

Musclehub A/B Test Results:

Does removing the Fitness Test improve membership rates?

Becky Chu

Background Information

- Musclehub requires new visitors (people who are not members of the gym) to perform a Fitness Test before submitting an application for gym membership.
- Current process for gym membership:
 1. Visit the gym
 2. Conduct Fitness Test
 3. Submit membership application
 4. Purchase membership

A/B Test Setup

- An A/B test was conducted to determine whether the Fitness Test intimidates visitors, and if removing the Fitness Test would result in more visitors purchasing gym memberships.
 - H_0 : Removing the Fitness Test **will result in no change** in the number of gym membership purchases.
 - H_1 : Removing the Fitness Test **will result in a change** to the number of gym membership purchases.
- Test Groups:
 - *Group A: Baseline using current Fitness Test requirement*
 - *Group B: No Fitness Test requirement (testing the null hypothesis)*

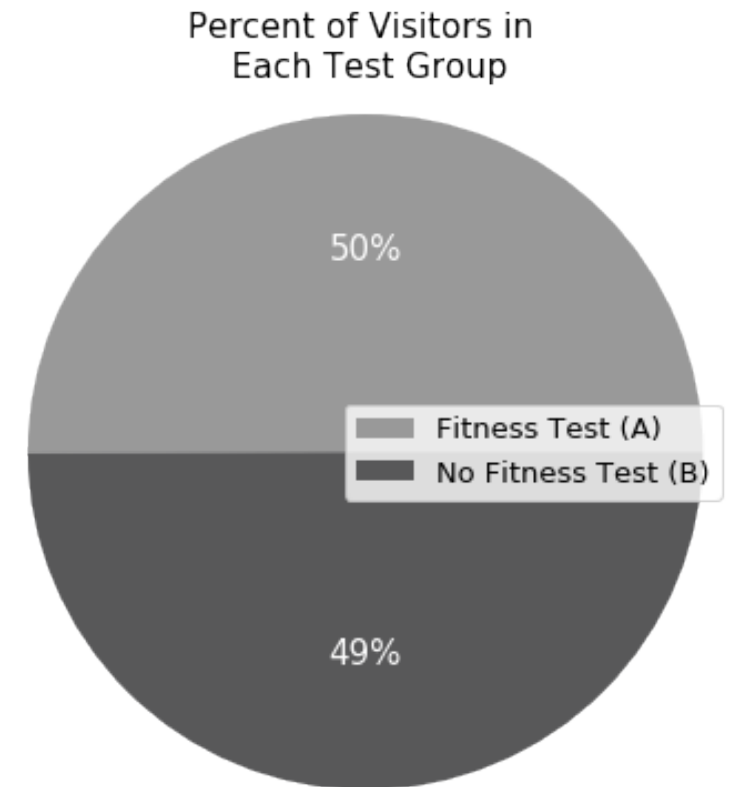
Data Collection

The A/B test ran from 2017-07-01 to 2017-09-29.

- Data collected:
 - # of Visitors
 - # of Applications
 - # of Memberships Purchased
- Statistical Tests conducted:
 - Chi-squared
- Questions to be answered between Groups A and B:
 1. Was there a difference in the **number of visitors who applied for membership?**
 2. Was there a difference in the **number of applicants who purchased a membership?**
 3. Was there a difference in the **number of visitors who purchased a gym membership?**

Number of Visitors

- During this time, Musclehub had 5004 visitors.
 - 2504 visitors in Group A - Fitness Test required
 - 2500 visitors in Group B - No Fitness Test required



Chi-Squared Test:

