



Association Between The Overall Level of Education and Belief That Global Warming Is Caused by Human Activity



Yinuo Zhou, Applied Data Analysis, Wesleyan University

Introduction

- Climate change, specifically global warming, has been a topic of increasing concern and interest in recent years. This study aims to investigate the association between overall level of education and belief that global warming is caused by human activity.
- The study found that teenagers pay less attention to environmental issues.(Qian, X., Xu, G., Li, L., Shen, Y., He, T., Liang, Y., . . . Xu, J. 2016)
- The residents' knowledge, attitudes and practices related to ambient air pollution and health will help to improve the understanding of environmental protection and make environmental health policies more targeted and effective. (Conti. 1996)
- College students in China do not pay much attention to marine environment pollution(MEP). The reason is that they do not always understand its causes. They are not aware of its importance and possible related solutions.(Gan, Y., Gao, J., Zhang, J., Wu, X., Zhang, T., & Shao, M. 2022)

Research Questions

- What is the association between overall level of education and belief that global warming is caused by human activity?
- Does this association vary by demographic factors such as region and political affiliation?

Methods

Sample

- NSEE(National Surveys on Energy and Environment)
- The results are based on a telephone survey.
- The sample included 929 participants(adult residents of the United States).
- The sample were collected between october 4 and november 19, 2017.

Measures

- The main variables I plan to use in my study are **believer_cause** and **demog_edu**. Other variables are **believer_confidence**, **Region** and **demog_polparty**.
- believer_cause**: Is the global warming because of human activity or natural patterns?
- demog_edu**: What is your highest level of education?
- believer_confidence**: How confident are you that the average temperature on earth is increasing?(I put the participants who choose "Not confident" into the group who do not believe that GW is caused by human activity.)
- Region**: Including Northeast, South, Midwest, West.
- demog_polparty**: Political party affiliation. (Democrat or Republican)

Discussion

- This study does not provide evidence that overall level of education is a significant predictor of belief on the cause of global warming.
- Research may suggest that it is more likely for a person with a affiliation party of Democrats to believe that global warming is caused by human activity than it is for a Republican.
- Political ideology and media consumption may have a stronger influence on individuals' beliefs about the cause of global warming.

Results

Univariate

- 61% of participants believe that GW is totally because of human activity.
- 70% of participants have received higher education level(Some college or technical school, college graduate, grad or professional degree.)

Bivariate

- Chi-square test(p-value:0.06).
- we don't have enough evidence to prove that there is a relationship.
- The relationship between them is very **weak**.

Figure 1. Relationship between education level and belief climate change is caused by human activity.

