

Happiness in Sweden

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Research Question:

Is self-reported happiness related to economic privilege?

Data Description:

This data is from 1989 and is a set of 1189 responses to a survey administered in Sweden in 1998. There are a total of 99 questions (making the size of the data 99 x 1189). The sample was adults ages 18-77 residing in Sweden. There was a response rate of 60%. The data contains ordinal, nominal, continuous, and discrete data.

Variables Used:

Variable	Type	Description
Happiness	Ordinal	Self-reported happiness. Reported on a scale from 1-5: 1. Very happy 2. Quite happy 3. Not very happy 4. Not happy at all
Household Income	Continuous	A combination of two variables: Household income divided by number of people in household. Originally reported as 1 = 1,000 SEK, manipulated to represent actual value for visualization
Socio-Economic Class	Nominal	Self-reported socio-economic class with the following options: 1. The lower class 2. The working class 3. The middle class 4. The upper middle class 5. The upper class

Data Justification:

This data addresses the research question because self-reported happiness indicates happiness. Although economic privilege is challenging to represent - income and self-reported socioeconomic can simulate it. Income represents pure economic privilege, but socio-economic class helps to represent the social aspect of economic privilege.

Purpose:

The purpose of this project is to explore the relationship between privilege and happiness. This is relevant as whether economic privilege is related to happiness can be relevant as people choose career paths. It also gives insight into the effect of privilege on mental health.

Target Audience:

The target audience is people who are considering careers. Potentially college students, high school students, or people considering a career change.

Insights:

Class -

The higher the socio-economic class of a person, the higher their reported happiness. This is fairly linear, with the exception of people identifying as being in the lower class who were significantly less happy than the general linear trend. The lower class also had the largest range of reported happiness. The majority of people identified as middle class, followed by working class, upper middle class, lower class, and upper class.

Income -

There is a linear trend between income and happiness, however, the trend is less than the relationship between socio-economic class and happiness. It appears that most income brackets fall between quite happy and very happy with some falling between not very happy and quite happy. A disproportionate amount of the incomes with lower happiness (2) were lower income. The majority of people earned between 5,000 and 10,000 SEK per month.

Overall-

Generally, economic privilege is correlated with happiness. An interesting phenomenon is that socioeconomic class is more highly correlated to happiness than income. This is interesting because socio-economic privilege is more of a social and cultural indicator than income. One hypothesis is that class does make people more happy, but another is that people in higher socio-economic classes are simply more likely to report that they are happy, representing a cultural phenomenon. Another interesting finding is that people in the lower class were significantly less happy. This suggests that some level of disadvantage significantly affects happiness. Regarding the relationship between income and socio-economic class, something that is unexpected is that according to the data, people in the upper class earn less than people in the upper-middle class. This seems highly unlikely. I have analyzed the data inducing the outliers that I originally excluded and the trend still holds. I am unsure how to interpret this.

What needs improvement:

The first obvious flaw is the discrepancy in the relationship between people in the upper class and their income. Another thing that could be improved is the barplot for the relationship between income and happiness. Although it is informative, the limiting factor of happiness being on a discrete scale makes the graph harder to interpret and visually unappealing. Another variable that could be considered is education. Due to a lack of understanding of the relationship between the US school system and the numerous options for the level of schooling in Sweden, I was unable to use this data.

Sources:

“Gallery”. *Shiny*. <https://shiny.posit.co/r/gallery/>

“Create a page with a top level navigation bar.” *GitHub*.
<https://rstudio.github.io/shiny/reference/navbarPage.html>

“Invert y-axis in barplot.” *stack overflow*.

<https://stackoverflow.com/questions/21911993/invert-y-axis-in-barplot>

Process and Development:

The first task was to clean the data. I extracted the appropriate variables and renamed them appropriately. I omitted the missing variables. I manipulated the income variable to reflect the income per family member. I removed outliers and data that had values that indicated a lack of response. I rounded the income so that the values could be more easily used and adjusted it by 1,000 to represent the true value. I found the mean income and happiness per class. Without this, on a scatterplot, the dots would show up as an indistinguishable line. For each graph, I created two graphs one that displayed the appropriate visualization for the desired variable.

What-Why-How:

Box plot:

What - A boxplot describing the relationship between the desired privilege indicator and happiness.

Why - This serves a variety of purposes. One is to indicate the range of happiness for a category. Another is to indicate how a category may be affected by outliers.

How - The graph shows the minimum, maximum, median, and quartile ranges showing the range.

Privilege and Happiness Scatterplot:

What - A scatter plot of the desired variable and happiness.

Why - This addresses the research question of the relationship between happiness and economic privilege.

How - The scatterplot and trend line demonstrate the relationship.

Income and Class:

What: A scatterplot of the relationship between income and class.

Why: To indicate the complicated relationship between class and income.

How: The dots and line show the trend between the variables.

Histogram:

What: Histograms of the number of people in each socioeconomic class.

Why: This is to give additional information on class and income. This value demonstrates the importance of certain values - how many people they apply to.