosing to compete less frequently than men, women chose to prepare more for the multiplication task, which, as predicted, aligned with participants’ perceptions of gender differences in preparation and competition, even though participants did not expect any gender differences in performance.

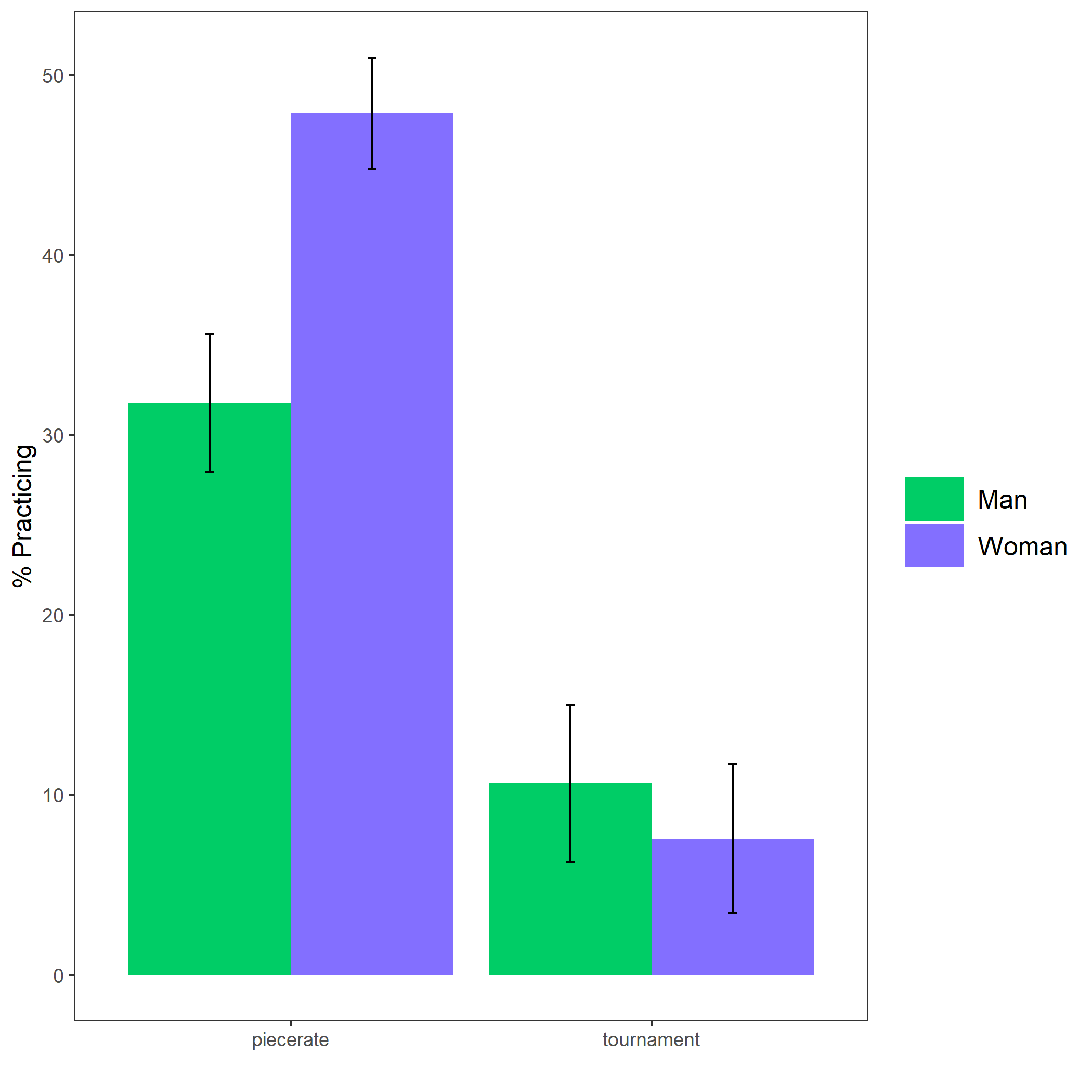
### Pre-registered analyses

Primary hypothesis 1: We do not find evidence of a significant interaction between gender and condition on the decision to compete , 95% CI , , , .



