

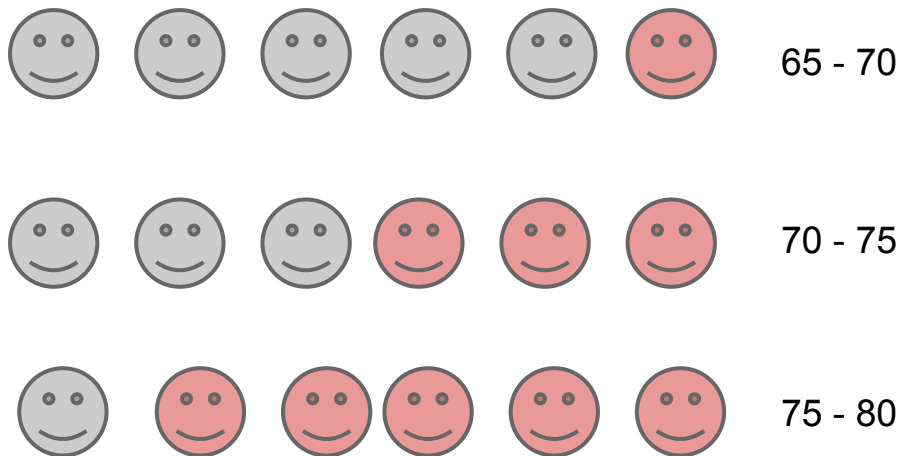
Blocking / Adjustment

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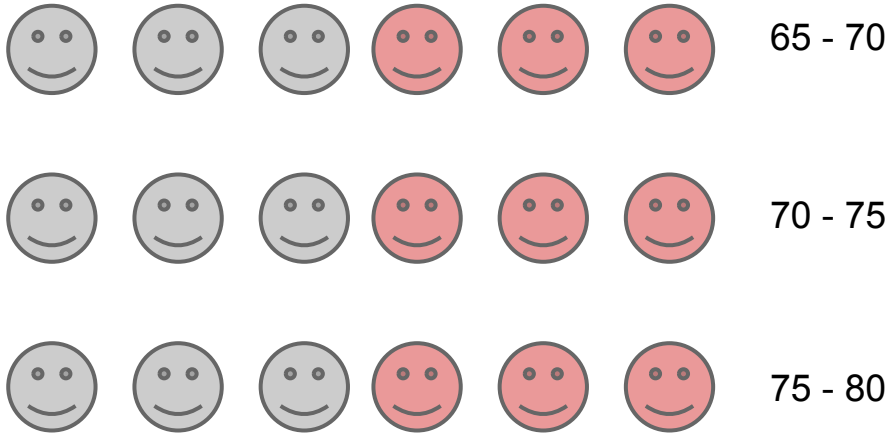
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- You're looking at improving mobility among the elderly using fitness trackers as motivation in a clinical trial where you randomize Fitbits to $\frac{1}{2}$ of the subjects while the remaining are controls
- You're worried that age would confound the relationship; if there were more younger people in the fitbit group, you might see a spurious effect



