When looking at the way statistics are used to this day, we can use the expansion of data to improve our accuracy of certain predicting parameters. When doing so, we can get a painting of a larger picture and be able give reasonable next steps that are going to be taken to solve the said issue. This is commonly done in the medical field when looking to stop a problem from starting early on. Considering new infectious diseases, and other kinds of rare illnesses, we can use chi square testing to see if two of the variables are dependent on each other. This would make lots of sense for the medical field as they are trying to figure out what causes that said problem, along with being able to prevent it. The Study I found was using the Chi square test to study the Hepatitis B infection (Odetunmibi et al., 2021). In the study, they were able to find out that the age group of thirty-one- to fifty-year-olds were affected the greatest, and that females had a higher risk of contracting the disease (Odetunmibi et al., 2021). Their Chi-Square test of independence was also to see if that the two variables age, and gender were not independent. And with that test they were able to connect that women have a 66% higher risk of contracting hepatitis-B. Furthermore, we can use statistics to be able to connect the dots with certain variables, and see if they are correlated or connected in any way.

References:

Odetunmibi, O. A., Adejumo, A. O., & Anake, T. A. (2021). A study of Hepatitis B virus infection using chi-square statistic. *Journal of Physics*, *1734*(1), 012010. https://doi.org/10.1088/1742-6596/1734/1/012010