Drill-BC-1.4.3

Drill: Am Biased?

Q1. You're testing advertising emails for a bathing suit company and you test one version of the email in February and the other in May.

**Bias types:**

**Selection bias, Bias in assignment to conditions, contextual bias, observer bias.**

The bias here is Sampling bias in broad sense and the bias here is from assignment to conditions.

Here there are two groups one version is taken in Februrary and other in May. The group tested in February may have less sales or may not respond to ad emails since it is colder in February compared to May and Viceversa. This will cause the data to be skewed towards one result of experiment. We are falsely assuming that we will get same response to ad emails of bathing suit in colder month of Feb and hotter month of may.

The initial design here should be test both email versions of bathing suit company in the hotter month of May where people are interested and would respond better. The two groups should be sent email at the same time in the month of may.

Q2. You open a clinic to treat anxiety and find that the people who visit show a higher rate of anxiety than the general population.

The bias here is contextual bias or bias with the setting.

Here we cannot make the conclusion that people who visit an anxiety treating clinic show a higher rate of anxiety than the general population. The people who come to this clinic are obviously having lot of anxiety and is not good sample for making conclusions about the population. We are again falsely assuming that people who visit this clinic has same anxiety levels as the general populations.

The initial design here should instead be such that the sample should not be selected such that we are selecting only people with higher anxiety levels. So if we select people who come to any clinic other than anxiety treatment clinic as sample and then measure the anxiety levels. From that we can say or hypothesize that people who come to clinics other than anxiety treatment clinic have higher anxiety than general population.

Q3. You launch a new ad billboard based campaign and see an increase in website visits in the first week.

I donot see any particular bias here.

Q4. You launch a loyalty program but see no change in visits in the first week.

The bias here is contextual bias

The sample should be collected at later times more than a week, as loyalty program takes time as many people do not see that such program exists immediately especially since this is not advertised extensively.