Randomizing overall may wind up with unlucky imbalances over age groups

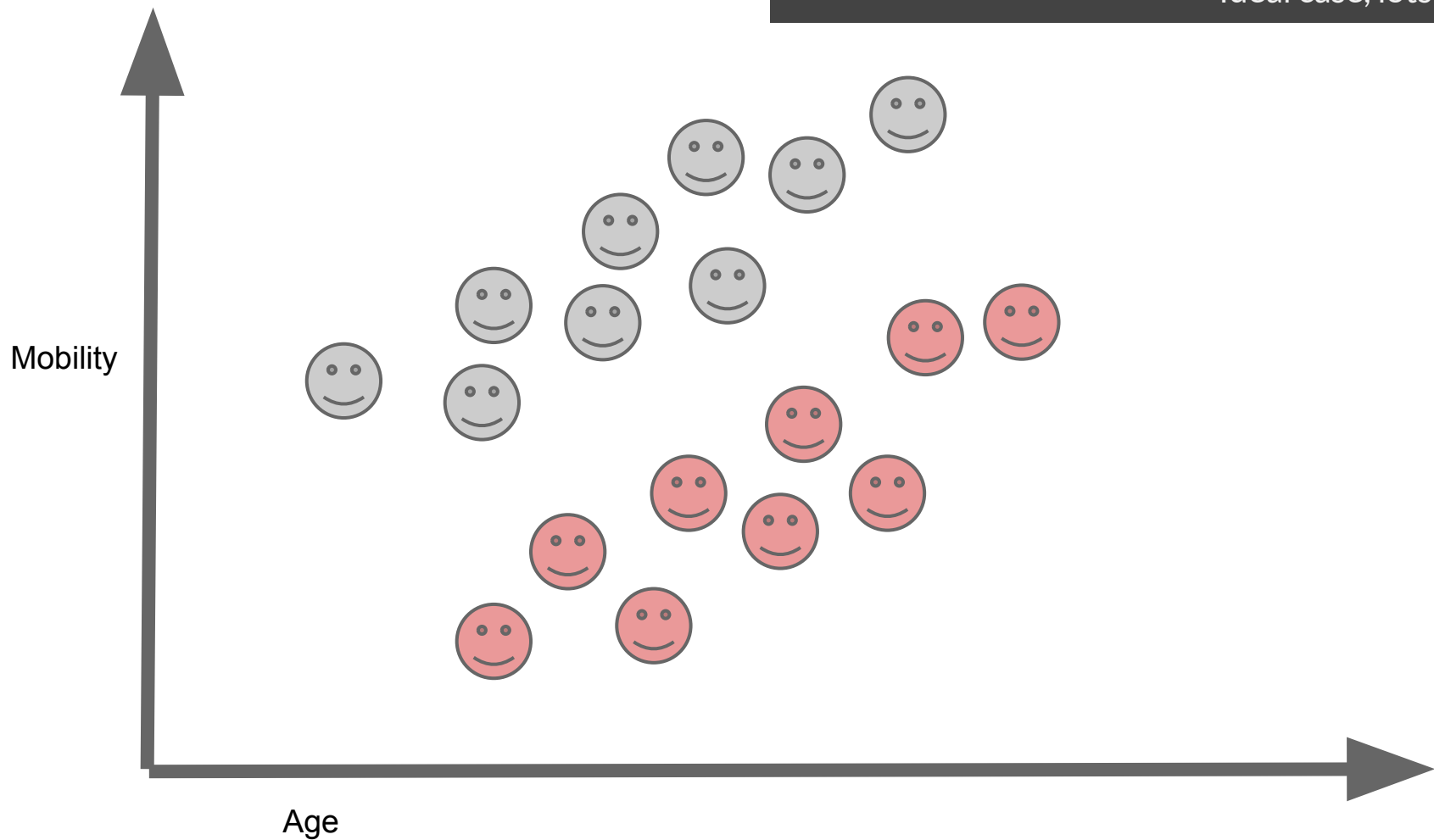


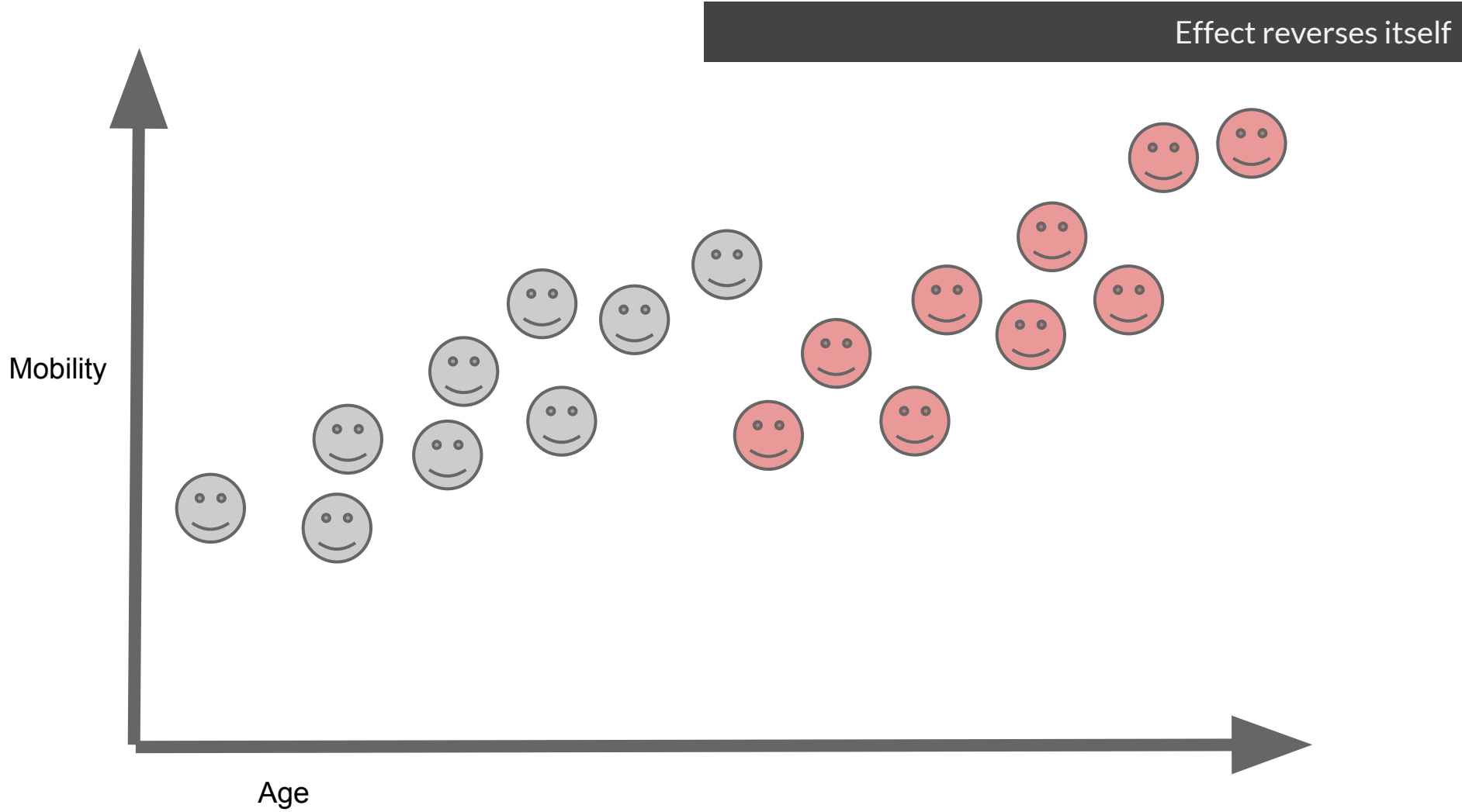
Randomizing within age groups forces balance within ages
This is called “blocking” on age