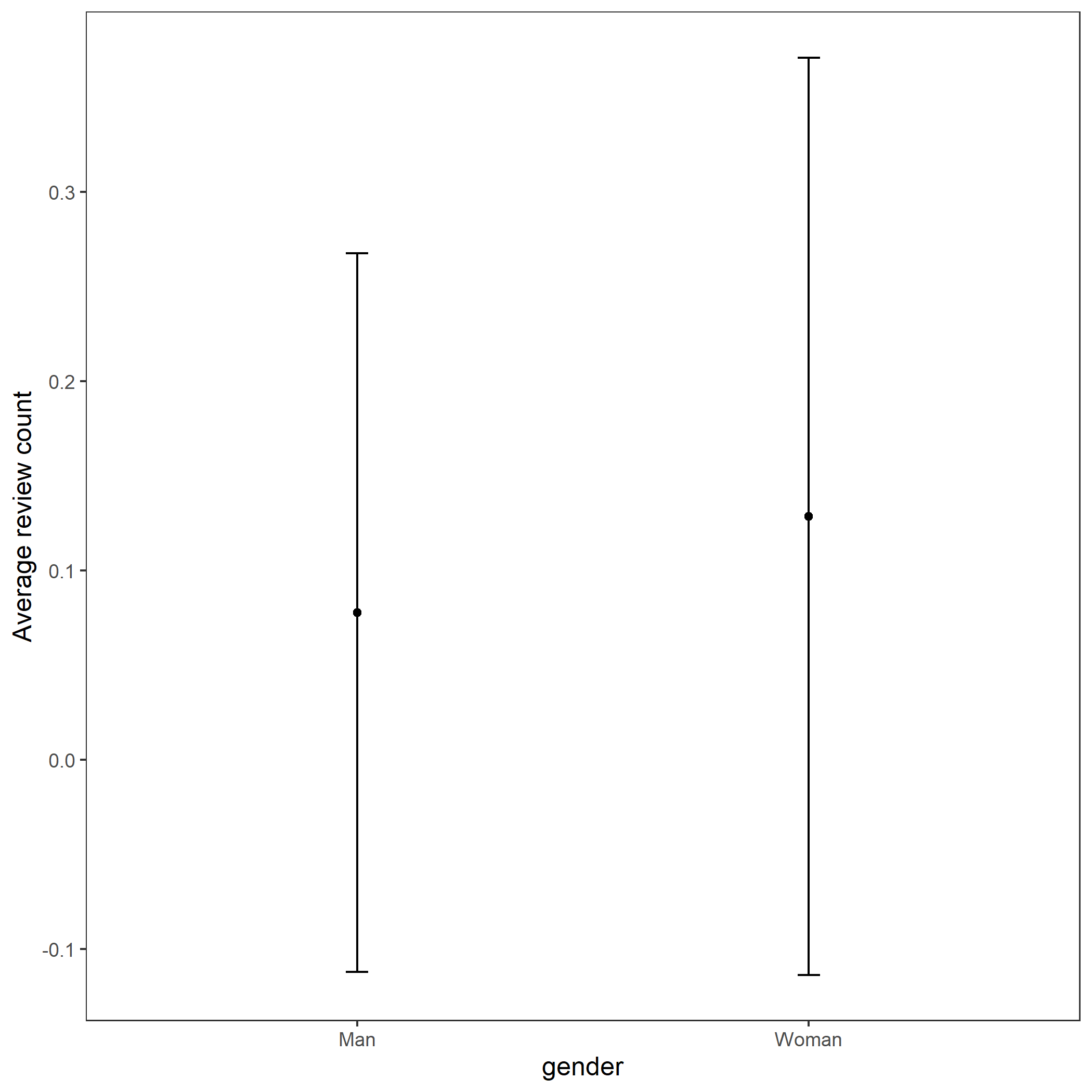
Choice to compete by gender and condition

Primary hypothesis 2: Women are 77.93% more likely to take advantage of the opportunity to prepare relative to men , 95% CI , , , , while controlling for the decision to compete. Note: there is no significant interaction between gender and the choice to compete on the choice to prepare.



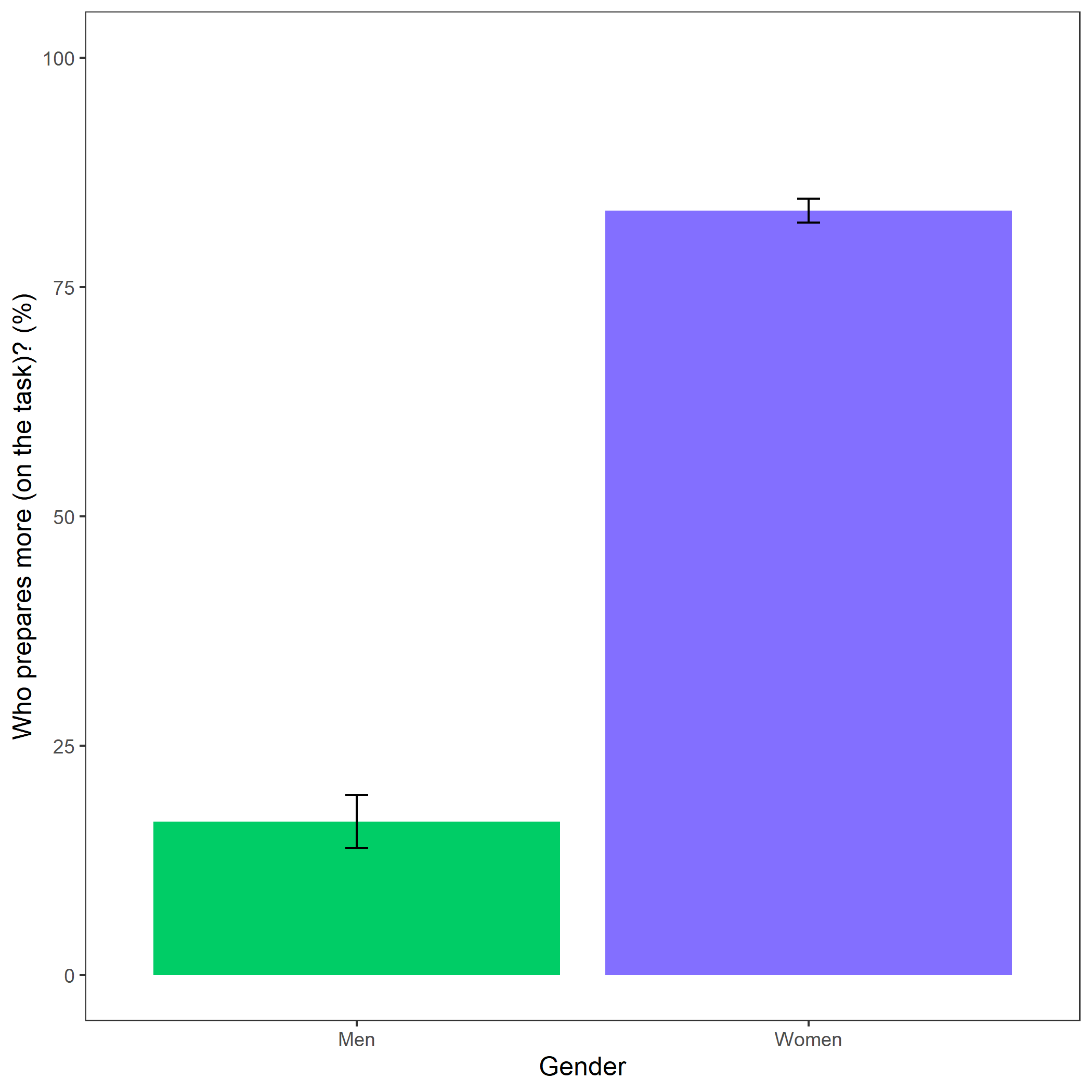
Choice to practice by gender and choice to compete

