



Why are Americans against eating insects?

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Abstract

Some scientists are worried about food shortages in the future as the population grows, and food production is not growing fast enough to keep up (Tao and Li 2018). This has led many scientists to look at insects as potential replacements or supplements to current livestock because insects are much more efficient, cheap, and environmentally friendly to raise than traditional live stock and have more protein per mass (Hartmann and Siegrist 2017). However, the trouble is to get Americans and other Westerners to accept insects into their diet because they are the largest consumers of meat in the world, and to be able to do that we need to understand the Western aversion to eating insects. (Schuursman 2014) According to my research, the most likely factors that cause United States citizens to have an aversion to eating insects are because they see insects as pests to their crops, because insects look alien and scary to them, and, or because eating insects is not convenient, cheap, or socially accepted (Bellisle 2006). My study showed that there is a positive relationship between interest in trying insects and likelihood of buying them from the store, between not seeing insects as a pest and interest in trying insects, someone's adventurousness and their openness to trying new foods, and the likelihood of eating insects if it was socially accepted and interest in trying insects. My results are important because they show that there are several identifiable factors that determine whether or not someone is interested in trying insects. This shows that by meeting these factors, we can get Westerners to at the very least try insects.

Purpose

To understand why the United States has such an aversion to eating insects.

Questions, Hypotheses, and Predictions

Question: Why does the United States have such an aversion to eating insects?

Hypothesis: The US has an aversion to eating insects because Americans see insects as a pest rather than a potential food source, and because insects are seen as gross and scary, not food. In addition, many people do not eat insects because they are not accessible, and it is not socially acceptable to eat insects.

Prediction: My prediction is that people in science fields/agricultural, who grow up in a rural, who spend a lot of time in nature, who are more interested in trying new things, and don't see insects as pests are going to be the most willing to try insects.

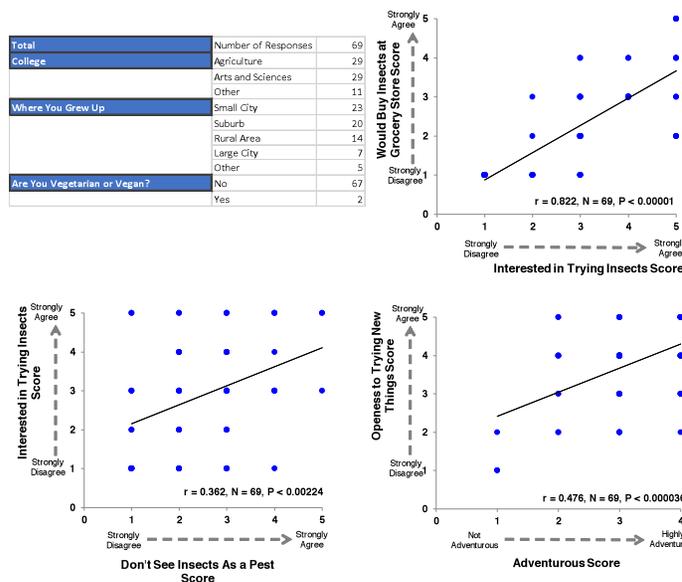
Study System

My study system is Americans as a whole, but because of the constraints of this research project, my survey was more focused on college students at Kansas State University. In general, K-State is a very agricultural school, This study will probably not be a very good representation of all Americans, but could be good for college students. People who grew up in Large cities are also underrepresented in the survey results.

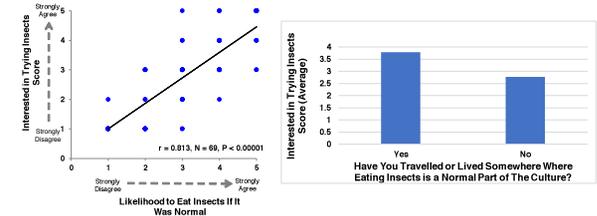
Methods and Experimental Design

To answer my research question, I developed a survey that asked students to rank their willingness to buy insects from the store to eat, their willingness to eat insects if it became a normal part of their culture, their willingness to try new foods, how scared they are of insects, how much of a pest they see insects as to our living environments and food sources, as well as to rank their willingness to try insects as a baseline to compare the other answers to. The questions were statements, and the respondents were instructed to select an option based on how well the statement describes them. The options were 1-5, with an answer of strongly agree given a 5 and strongly disagree a 1, with the appropriate numbers in between. The questions were phrased such that an answer of strongly agree would correlate with a certain willingness to try insects. Therefore, a high overall score would indicate a high willingness to try insects, and a low score would indicate a low willingness to try insects based on several factors. The survey also included general questions about their major, potential dietary restrictions that would prevent them from eating insects, experience travelling or living somewhere where eating insects was normal, how adventurous they are, and what type of area they grew up in. The survey included questions that were from another student doing a study about how people view cleanliness and disease related to eating insects, however the results of those questions were omitted from this study and analysis. I conducted this survey by setting up a table in the Kansas State University student union and offered a piece of candy to any student who took my survey from 10 a.m. to 2 p.m. cst. There were 23 responses from that method. In addition, the study was given to a class of 43 general etymology students. I then used correlation analysis to analyze the data.

Results



Analysis was done to compare the two survey groups, and they were found to be similar enough to compile into one data set.



Conclusions

From my work, we know some of the factors that contribute to why people eat/do not eat insects. This is important because now we can potentially get more people to eat insects, and because it gives us insight into why people eat the foods they do: convenience, social acceptance, and associations they make about the food based on their cultural background.

Future Directions

Because we identified some factors that contribute to the United States aversion to insects, further research should be to consolidate and make sure we know all the factors. Then, research should be done to find ways to actually overcome these aversions whether it be through advertising, presentation of the insects, different preparation methods of the insects, more education about the nutritional and environmental benefits of insects, or some other way. This experiment was very isolated and only done on college students at a very agricultural school where the students are going to be more educated about insects, less worried about cleanliness, and perhaps more educated about the potential food shortages and how hard it is to raise livestock than the average American. To get a truly representative sample of the American public, this survey should be given out to more people, and a much wider geographical and demographical range of people instead of just college students at one college in Kansas. The survey was also quite short, and a survey with more comprehensive and specific questions would do a better job of shining some light on why Americans do not generally see the eating of insects in a favorable light.

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Acknowledgements

Thank you to Dr. Jeremy Marshall for providing me with the opportunity to do this research project and helping me every step of the way, and thank you to Dr. Spencer Wood for helping me with survey questions and constructing the survey.