

# Module 3b – Lurking Variables

# Correlation vs Causation (*Be Careful*)

- Correlation/Association **DOES NOT** necessarily imply Causation (though it can be evidence of causation)
- Lurking Variables (often a third variable explains variation in the other two)
  - Ice cream trucks and drowning
  - Working while pregnant and health issues with babies
  - More CO2 emissions and longer life expectancy (by country)
  - Kids who eat breakfast do better on standardized tests
  - Eating out late leads to headaches the next day
- What is the “lurking” variable in each case?
- Indicators of causation
  - 1. Time Order (SAT comes before College GPA)
  - 2. Logic (Gender and Pay inequality)