# Problem Set 3

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1. As emphasized in class lecture, mother's education is a very good predictor of infant health outcomes (such as birthweight and infant mortality). To see this, if we were to estimate the following specification: $infant\ mortaility = \alpha + \beta mother\ educa + \epsilon \ldots$ eq (1) the coefficient on $\beta$ will be greater than zero. From this finding we can state that

a. Mother's education leads to improvements in children's health (in other words; a causal relationship).
b. Just because $\beta > 0$, it does not suggest a causal relationship, as other factors that can affect both mother's education and children health are not accounted for.
c. Educated mothers are likely to be from richer famlies, which can confound the relationship in eq (1).
d. both (b) and (c).

2. One way to get at the causal relationship between mother's education and infant health would be to conduct a randomized experiment, such that a random group of selected mothers are provided with better education compared to the control group. This type of experiment

a. is pareto optimal, so should be conducted around the world
b. is unethical, although pareto optimal
c. should be conducted for the sake of others
d. both (a) and (c)

3. Disparity in infant health outcomes here in U.S. based on mother's education is only at the average of health variables (such as birthweight) but not across the entire distribution (of birthweight).

a. True
b. False

4. The general idea of income-gradient speaks to a causal relationship between higher income and better health stock.

a. True
b. False

5. As discussed in the lecture, several studies have pointed to the direction supporting that education has a causal impact on improving health outcomes. Based on this, say hypothetically, if education of African Americans were made similar to that of whites, then health disparity across these two race groups would not exist.

a. True
b. False