Primary hypothesis 3: Women completed 81.93% more rounds of preparation relative to men, , 95% CI , , , .



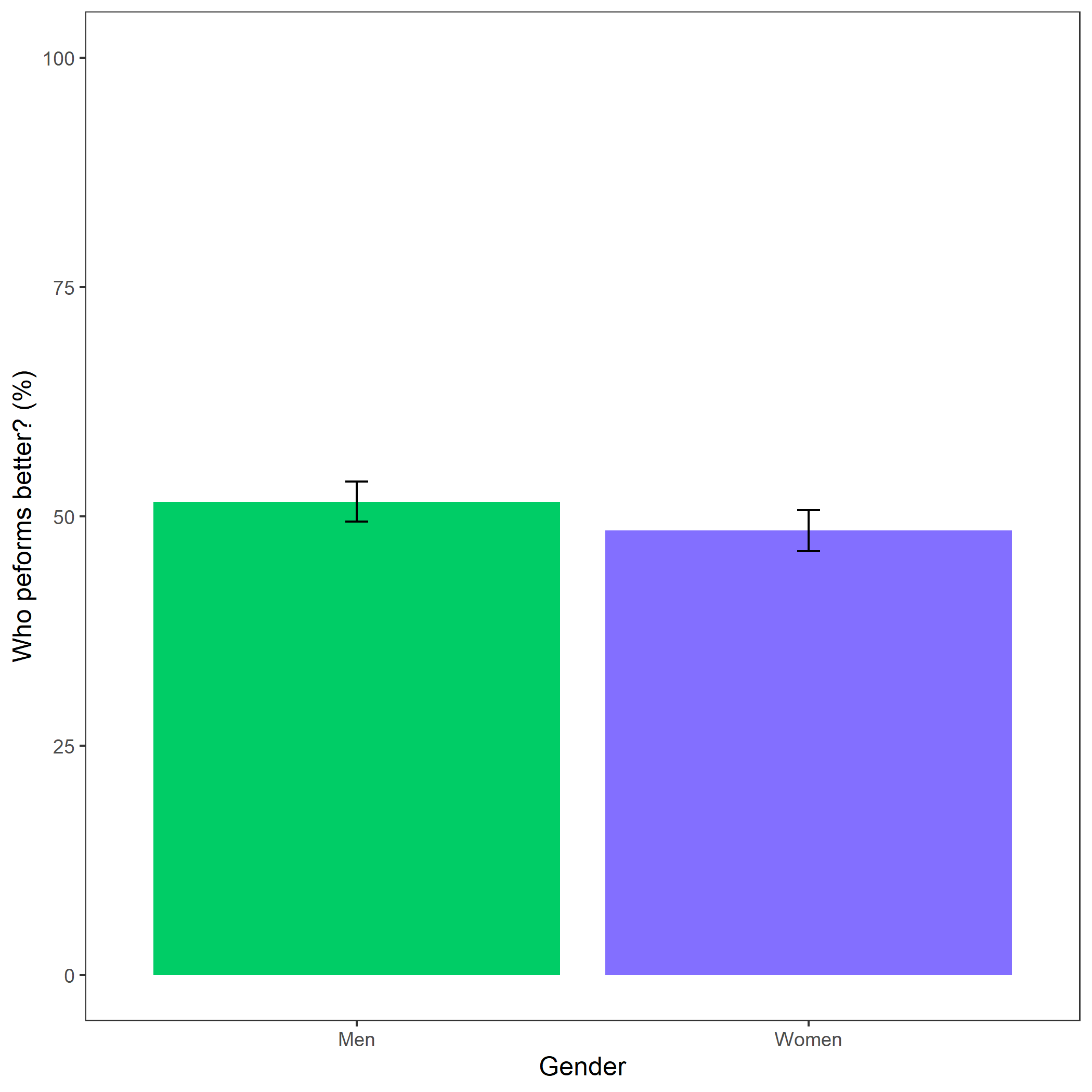
Total practice count by gender

Primary hypothesis 4: Participants expected women to spend more time preparing for the multiplication task relative to men, , .



