

Average Income in Countries Predicting Percent of Anxiety in Countries

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Background

This paper explores the implications of having a high average income, relating to anxiety. I have been interested in this topic because people with lower income should be considerably more stressed than people with higher income because they need to worry about housing, food, and everyday living needs. However, I read and encounter more anxiety diagnoses for people with higher income in my daily life. The detailed coverage of anxiety could be due to having high pressure to do well in school when in a higher socioeconomic status (Hieronymus). It could also be influences of social media that exaggerate symptoms of anxiety, as people in higher SES have easier access to technology and social media (Vannucci). Therefore, my hypothesis is that people who grew up in high income families are more likely to be diagnosed with anxiety. Using research data from a global health database and then putting it through a Pearson correlation test, I found a significant correlation between the two variables that supports my hypothesis. I will go into more detail about how I designed my experiment and the possible explanations for the results, including exposure to mental illnesses, influence of social media, and societal pressure for academic success.

Methods

Measures

The two variable constructs I wanted to measure was income and anxiety. My independent variable was income while my dependent variable was anxiety. In order to operationalize these, I chose to measure countries instead of individual people. I used the percentage of anxiety prevalent in each country from 1990-2017 and the average income of each country.

Sample and Procedures

I chose the sample of countries based on income, making sure there was a wide spread of different areas. I then looked up the same countries in the anxiety database to get the percentage of anxiety prevalent in each country. Using a public database that was established by a German research group, I sampled 25 countries with varying average incomes. The incomes were reported in US dollars. This resulted in diverse incomes ranging from \$440 to \$62,850. For my anxiety data, I used a global database called Global Health Data Exchange (GHDx) from the Institute for Health Metrics and Evaluation. I narrowed the search results to include only the year 2017, countries/territories, anxiety, percentage, and prevalence.

Results

I found that the mean of percentage of anxiety prevalent per country was 4.38 and the median was 3.88 (*see Table 1*). The average income for all countries selected is \$23,740 and the median is \$11,510 (*see Table 1*). I analyzed my data by using SPSS Statistics software to find the Pearson correlation. The Pearson correlation method is best suited for two continuous variables. This method tests the extent to which my two variables are linearly related by giving a correlation coefficient, r , between -1 and 1. The closer r is to the absolute value of 1, the more significant the results are. The closer r is to 0, the less significant the results are. When looking at the data in a scatterplot, if r is close to 0, the points will be more scattered. If r is close to 1 or -1, the points will resemble a line, therefore having a linear relationship (*see Figure 1*).

The correlation coefficient I found for my data was $r(23) = 0.627$. This is quite significant, considering I measured a variety of countries. For my statistical significance, or p-value, I got $p = 0.001$. This is excellent, since the closer p-value is to 0, the more statistically

significant the results are.