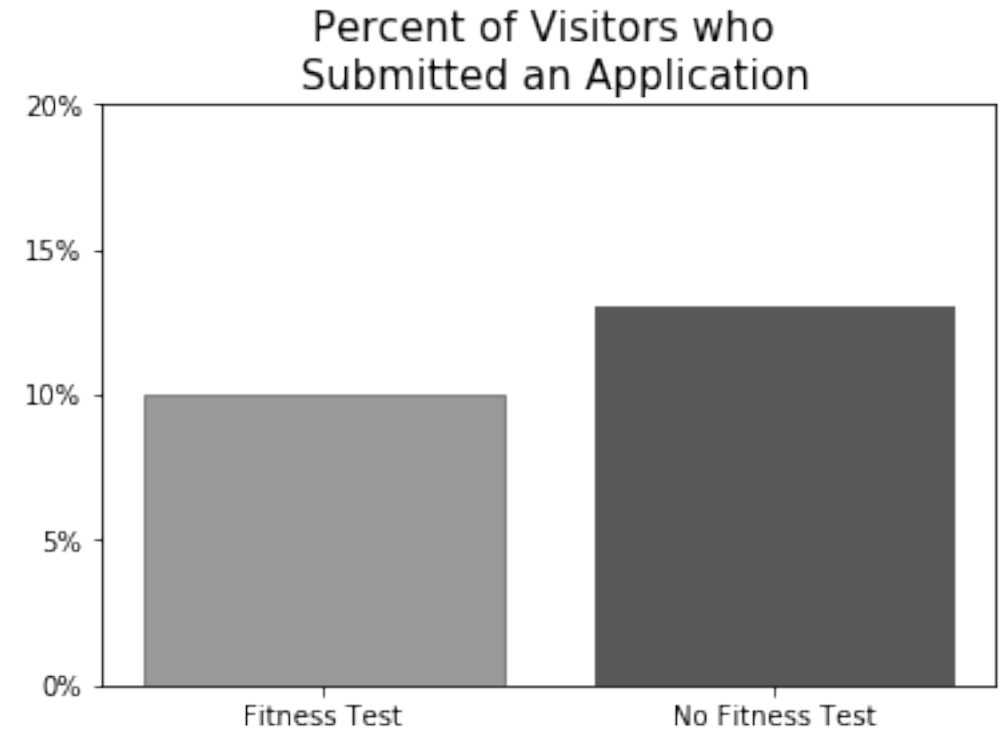
of Visitors who Submitted Applications

Was there a difference in the number of visitors who applied for membership?

- **Yes**, the differences are significant.

Group	% of Visitors who Submitted Applications
Fitness Test (Group A)	9.98
No Fitness Test (Group B)	13.00

- P-value < 0.05 at 0.001



Chi-Squared Test:

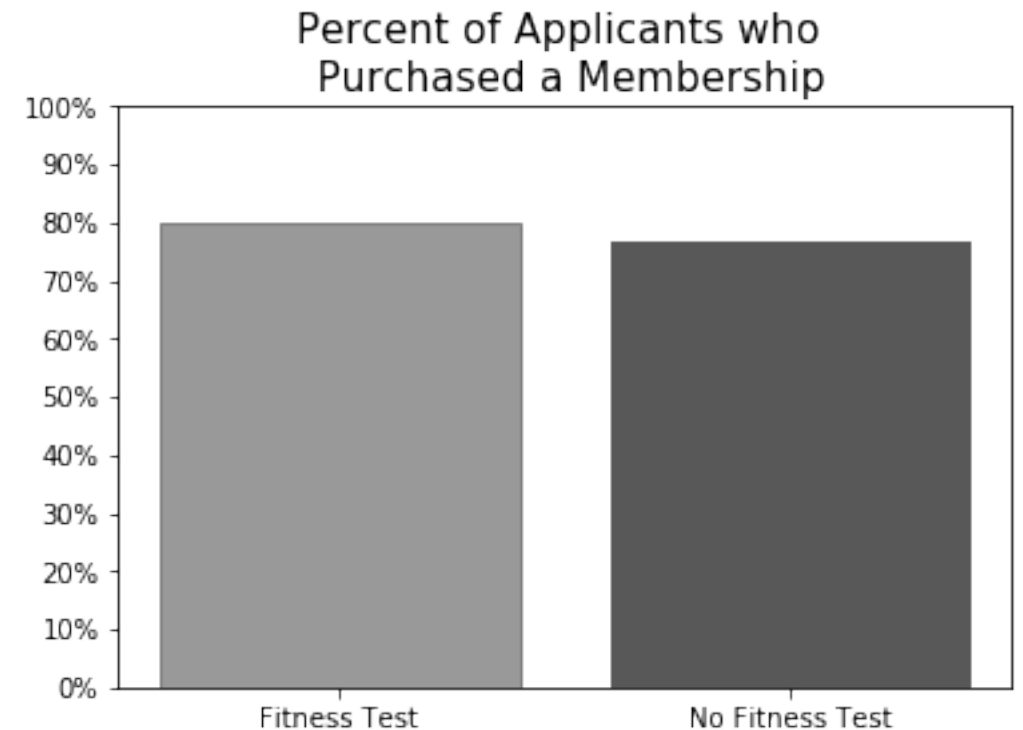
of Applicants who Purchased Memberships

Was there a difference in the number of applicants who purchased a membership?