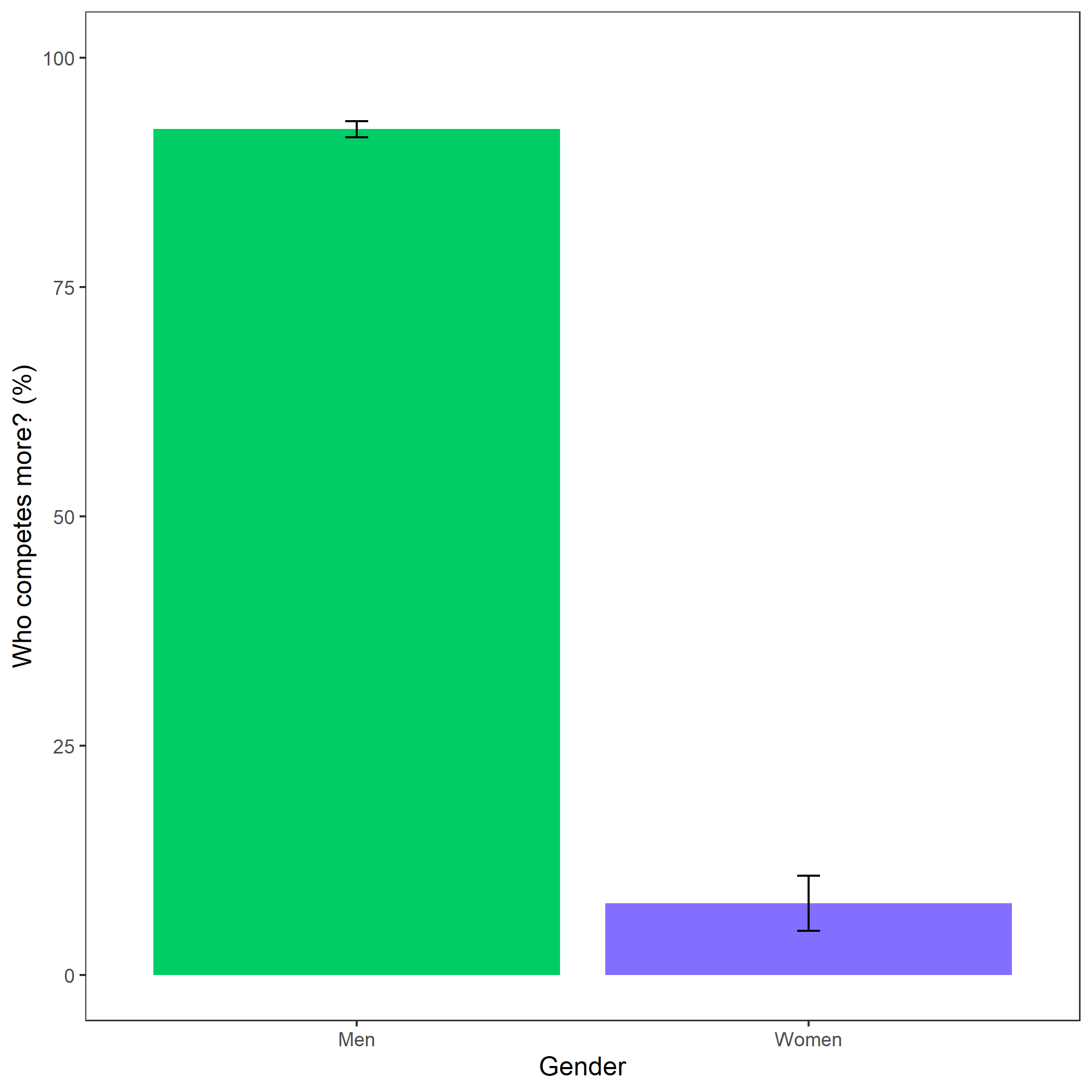
Perceptions of gender differences in practice on the task

Exploratory analysis 7a: Participants did not expect any gender differences in performance on the task, , .



