



# The Association Between Gender and Attitudes Towards Global Warming among Republicans and Democrats

Aashni Parikh, Quantitative Analysis Center, Wesleyan University

## Introduction

- Global warming is the defining issue of our time and is expected to accelerate over the next few decades. (Hansen *et. al.*, 2000)
- Despite the staggering scientific research recording the rise in global temperatures, the issue and the role of humans in this issue is frequently contested. (Anderson, 2014)
- Differences in the attitude towards global warming stems from many factors such as gender, race, ethnicity, and socio-economic status, amongst others.
- For instance, studies show that women have more pro-environmental views than men do and also express greater concern over environmental issues. (Ballew, 2018)
- Alternately, however, the relationship between gender and global warming attitude may change when other factors, such as political party affiliation, are taken into consideration (i.e. democratic males may have more pro-environmental beliefs than republican females do).

## Methods

### Sample

- Adults (age 18 and older), who reported whether they believed if global warming was a serious issue (n=552) in 2017, were drawn from the National Surveys on Energy and Environment (NSEE).
- The NSEE is an ongoing biannual national opinion survey on energy and climate policy since 2008.

### Measures

- The attitude towards global warming was assessed with the question "Is global warming a serious problem?". This variable was coded dichotomously in terms of whether they believed global warming was a serious issue or not.
- The political affiliation variable was assessed by asking the participants which political party they supported. Possible responses included 'democratic', 'republican', 'other', or 'independent'.

## Research Questions

- What is the relationship between gender and attitudes towards global warming?
- Does the association between gender and global warming attitude differ within the democratic and republican parties respectively?

## Results

### Univariate

- 53.3% of the respondents identified as male, 39% of the respondents were democrats, and 19% were republicans.
- 90.6% of the respondents reported they believed that global warming is a serious issue

### Bivariate

- Chi-Square analysis showed that **females were significantly more likely to believe that global warming is a serious issue (93.4%)** compared to males (88.1%),  $X^2=3.95$ , 1 df,  $p<.05$ . (Figure 1)
- Two other Chi-square analyses also revealed that within the democratic party, females were significantly more likely to believe that global warming is a serious issue ( $X^2=4.78$ ,  $p<0.05$ ), the same relationship was not significant within the republican party ( $p>0.05$ )

### Multivariate

- Political party affiliation does not seem to moderate the relationship between gender and attitude towards global warming.
- According to a logistic regression model, being male decreases the odds of believing that global warming is a serious issue by a factor of 0.55 ( $p=0.05$ ), after controlling for political party affiliation. (Figure 2)
- Another logistic regression showed that being republican compared to a democrat decreases the odd of believing that global warming is a serious issue by a factor of 0.105 ( $p<0.01$ ). (Figure 2)

