

1. Random and blind selection can reduce bias
2. Confounding variables are related to both dependent and independent variables, that obscures the true relationship between dependent and independent variables.
3. A/B testing is a method that compares the performance of two groups/versions and determines which one is better using statistical analysis.
4. Welch's T-test is used when two independent groups have unequal variances.
5.  $H_0$  = average time spend on phone per call is 6 minutes  
 $H_a$  = average time spend on phone per call is higher than 6 minutes  
 $t = (6.5-6)/(1.2/\sqrt{50}) = 2.94$   
 $t_{0.05} = 1.676 < 2.94$   
Reject null hypothesis. So there is enough evidence that average time spend on phone per call is higher than 6 minutes
6.  $H_0$  = there is no difference in mean scores of the two groups  
 $H_a$  = there is a difference in mean scores of the two groups  
 $t = (75-78)/(\sqrt{(8^2/25+7^2/30)})=-1.464$   
 $t_{0.05} = \pm 2.004$ , -1.464 is within the range  
Fail to reject null hypothesis. So there is not enough evidence to show that there is a difference in mean scores of the two groups