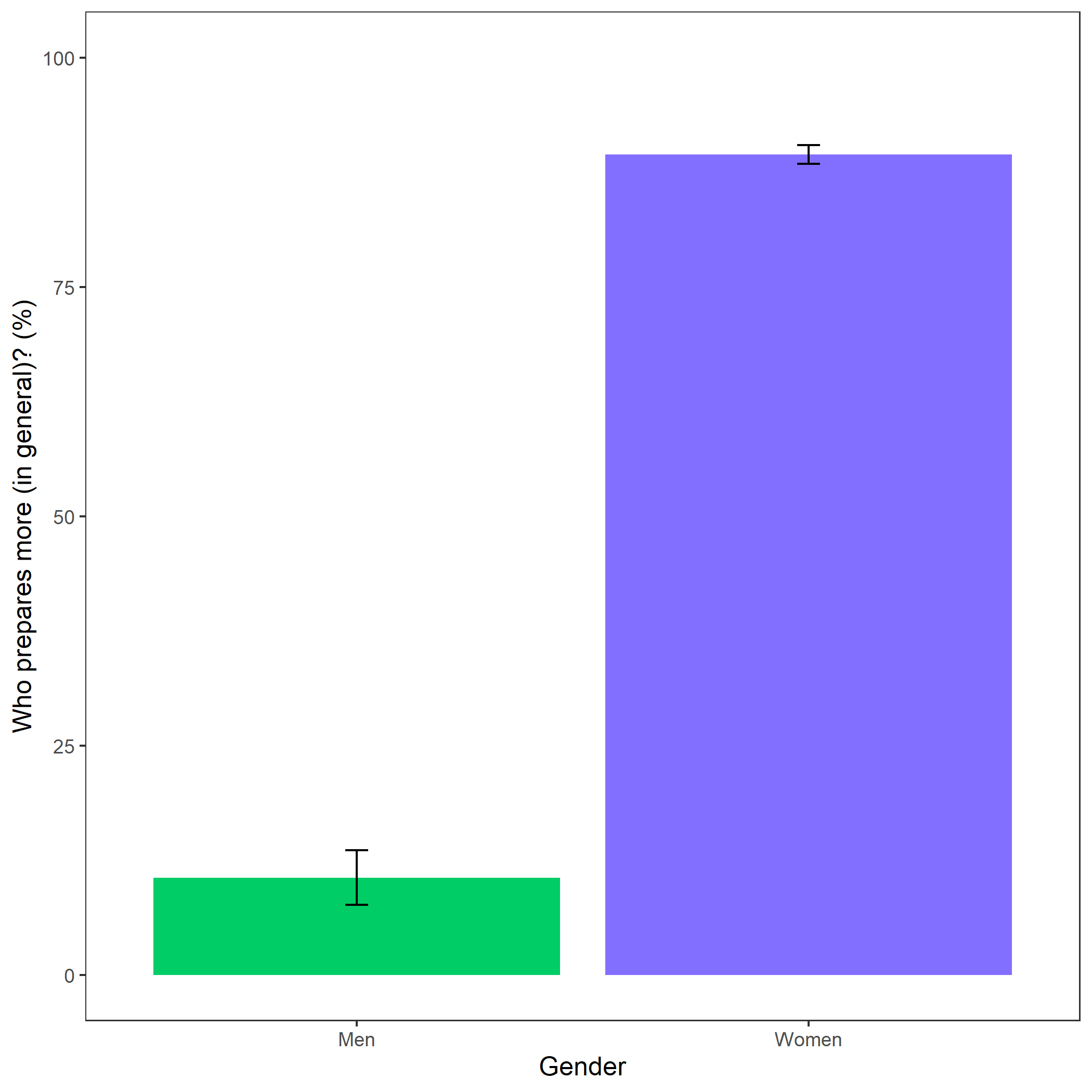
Perceptions of gender differences in performance on the task

Exploratory analysis 7b: Participants were significantly more likely to expect men to choose to compete more often, , .



Perceptions of gender differences in choice to compete

Exploratory analysis 7c: Participants were significantly more likely to expect women to choose to prepare in general, , .



Perceptions of general gender differences in choice to practice

# Study 2

## Methods

Participants, recruited through Amazon Mechanical Turk, were included based on the same criteria as in Study 1. The final sample consisted of 1026 participants (50.58% women), with an average age of 38.54 (*SD* = 12.5) years.

After being told about rules for the multiplication task and completing comprehension check questions, participants were assigned to either a preparation condition, where they were told they would complete several rounds of practice before completing the multiplication task, or a control condition, where they were told they would complete several rounds of a counting task before moving on. As in Study 1, men and women were assigned equally to each condition. The participants in the preparation condition completed 12 rounds (one round per times table), with 6 problems per round. For the counting task in the control condition, participants were asked to complete 5 questions where they counted the number of zeros in a matrix of zeros and ones. Afterwards, participants chose a payment scheme for the multiplication task, and completed the task for two minutes. We included many of the same follow-up questions as in Study 1, including risk aversion, confidence, perceptions of gender differences in preparation, competitiveness, and performance. We also asked participants if they wished they had more time to prepare for the multiplication task and included measures of their fatigue, field-specific ability beliefs, and interest in the multiplication task.

