WINE CONSUMPTION AND HEART DISEASE

2. Study Design

The 18 industralized countries used in the study were not selected randomly from any well-defined population of countries. Therefore, the observed pattern cannot be inferred to hold in some general population, for example the population of all industralized countries, unless we assume that the countries are representative of the population.

What can then be inferred? As there is no random sample, the statistical results apply only to the participating countries. Any extrapolation of the pattern to other countries comes from the assumption that the relationship between wine consumption and heart disease is similar for others. This is not necessarily a bad assumption. The point is that extending the inference to other countries is surely open to question.

This is an observational study, so no causation can be inferred. Though, there is a strong negative association between death rates of heart disease and wine consumption, one cannot claim that drinking wine causes a reduction in heart disease deaths. One cannot rule out the possibility that confounding variables are responsible for the observed differences among the death rates in the 18 countries. The 18 countries differ in many aspects, social, environmental, and cultural. These differences, not the level of wine consumption might be responsible for the observed differences in death rates of heart disease. For example, as wine drinking is said to be related to a relaxed way of living, it is possible that this attitude, very common in some of these countries, reduces the risk of heart disease.

Although this particular study did not establish any cause-and-effect relationship between wine consumption and heart disease rates, it was very important for the future research in the area. The recent research conducted by the researchers from Harvard Medical School found that men who had two to four drinks a week had the lowest death rate-about 22 percent lower than those who shunned alcohol.