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Demographic Influence on Public Fears of Pollution

Isabella Morrow

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Isabella Morrow
Department of Political Science, Chapman University; Orange, California

Introduction to Research

- This study examines the fear of pollution by exploring how different demographics play a role in public perception of pollution.
- The pollution fears analyzed in this paper include fears of air and water pollution, fear of oil spills, fear of the extinction of plants and animals, and fear of climate change.
- Demographics included in this study includes income, education, gender, race, and political ideology.

Results: Women, Democrats and ethnic minorities were found to be more fearful of pollution.

- Higher incomes and greater levels of education can be expected to correlate with more fear.

Theories: Women are socialized to be nurturing, while men are socialized to be independent and unemotional.

- Wealthier individuals can afford to worry more about pollution since their basic needs are met.
- Ethnic minorities were found to be more likely to live in areas close to industry and heavy traffic; thus, exposing them more to pollution and environmental degradation.
- The Democratic Party is traditionally associated with supporting environmental concerns.

Abstract

As the population steadily increases year after year, more resources are expended and consumed, and the chance of permanently harming the world around us increases. The topic of pollution, specifically air and water pollution, is not a new concept to the public. For instance, many are aware that our actions negatively impact the environment we live in, but what are the public attitudes that coincide with pollution awareness? This study will aim to answer this question by analyzing why some people fear pollution and why others do not. Key demographic variables that will be analyzed will help explain differences in public opinion. Among interesting findings, race and gender demonstrated modest influence on predicting fears of pollution. Additionally, this study finds a strong relationship between fear of air and water pollution and political party affiliation. Aside from demographic influence, it is important to consider the strong impact political, social and economic issues can have on the variations of public environmental fears. For example, within recent decades, a significant spike in pollution fears have been observed. This sudden spike was the start of the public becoming more responsive to fears of potential environmental issues. Lastly, fear of pollution greatly affects changes in environmental policy due to the impactful relationship public opinion and public policymaking share. This study's findings express the significance in determining fear of pollution and its' impact on public policy; however, it is just the start in understanding the cause of pollution perception.

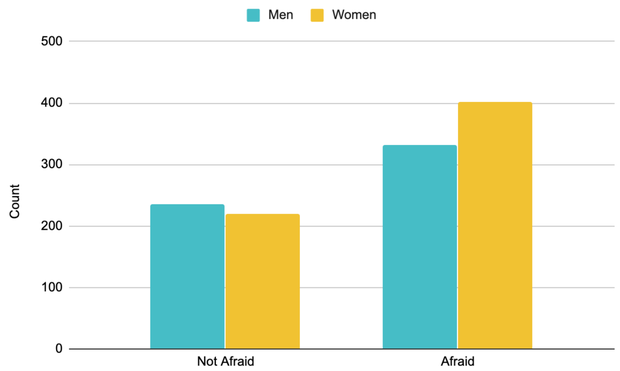
Hypotheses:

H 1: Women are more likely to fear pollution of oceans, rivers, and streams.

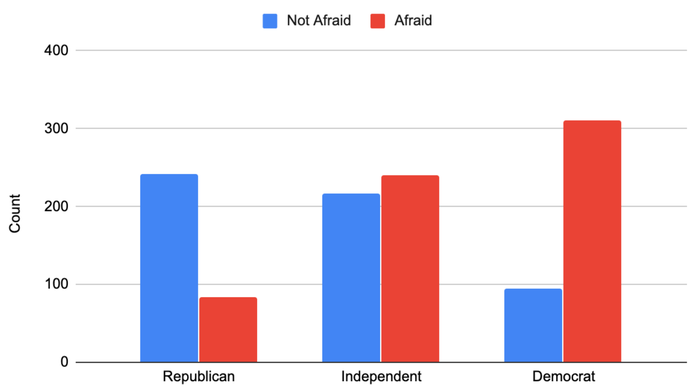
H 2: Individuals who identify as Democratic are more likely to fear climate change and global warming.

H 3: Individuals with higher incomes are more likely to fear polluted drinking water.