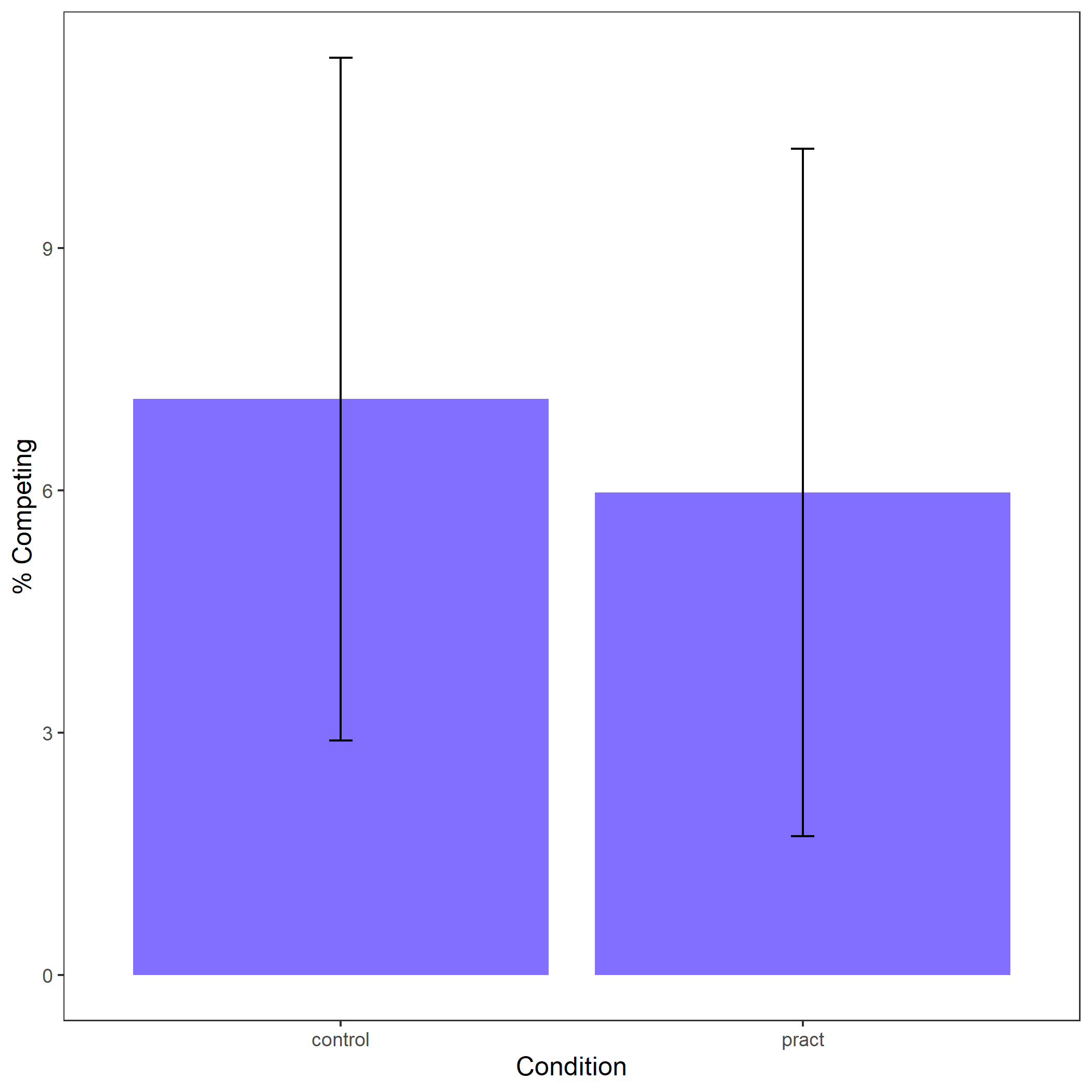
## Results

### Summary

Despite no evidence for the effect of condition on the choice to compete among women, we replicate the effects found in Study 1, where women were significantly more likely to prepare for the task, even after being forced to prepare in the preparation condition.