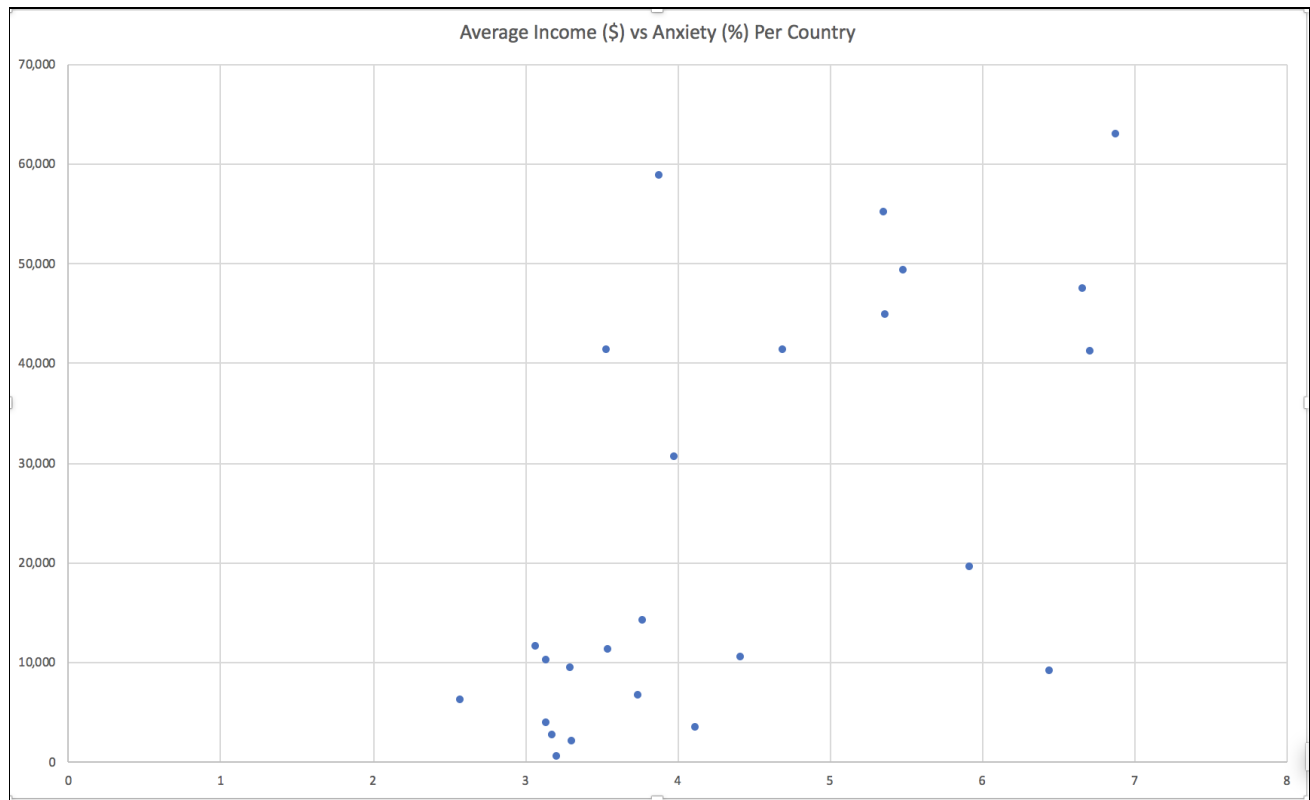


Figure 1: Scatter Plot of Anxiety vs Average Income.

Discussion

Based on the results of my archival study, my hypothesis is supported. What I found was that the higher the average income is in a country, the more likely there will be a high prevalence of anxiety, relative to other countries. This could be because people with higher income have more pressure from their friends, family, and school to do better academically, which causes anxiety (Hieronymus). The support for my hypothesis could also be due to how accessible social media is for varying incomes—higher income people will have more access to social media and vice versa—and more social media usage/time spent on social media is linked to higher likelihood of having an anxiety disorder (Vannucci). In my opinion, there are a combination of

reasons why there is a high correlation between anxiety and income, so it cannot be pinpointed as only being social media or only being academic pressure. However, to delve deeper into this idea, a study would have to be conducted on individuals rather than countries to understand more personal factors of how anxiety is developed. Subjects would be randomly selected, then the data would be collected by giving out a survey. The subjects would need to answer what type of household they grew up in (high, middle or low income), their current income, and whether they have been diagnosed with anxiety. Whether it be exposure to mental illnesses through social media, family upbringing, societal pressure in school, or any other invasive components, it is not feasible for me to do a more detailed study at this moment to gain insight into why individuals which higher income are more likely to develop anxiety.

I had the benefit of finding databases for both constructs I was measuring, which is an advantage of my study. Other advantages include the widespread knowledge of at least one construct, since every citizen knows their specific income. People should also know about anxiety disorder, since mental health has been highly advocated for in recent years, but countries with lower SES may not have the resources to promote awareness of mental illnesses as much as those with high SES. The main disadvantage to my study is the inability to study individuals rather than countries, since I would get more detailed, credible data that I collected myself rather than from databases. The databases I used may not have fully collected data for each country. Furthermore, countries themselves also may not have the resources to collect information on income and anxiety diagnoses for every citizen. Consequently, I cannot confidently generalize the results to individuals since I used data from countries.

All in all, countries with higher average income are highly correlated with countries having a higher prevalence of anxiety disorder. Further studies will be needed to explain what factors play into this correlation.

References

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Appendix

	average income (\$)	anxiety (%)
USA	62,850	6.88
France	41,070	6.71
Germany	47,450	6.67
Brazil	9,140	6.45
Greece	19,540	5.92
Austria	49,250	5.49
Canada	44,860	5.37
Sweden	55,070	5.36
United Kingdom	41,330	4.7
Malaysia	10,460	4.42
Bolivia	3,370	4.12
South Korea	30,600	3.98
Singapore	58,770	3.88
Poland	14,150	3.78
Thailand	6,610	3.75
Romania	11,290	3.55
Japan	41,340	3.54

India	2,020	3.31
China	9,470	3.3
Madagascar	440	3.21
Ukraine	2,660	3.18
Russia	10,230	3.14
Philippines	3,830	3.14
Costa Rica	11,510	3.07
Colombia	6,190	2.58

Table 1: Average Income and Anxiety in 25 Countries.