Small Group Exercise: An Introduction to Correlation

Does smoking cause lung cancer? Does texting while driving cause accidents? Are thin people healthier? You may think you know the answers to some or all of these questions already. On what evidence and/or reasoning do you base your answers?

The collection and analysis of data to determine whether two variables are “linked” are important elements in scientific investigations. Finding variables to be linked (i.e. correlated) suggests the possibility of a cause-and-effect relationship.

The purpose of this small group exercise is to evaluate information based on the results of scientific research, reported in a newspaper article. Read the article and be prepared to discuss in class.

Doing poorly

Study links low income with high blood pressure

United Press International

ATLANTA – The less money you earn, the more likely you are to have high blood pressure, a medical researcher says.

Dr. Neil Shulman, an associate professor of medicine at Emory University, says that conclusion is borne out in a study of 72,000 people in Georgia who suffer from moderate to severe hypertension.

“The lower the income, the higher the blood pressure,” said Shulman, a co-author of the study. “This correlation is so compelling that it is almost possible to take someone’s blood pressure and then figure out how much that person makes a year.”

Shulman said the statistics are significant because it means that “those who have the hardest time affording treatment are in a deadly bind.”

“They are more likely to have severe hypertension, and they have to spend a much larger percentage of their income on medicine,” he said.

Cost, according to Shulman, has become the chief obstacle to treatment for many lower-income Americans.

He said one-third of the people with untreated severe hypertension will develop complications within 11 months. But he said that when he and his colleagues surveyed 72,000 Georgians with moderate to severe hypertension “we found that only 20,000 of them are on medication.”

“That’s 52,000 people not on medication – a significant number of which will develop severe complications within the next year,” he said.

The survey, results of which were published in the American Journal of Public Health, revealed that blacks are five to seven times more likely than whites to suffer moderate to severe hypertension, with black hypertensives 10 times more likely than white hypertensives to fall prey to end-stage renal disease – kidney failure requiring dialysis and a common complication of uncontrolled high blood pressure.