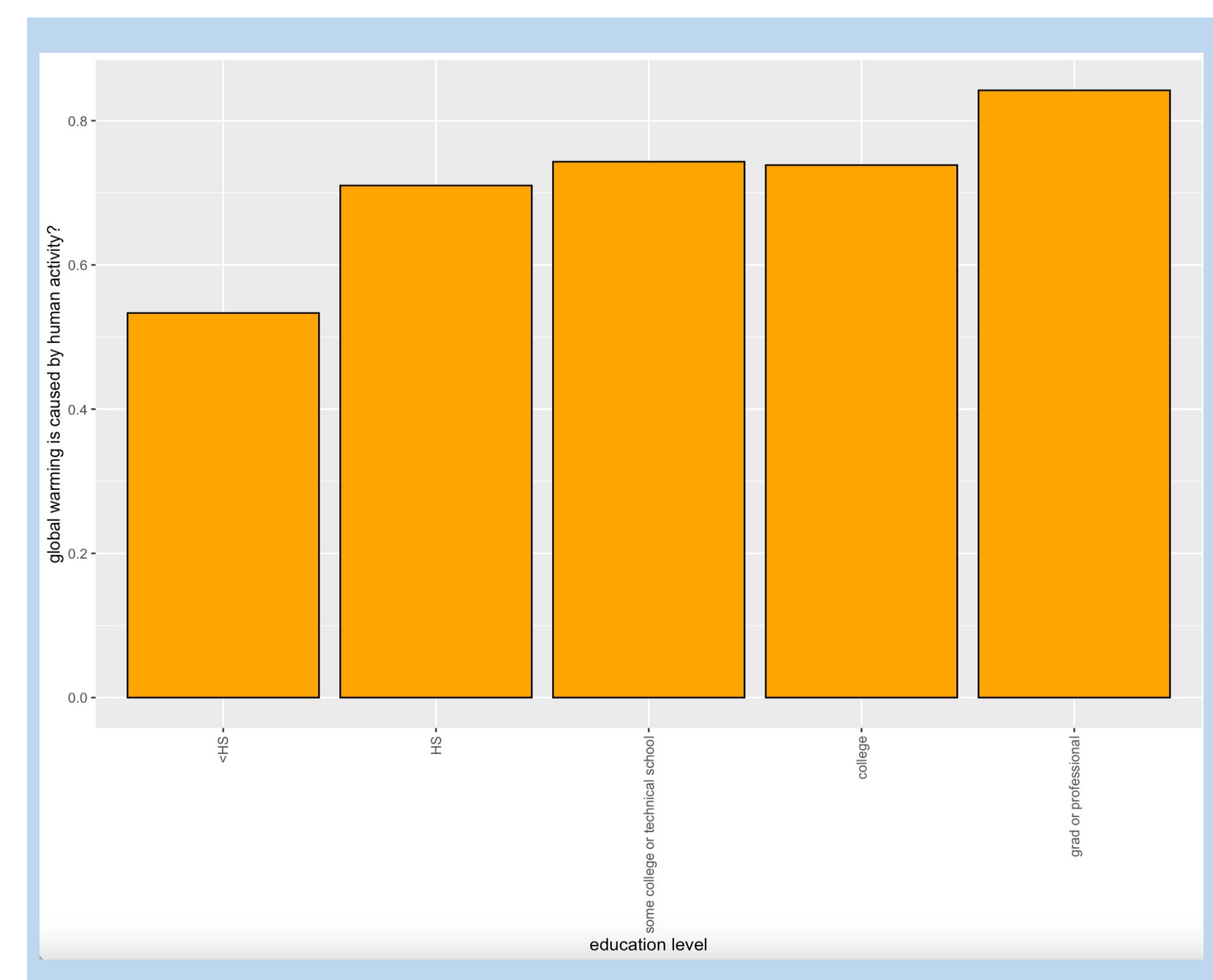
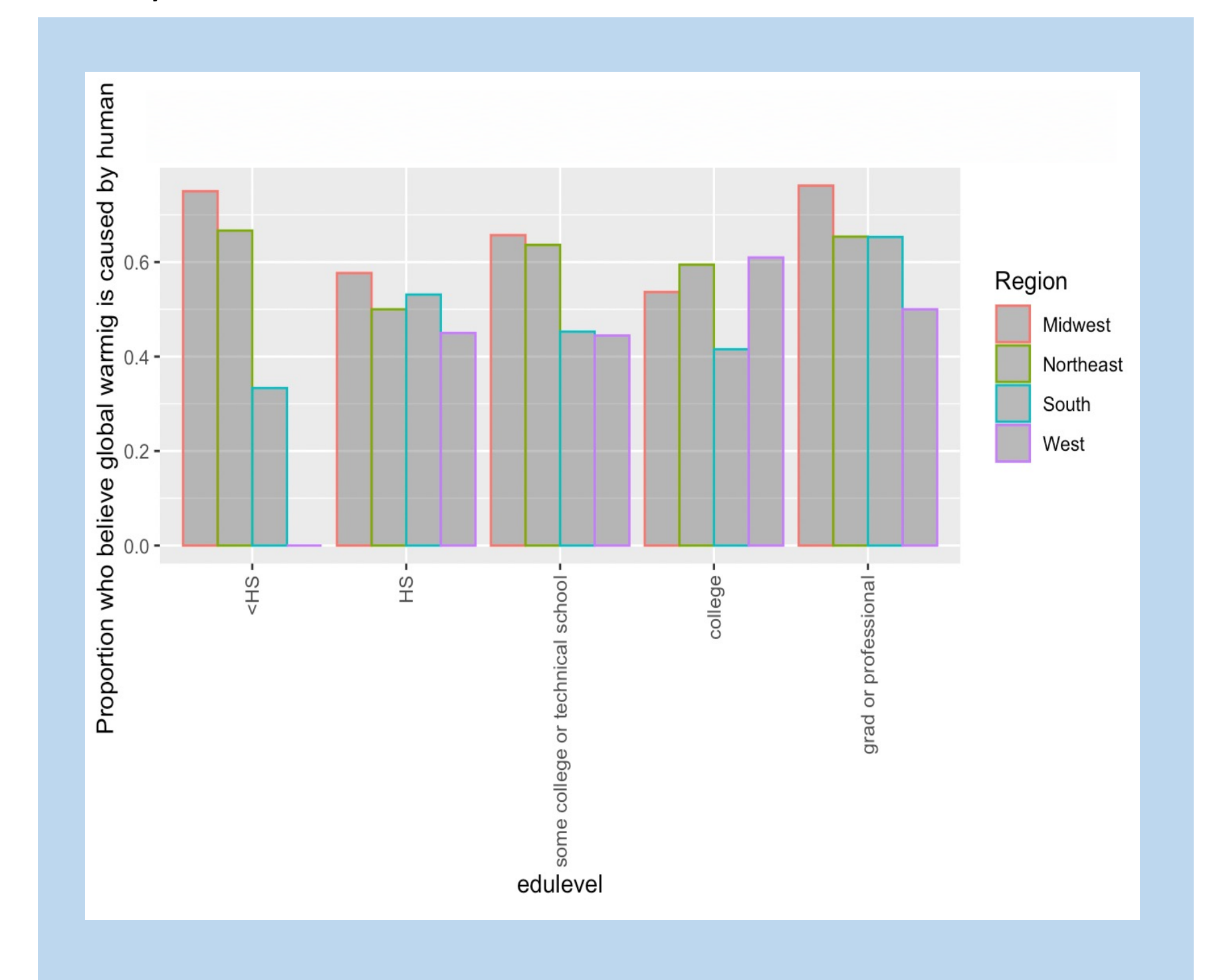


