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Essay 1: Correlation Versus Causation

W241: Field Experiments

Article chosen:
Bullying in childhood to blame for one million obese Britons

Anti-bullying campaigns, particularly around the type happening among children, have exploded in popularity over the last couple years. Due to the popularity of the subject, there has also coincided an increase in pseudo-scientific research attempting to prove the harms of bullying. A recent publication from The Telegraph purports that a 50-year observational study done at King's College London shows early-childhood bullying raised the risk of obesity in adulthood. In addition, "[the] experts said that bullying was a 'silent killer' which increased the risk of blocked arteries leading to potentially fatal heart attacks and strokes."

The data from the study came from survey responses from the parents of 7,000 children born in 1958 in the years 1965 and 1969, then later tracked those children at age 45 to record health metrics. To arrive at the conclusion that bullying caused increased risk of obesity, the study highlighted that 26 percent of women who were at least occasionally bullied ended up in the obese section of the Body Mass Index (BMI) scale at age 45, where only 19 percent of women who were not reported to have occasionally been bullied. The article points out that the study attempted to use statistical methods to reduce the impact of confounding variables "including IQ, social and lifestyle factors that might have influenced their results, including IQ, social background, smoking, diet and exercise."

In order to believe this causal relationship to be true, we must assume that the survey results from the parents of the children must have been accurate. The article specifically mentions that current estimates of bullying in England are thought to be about 1 in 5 children, and the study's data from the 1960s reported 28 percent of respondents reported their children were bullied. While the percentages then and now may not seem significantly different, it could be possible that the parents responses over-estimated the occurrences of bullying with their children. Perhaps parents who reported their child was bullied were also more likely to pass down lessons of making excuses that led to those children growing into adults who did not feel independently responsible for their diet and exercise patterns. Or perhaps not.

The observations by themselves do not wholly discount the relationship between bullying and obesity, in fact they support a relationship between the two, but the observations do not prove which causes which. Perhaps the children were bullied as children because they were obese then and most remained so. The article doesn't address the obesity data of the subjects in childhood and doesn't link to the study and I couldn't find a direct link to the original research. Without knowing the obesity before and after childhood, I don't understand how the effects of bullying could be tied to obesity, but I also don't know for sure the researchers didn't account for this and the reporter just failed to mention anything about it.

In order to truly prove that childhood bullying has a causal relationship with adulthood obesity, I would design an experiment involving all children entering their first year of school

with at least a couple hundred students. Starting with the first day, a random selection of those new students would be assigned to be bullied regularly through teacher intervention, such as forcing the subject to read out loud something far more difficult than their peers or some other act of effective embarrassment. While the teacher would not be the one to directly issue the bullying, the intentional setting would be monitored to record the results responses from the children and adjusted until acceptable amounts of trauma had been inflicted upon the intended recipient. Additionally any child not randomly selected for bullying would receive extra attention during school to avoid creating bullying effects outside the experiment. After four or five years of this continued treatment had been administered and resulting data collected, the experiment would stop and wait for resulting observations when the children were fully grown.

If the children randomly selected for bullying ended up more obese than their counterparts, we could reasonably assume that childhood bullying does indeed cause adulthood obesity. There would still some doubt in causality from this experiment due to limits in controlling bullying outside of the school environment and the inability to force children to bully other children just from intentionally creating reasons to start mocking. This experimental design suffers some serious ethical debate as intentionally creating harm to the children would violate most modern philosophies on acceptable research involving human subjects. In addition, due to media attention and public campaigns to reduce bullying it may be becoming harder to get children to unknowingly participate in bullying activities.