

Correlation and Causation

Some of the correlations between “Literacy Rate” and “Child Mortality Rate” derived are:

1. Total literacy and total mortality: -0.4571296360120202
2. Rural literacy and rural mortality: -0.4292860455506246
3. Urban literacy and urban mortality: -0.4350839382757739
4. Rural male literacy and rural mortality: -0.3330908460846775
5. Urban male literacy and urban mortality: -0.3172926701208852
6. Rural female literacy and rural mortality: -0.47834647049589907
7. Urban female literacy and urban mortality: -0.4973832369003977
8. Total male literacy and child mortality: -0.4147976487729266
9. Total female literacy and child mortality: -0.4652524961596748

Now we will try and make sense out of these results and see if we can come to a conclusion for what could have been the cause. As we already know, just because two parameters seem to be correlated, it does not necessarily imply that one causes the other. However, I am looking at literacy rate and child mortality because our intuition says that an increased literacy rate would mean better livelihood for everyone, which means that people can afford and are ready to spend money on better healthcare for their children. This is also reflected in our results, as there is a negative correlation of -0.45 between child mortality rate and total literacy. Now let us observe correlations 5 vs 7 and 4 vs 6. It is evident that the decrease in infant mortality rates is more with increased female literacy rates than with male literacy rates (-0.3 with male literacy and -0.45 with female literacy). One of the reasons could be that females are more aware of the care that has to be taken care of an unborn child, and if they are educated, they can make sure that the child's health is not compromised. This results in a healthy child. Another reason could be that better education gives the females a more significant role in the decision making of the household. Therefore they can spend more on child care if they feel it is required (because they are well educated, they are better placed to judge if treatment is needed). Now, we are not able to generalise this data and say that this would be applicable in all family units. Still, it is pretty clear that higher female literacy, and even literacy in general, seems to imply lower immortality rates. Hence, one of the primary focuses of the state governments should be to create parity between the men and women of their state by promoting women education. However, another thing we must keep in mind is that female literacy may not be the sole indicator for the decrease in infant mortality rates but just one of the many factors. Healthcare services, caste, sex, religion, government schemes, etc., may also have a strong influence on the data.