**Correlation vs Causation:**

It’s very wrong to say that if two RV (X, Y) are highly correlated then X causes Y or Y causes X,

Let’s understand using an example, below given a figure, where

* On x-axis we plot chocolate consumption per year
* On y-axis we plot number of nobel price winner per 10 million population.

These two RV gives a high correation of 0.8, but it’s very absurd to say that:

* If a country consume more chocolates then that country will produce more nobel prize winner.
* Or if a country have more noble prize winners then that country consume more chocolates.

So on the basis of this example we must not use correlation for understanding causation.