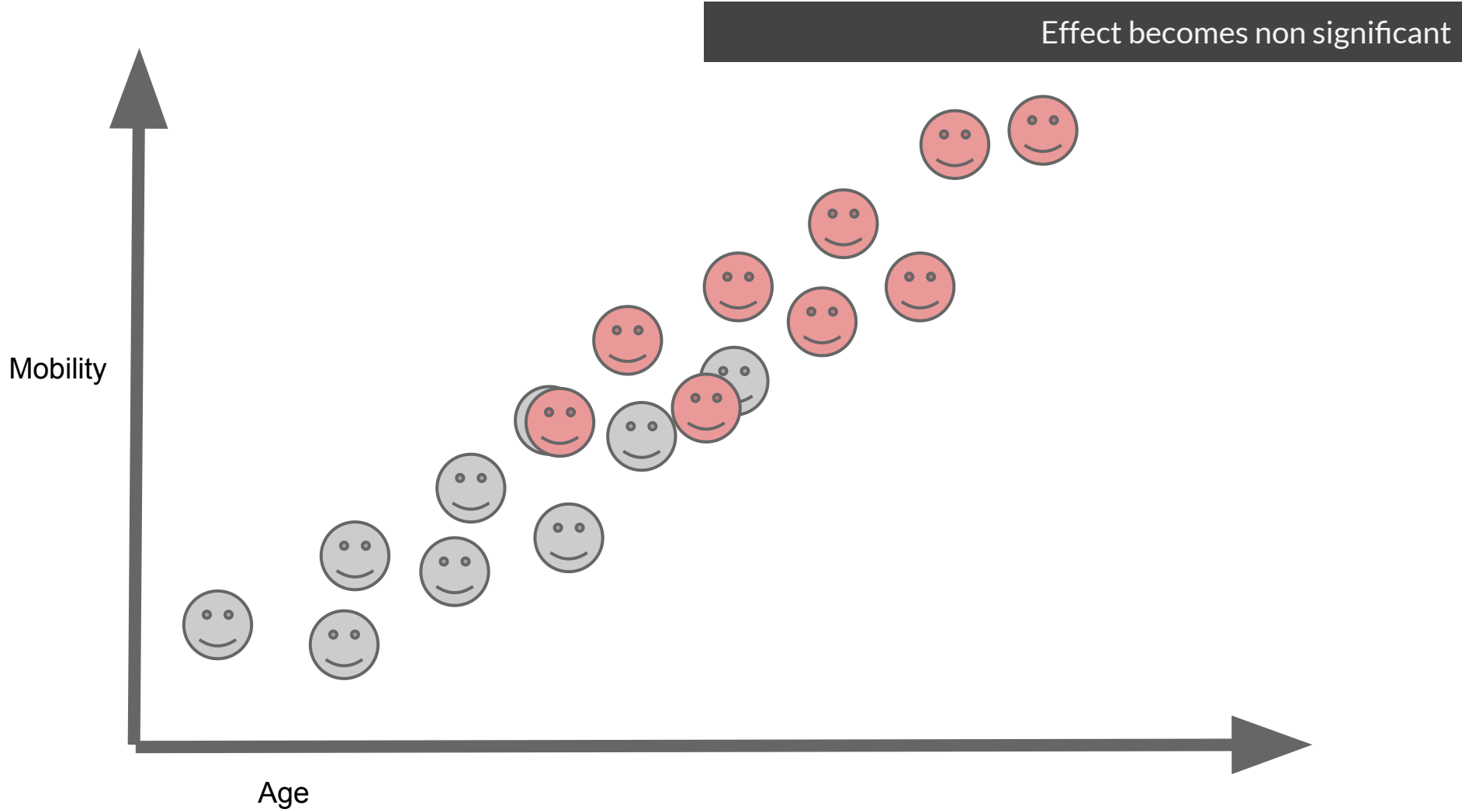
- Related problem. You're studying the elderly and are comparing the use of fitness trackers with mobility
 - Observational study; no randomization
- You are worried about the age distribution will be problematic with more younger people using Fitbits