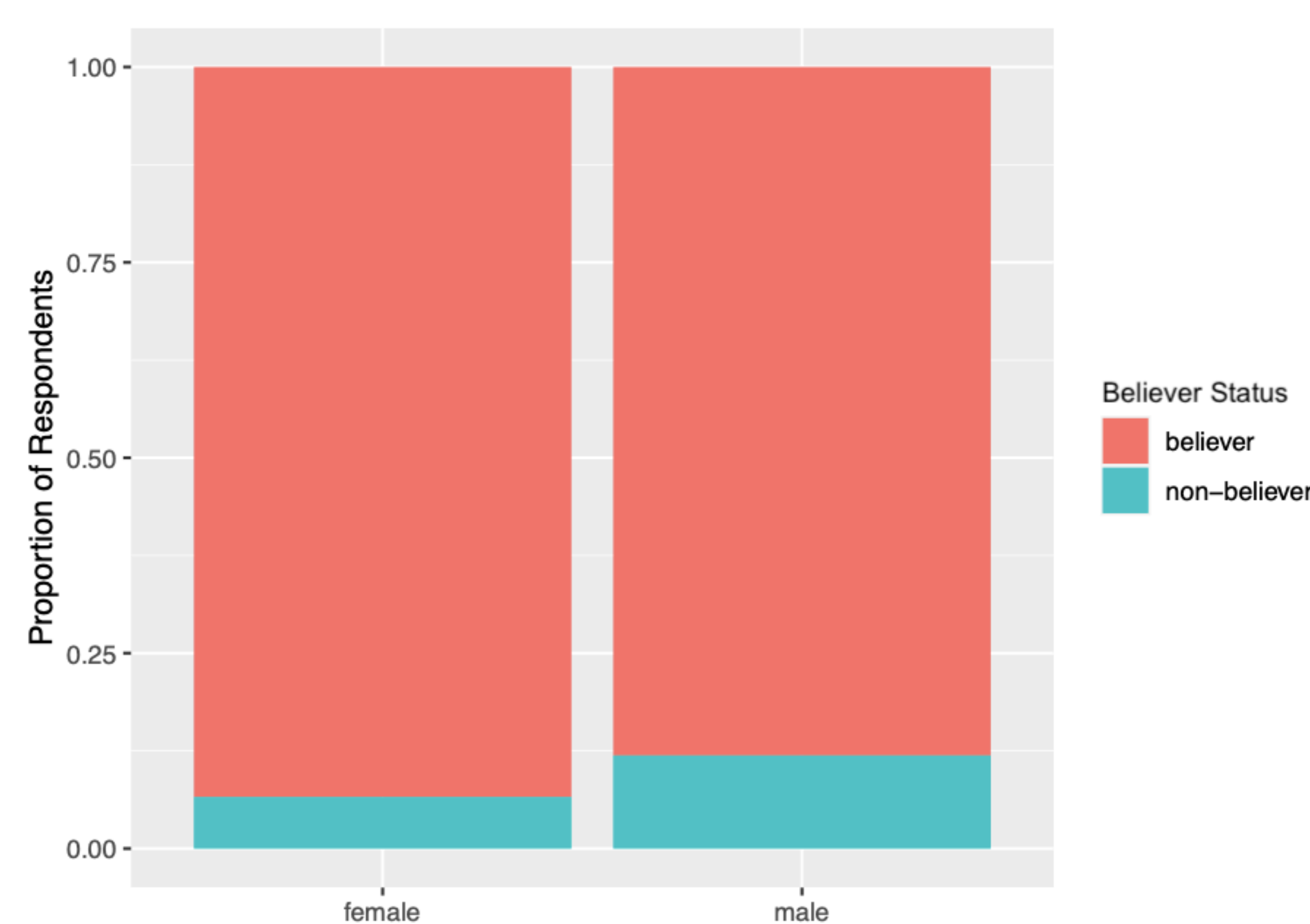


Figure 1. Gender and Attitudes Towards Global Warming among Adult Respondents of the NSEE

