



Untitled

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Coursera assignment week 1: (Data Management & Visualization)

Data Set: I plan to use the NESARC data set. I am interested in the health benefits of moderate wine consumption.

Primary Topic of interest: To begin with, I will check on whether consumption of wine helps cardiovascular health, with focus on the health of arteries. Assuming a correlation, what level of wine consumption is optimal for cardiovascular health (for example: daily, 3 – 4 times a week, once a week, once a month, etc). My codebook will include variables for how often participants drank wine in the past 12 months against participants diagnosed with hardening of the arteries or arteriosclerosis in the last 12 months.

Secondary Topic of interest: Secondarily, I will check on whether consumption of wine helps prevent heart attacks. Again, assuming a correlation, what level of wine consumption is optimal to show positive results. My codebook will include variables for how often participants drank wine in the

past 12 months against participants that were diagnosed with a heart attack or myocardial infarction in the past 12 months. There are additional variables under the category for Medical Conditions so additional correlations can possibly be explored.

Hypothesis: Regular, but moderate, consumption of wine helps cardiovascular health. More specifically, consumption of 1 – 2 glasses of wine per day is optimal, while more consumption, or less, does not show the same level of benefits.

Research:

I checked 5 articles (listed below). Based on the information in these articles:

- o I should expect to see health benefits associated with moderate consumption of wine (1 – 2 glasses per day);
- § cardiovascular disease is low in populations that consume larger amounts of wine, particularly red wine
- § the French Paradox was also referenced as an indication of the benefits of moderate consumption of red wine (there is a lower rate of cardiovascular disease in spite of the high intake of saturated fats)
- o Moderate consumption helps protect the lining of the blood vessels by effecting the accumulation of fatty plaques; it also helps increase good cholesterol (HDL); the benefits most likely come from properties in the skins of the grapes
- o The amount of consumption is key: moderate consumption provides more benefits than abstaining, but higher consumption contributes to higher risk of cardiovascular disease and potentially other health problems
- o One article suggested the risk of coronary disease is decreased by approx. 20% with moderate consumption, and the risk of heart attacks is decreased by approx. 32%

- o Some studies don't think the evidence is sufficient to recommend abstainers begin drinking red wine

Articles:

- o How Red Wine Helps the Heart (from WebMD)
- o Red Wine and Your Heart (from AHA journals)
- o Red Wine, antioxidants and resveratrol: Good for your Heart? (from Mayo Clinic)
- o Moderate Red Wine Consumption and Cardiovascular Disease Risk: Beyond the "French Paradox": (authors: Lippi, Franchini, Favaloro, and Targher)
- o Alcohol and Cardiovascular Health (from Journal of American College of Cardiology)