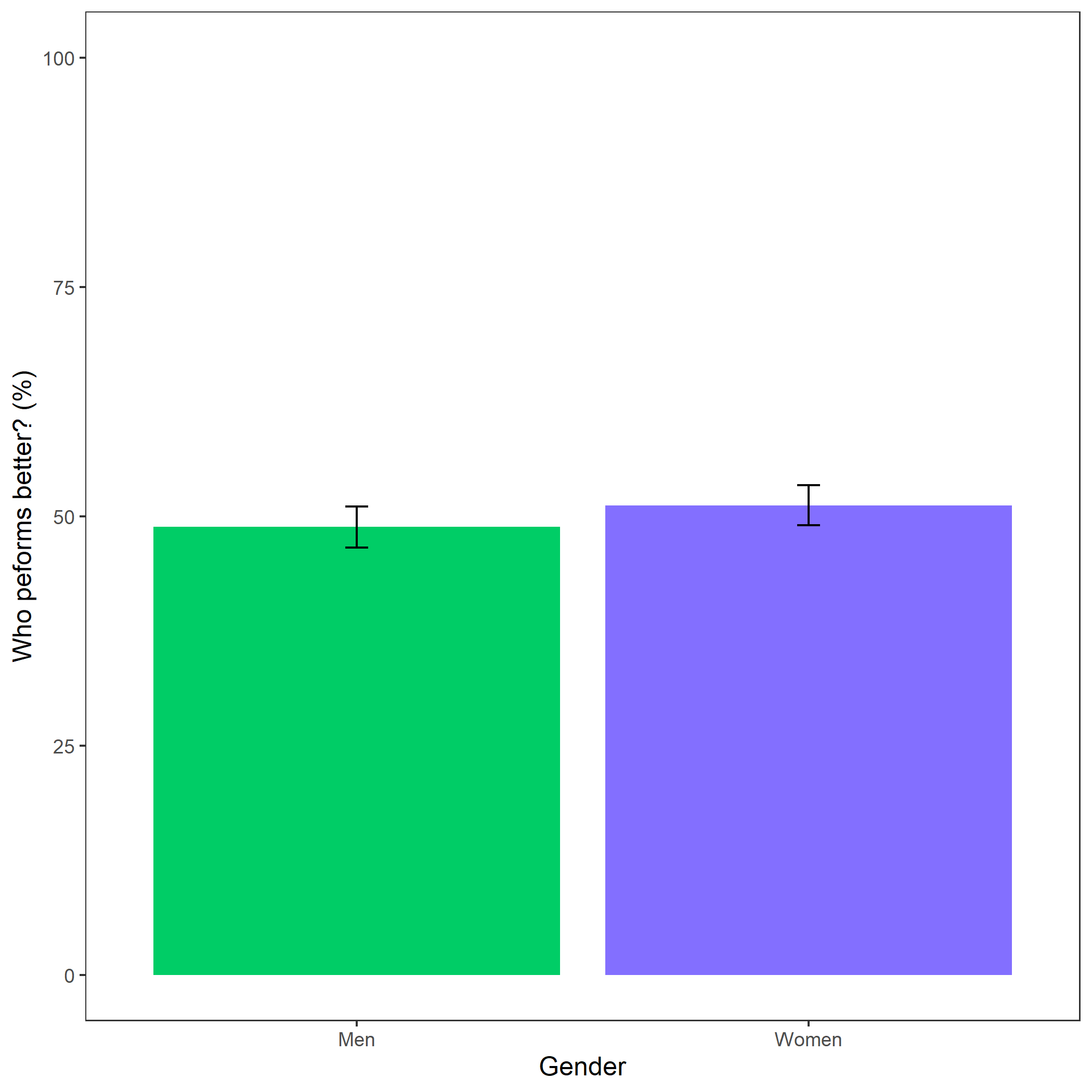
### Pre-registered analyses

Primary hypothesis 1: We do not find evidence of a significant effect of condition on the choice to compete among women z = -0.87, p = 0.19.



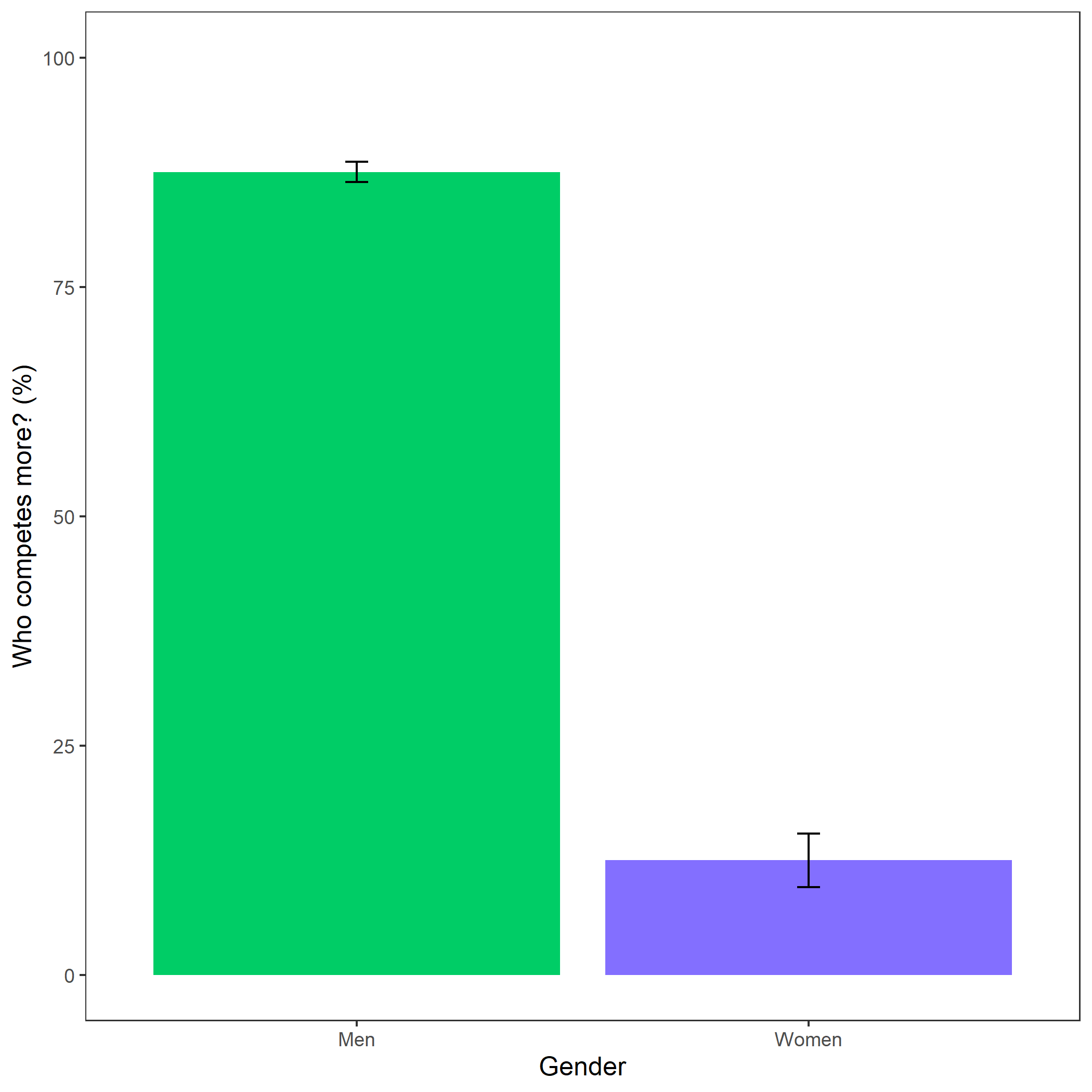
Choice to compete by condition within women