- **No**, the differences aren't significant.

Group	% of Applicants who Purchased Memberships
Fitness Test (Group A)	80.00
No Fitness Test (Group B)	76.92

- P-value > 0.05 at 0.433



Chi-Squared Test:

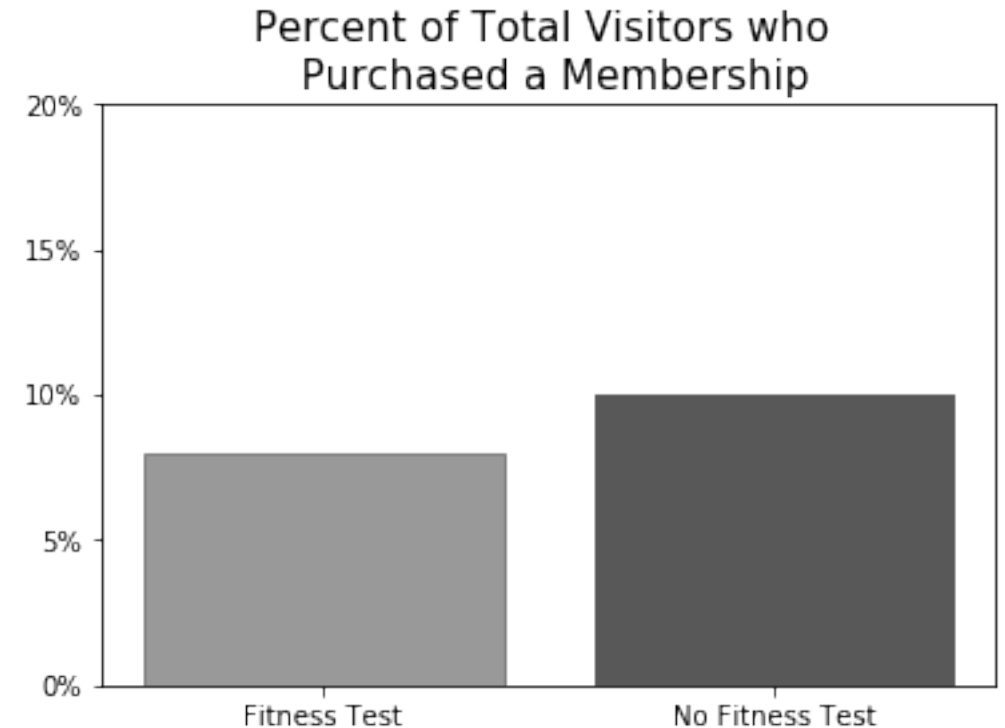
of Visitors who Purchased Memberships

Was there a difference in the number of visitors who purchased a gym membership?

- **Yes**, the differences are significant.

Group	% of Visitors who Purchased Memberships
Fitness Test (Group A)	7.99
No Fitness Test (Group B)	10.00

- P-value < 0.05 at 0.015



Why Chi-Squared?

- Chi-Squared is the preferred statistical method when comparing results of categorical data between a baseline and a condition group.

Qualitative Data

- 4 gym visitors were interviewed.
- Out of 4 visitors, 2 were in the Fitness Test group and 2 were in the No Fitness Test group.
 - Only 1 out of the 4 visitors appreciated taking a Fitness Test before submitting the application because it motivated her to work out more and see progress. The other 3 didn't like or didn't appreciate making Fitness Tests a requirement.

Recommendations

- Going forward, Musclehub **should not require** Fitness Tests prior to submitting a membership application.
- Musclehub should make **Fitness Tests optional** for people who want to track their progress over time.
- Based on the results of the A/B Test, Musclehub can expect an increase of 25% in gym memberships purchased.