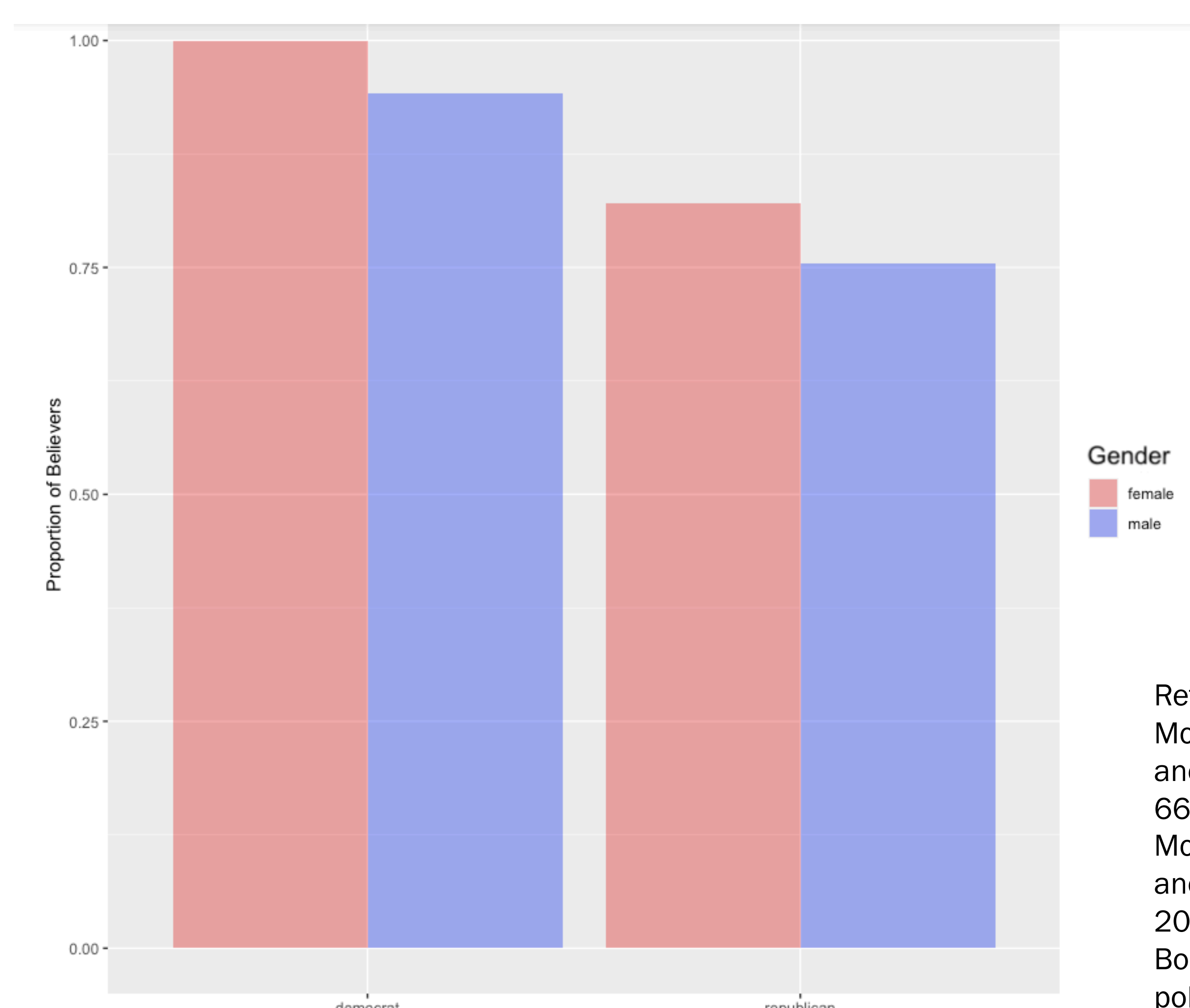


Figure 2. Gender and Proportion of Believers within Political Parties among Adult Respondents of the NSEE

## Discussion

- In general, females are more likely to consider global warming to be a serious issue than males do.
- In general, both male and female democrats are more likely to consider global warming to be a serious issue compared to female and male republicans.
- Within the democratic party, females are significantly more likely to believe that global warming is a serious issue compared to males, however, this relationship is not significant within the republican party.
- This information could be used to identify an important population in the fight against climate change and also recognize individuals, even political candidates, who would promote and implement pro-environmental, policies.
- Further research could consider more demographics and investigate the reasons for differences in opinions about global warming.
- This could potentially lead to more targeted climate education, outreach efforts and empowerment of groups that are more vulnerable to the effects of climate change

### References:

- McCright, A. M. (2010). The effects of gender on climate change knowledge and concern in the American public. *Population and Environment*, 32(1), 66–87.
- McCright, A. M., & Dunlap, R. E. (2011). The Politicization of Climate Change and Polarization in the American Public's Views of Global Warming, 2001–2010. *The Sociological Quarterly*, 52(2), 155–194.
- Bohr, J. (2017). Is it hot in here or is it just me? Temperature anomalies and political polarization over global warming in the American public. *Climatic Change*, 142(1–2), 271–285.
- Ballew, M. B., Marlon, J. M., Leiserowitz, A. L., & Maibach, E. M. (2018, December 12). *Gender Differences in Public Understanding of Climate Change*. Yale Program on Climate Change Communication.
- Hansen, J., Sato, M., Ruedy R., Lacis, A., & Oinas V. "Global Warming in the Twenty-First Century: An Alternative Scenario." Proceedings of the National Academy of Sciences, vol. 97, no. 18, 2000, pp. 9875–9880.