Exploratory analysis 3a: Participants did not expect any gender differences in performance on the task, , .



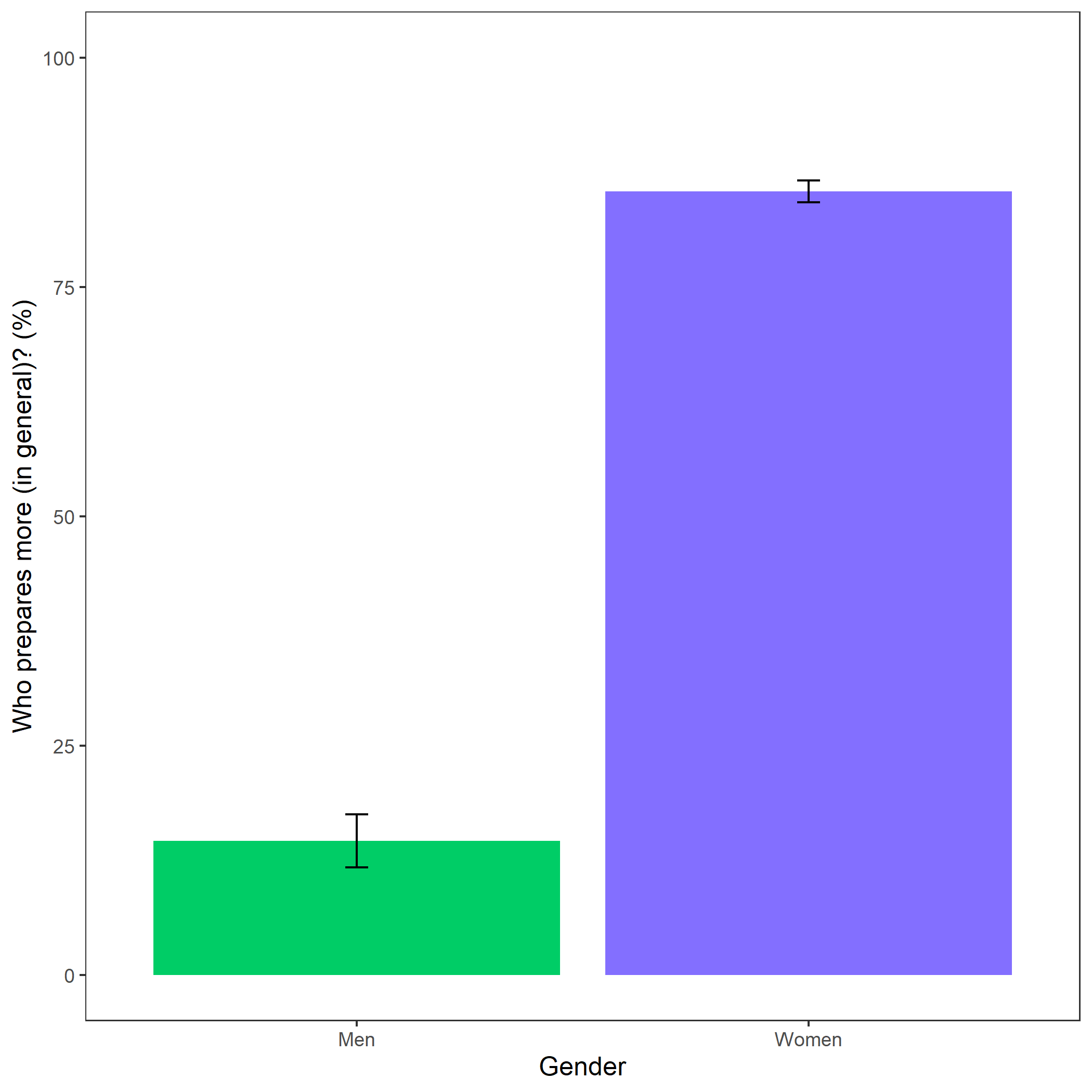
Perceptions of gender differences in performance on the task

Exploratory analysis 3b: Participants were significantly more likely to expect men to choose to compete more often, , .



Perceptions of gender differences in choice to compete

Exploratory analysis 3c: Participants were significantly more likely to expect women to choose to prepare in general, , .



Perceptions of general gender differences in choice to practice