- Adjustment is the of looking at the relationship with levels of the confounder held fixed
- The most used version of this is regression adjustment (adding the confounder into a regression model)
- Let's go through examples of regression adjustment to see strengths and limitations

Ideal case, lots of overlap



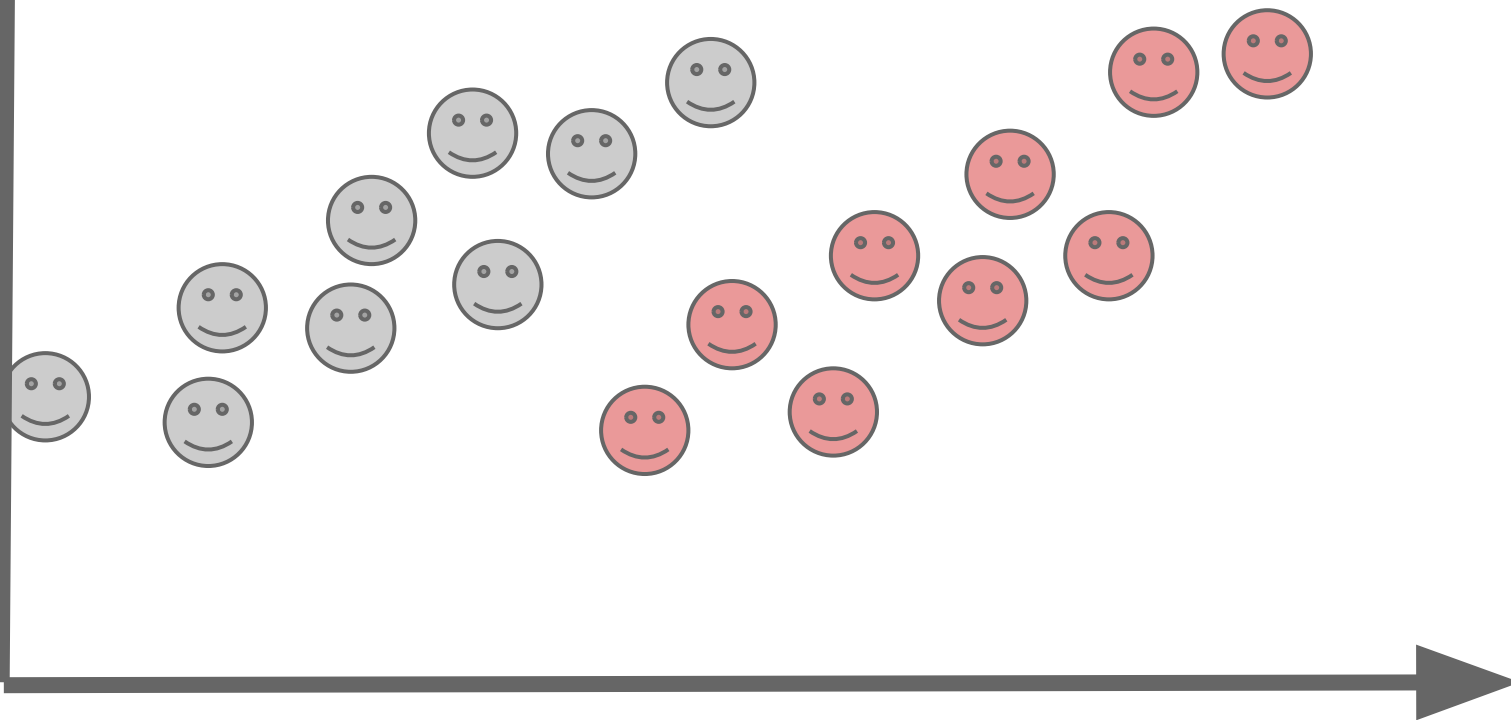




Effect becomes significant

Mobility

Age



Adjusted effect is all model

