

How Demographic and Social Factors Correlate with the Perception of Gluten and Gluten Sensitivity.

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INTRODUCTION

Cases of gluten sensitivity have continued to increase. Types of gluten sensitivity include celiac disease, gluten/wheat allergy, and non-celiac gluten sensitivity. With the lack of biological evidence for the cause of non-celiac gluten sensitivity and the controversy within the medical community surrounding the actual biological existence of the condition (Carroccio et al., 2017), an understanding of how factors, beyond the biological, correlate the prevalence of gluten sensitivity and perception of gluten was sought after. These factors includes demographic and social factors such as gender, ethnicity, economic status, upbringing, family/friend behavior, and social media.



OBJECTIVES

The learning objective of the current study is to determine which of the presented factors: gender, ethnicity, economic status, upbringing, family/friend behavior, and social media etc., correlate with GS or gluten misconceptions to discover potential contributors of GS and discover additional research suggestions.

Research questions:

1. How do demographic factors such as age, gender, and race effect the likelihood of someone identifying as being gluten sensitive?
2. How do social factors such as behaviors and opinions of relatives and friends effect the likelihood of someone identifying as being gluten sensitive?
3. How do social factors such as behaviors and opinions of relatives and friends effect the likelihood of someone identifying as being gluten sensitive?
4. How do demographic factors, social factors, and media effect one's perception of gluten properties?

MATERIAL AND METHODS

The researcher conducted a quantitative study. A survey was constructed by the researcher and then reviewed by 13 individuals for content, clarity, and internal consistency. The survey was sent out to the student body (2,658) at a small Midwestern university. The final number of participants was 176. Questions covering demographics, social backgrounds, GS, social media, and perception of gluten (as a Likert scale assessing agreeance to misconception statements collected from Asiyambi et al. (2018) were included in the questionnaire.

Differences of variables on a continuous scale were tested between the gluten sensitive and non-gluten sensitive groups using the independent t test, which included:

- Age
- How many people the participant knows with a gluten sensitivity
- How many gluten sensitive relatives the participant has
- How old the participant was when they learned about gluten sensitivity
- How many gluten-free diet following celebrities/influencers the participant follows on social media, and misconception scores

Differences in variables on an ordinal scales were tested between the gluten sensitive and non-gluten sensitive groups using the two-way chi-square test, along with Phi Coefficient, variables included:

- If the participant grew up in a household with someone who was gluten sensitive
- Gender
- household income
- rural/urban/suburban upbringing
- whether or not the participant is an athlete

Difference in misconception scores between groups of different demographics containing 2 levels of variables and more than 2 levels of variables was tested using the independent t test and the one-way ANOVA test, respectively.

RESULTS

Demographics:

There were very few statistically significant differences between the demographics of the gluten sensitive group and the non-gluten sensitive group. The only exception was gender, in which the phi coefficient ($\phi = 0.19$), indicating no or negligible relationship, which suggests the significance could have occurred by chance.

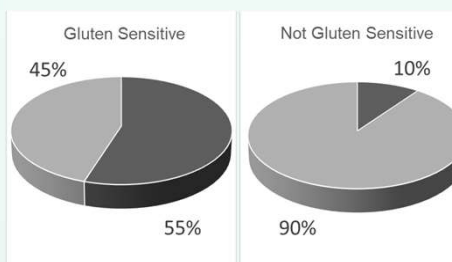
RESULTS CONT.

Social Factors

There were two statistically significant findings in relation to how social factors correlate with GS. Participants were more likely to report GS if they grew up with someone who had GS, $\chi^2(1, N=172) = 34.8, p < .001$. A strong positive association between the variables was determined ($\phi = 0.45$).

χ^2 Tests			
	Value	df	p
χ^2	34.8	1	< .001
N	172		

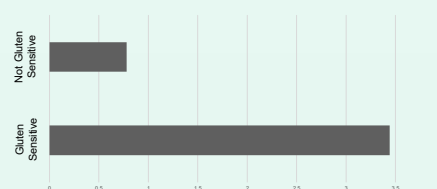
Percentage of each group who grew up with someone with a GS



Dark grey: Yes, Light grey: No

Participants with GS reported following more GS/gluten-free diet promoting celebrities and influencers on social media ($M=3.44, SD=9.8$) than people who did not report having GS ($M=0.78, SD=1.73$); $t(165) = -2.99, p = .003$; $d = 0.59$.

Mean number of GF diet promoting celebrities and influencers followed on social media



Misconception:

The difference in average misconception scores between participants of every collected demographic factor was not statistically significant.

CONCLUSION

The results suggest that social factors such as the incidence of GS within the household during upbringing and the number of GS/gluten-free diet promoting celebrities and influencers followed on social media do correlate with GS. The specifics of this correlation cannot be determined from the current study's experimental design. The findings support the need for additional research to explore the relationship between these social factors and GS.

Research question 1 can be answered because no significant correlation between demographic factors and GS was discovered, leading to the conclusion that there is no effect of demographic factors on GS.

Research question 4 can be answered because no significant correlation between demographic factors and perception of gluten was discovered, leading to the conclusion that there is no effect of demographic factors on the perception of gluten. Additional research would need to be done to answer research questions 2 and 3, as the specific details of the correlation cannot be determined from the current study.

REFERENCES

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