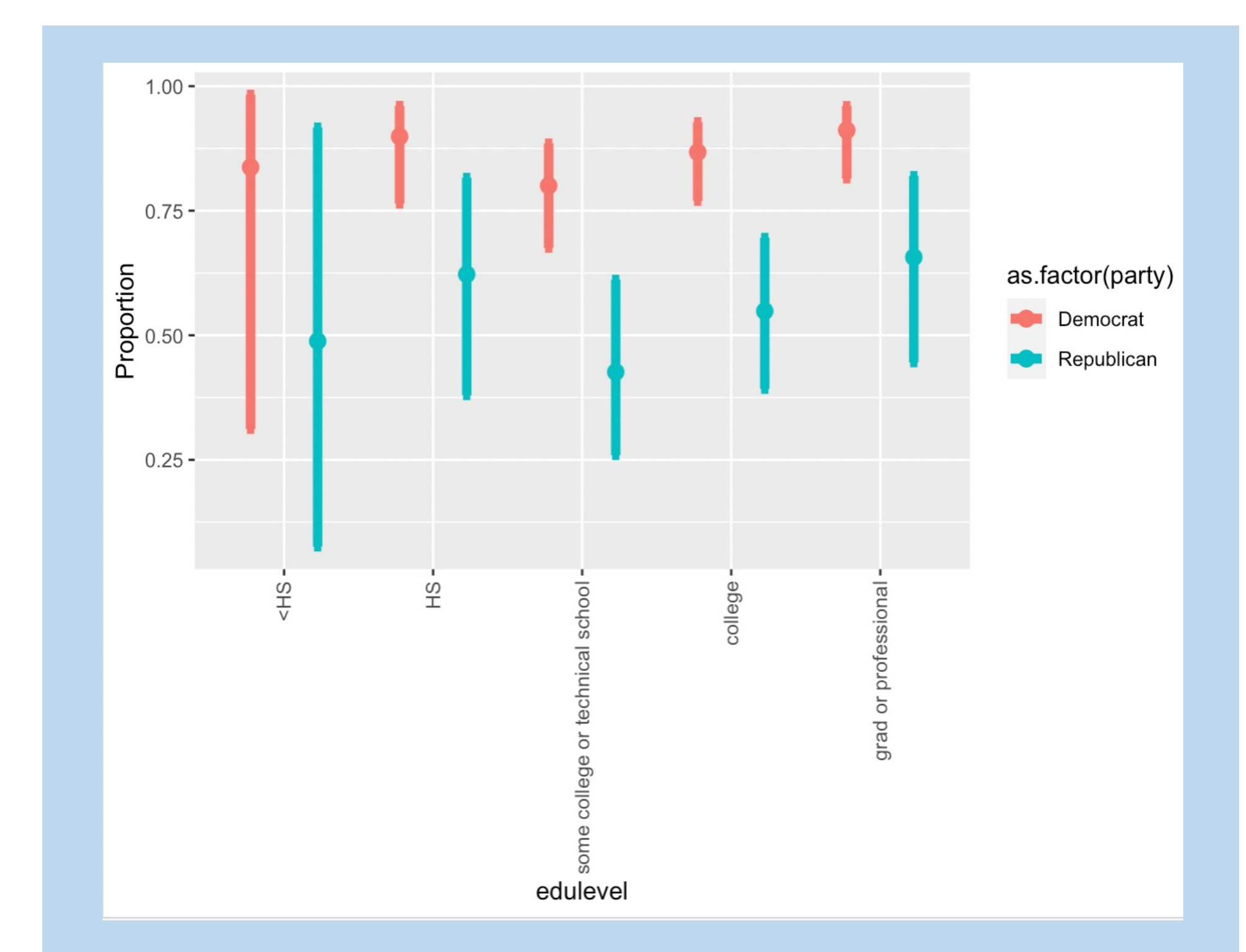
Figure 2. How regions associated with the relationship between education level and belief climate change is caused by human activity



Multivariate

- Compared with people from the South and the West, a larger proportion of people in the Midwest and Northeast believe that global warming is caused by humans. I think it may have something to do with whether people come from areas that support **Democrats** or **Republicans**.(figure2)
- After adding a third variable and controlling variables, I found that there is a significant relationship between the party(O.R.0.14, CI:0.07-0.28) and the GW belief since it has a p-value<0.05. This study provides evidence that political party affiliation is a significant predictor of belief on the cause of global warming.
- Also, the graph clearly shows that the mean of proportion of Democrat at all levels is higher than that of Republican.(figure 3)

Figure 3. How political party affiliation associated with the relationship between education level and belief climate change is caused by human activity



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