H1: Gender and Fears of Ocean, River, and Stream Pollution



H2: Political Ideology and Fear of Climate Change



H3: Income and Fear of Polluted Drinking Water

Table 1: Fear of Pollution of Drinking Water

Model	Coefficient (B)	Stand. Coefficient	Significance
RACE: Non-White Hispanic	-0.024	-0.011	0.806
RACE: Black Non-Hispanic	-0.222	-0.067	0.083
RACE: White Hispanic	0.452	0.134	0.000
RACE: Black Hispanic	-0.061	-0.005	0.859
RACE: Asian Chinese Japanese	0.489	0.083	0.008
RACE: Native American, American Indian, Alaska Native	0.777	0.083	0.004
Gender	0.196	0.095	0.001
Income	-0.002	-0.043	0.118
Education	0.001	0.007	0.813
Political Party Affiliation	0.165	0.270	0.000

*Significant at < .05
R squared for model is 11.3%

Table Interpretations: This table measures race, gender, income, education, and political party affiliation in reference to the participants' response to their fear of polluted drinking water.

- White Hispanic individuals had a significance level of 0.000. *Thus, individuals identifying as White Hispanics were more likely to fear drinking water becoming polluted.*
- Asian, Chinese, and Japanese had a significance level of 0.008. *Those identifying as Asian, Chinese, or Japanese were more likely to fear pollution of drinking water.*
- Native American, American Indian, and Alaska Native had a significance level of 0.004. *Further, those who identify themselves as Native American, American Indian, or Alaska Native were more likely to fear pollution of drinking water.*
- Gender had a significance level of 0.001. *Women were more likely to be afraid of drinking water becoming polluted.*
- Political Party affiliation had a significance level of 0.000. *Democrats were more likely to be afraid of drinking water becoming polluted.*
- Non-White Hispanic, Black Non-Hispanic, Black Hispanic, income and education were all rendered insignificant.
- Political party affiliation and White Hispanic had the highest standardized coefficients, meaning these demographics have the largest impact on the fear of pollution of drinking water.

Findings

H 1: Women were found to be more fearful of ocean, river and stream pollution, while men were more likely to not fear polluted oceans, rivers, and streams. Similar to this result, women were found to be more likely to fear all five other pollution fears included in this study.

H 2: Democrats were found to be more afraid of climate change and global warming. About 77% of Democratic respondents reported that they were afraid, while only 26% of Republican respondents reported that they were afraid. Additionally, Independents were found to be more fearful compared to Republicans.

H 3: Income was not found to be statistically significant in relation to the fear of drinking water becoming polluted. Income has a significance of 0.118, which is greater than 0.05. Further, income is not a demographic that helps determine public fears of drinking water pollution.

Conclusions

- Women were found to be more afraid of pollution, which can not be explained by a single theory.
- Democrats were more likely to fear pollution, while Independents were the second most fearful.
- Income only demonstrated a significant relationship with the fear of climate change and global warming. This relationship was negative, indicating lower incomes were more fearful of climate change.
- Race presented a significant association, while education failed to possess a significant association.
- It is important to recognize the recent increase in the fear of pollution, which can be attributed to political, social and economic changes in the United States. Demographic influence may have had stronger relationships during the start of the spike in pollution fears.
- The way studies measure environmental concerns are important because it results in inconsistent demographic relationships.

References

Chapman University. 2018. The Chapman University Survey of American Fears, Wave 5. Orange, CA: Earl Babbie Research Center [producer].

Liere, K. D. V., & Dunlap, R. E. 1980. The Social Bases of Environmental Concern: A Review of Hypotheses, Explanations and Empirical Evidence. Public Opinion Quarterly, vol. 44, no. 2, (Summer 1980) pp.181–197.

Macias, T. 2015. Environmental risk perception among race and ethnic groups in the United States. Ethnicities, vol. 16, no. 1, pp. 111–129.

McCright, A. M. 2010. The effects of gender on climate change knowledge and concern in the American public. Population and Environment, vol. 32, no. 1, September, pp. 66–87.

McCright, A. M., & Dunlap, R. E. 2011. The Politicization of Climate Change and Polarization in the American Publics Views of Global Warming, 2001–2010. The Sociological Quarterly, vol. 52, no. 2, pp. 155–194.

Uyeki, E. S., & Holland, L. J. 2000. Diffusion of Pro-Environment Attitudes? American Behavioral Scientist, vol. 43, no. 4, January 2000, pp. 646–662.