



MuscleHub Membership Test

Matt Boehlke

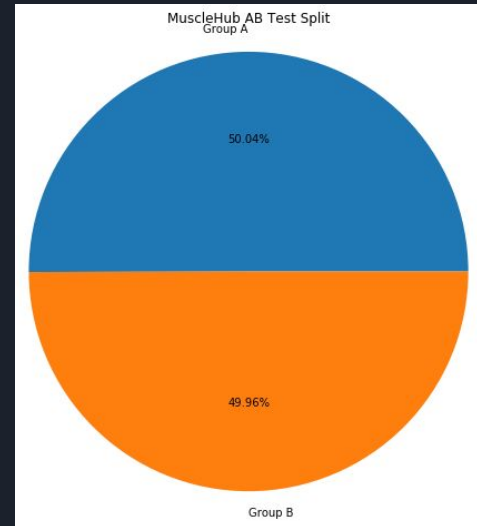


A/B Test Summary

- Prospective MuscleHub members during testing period were randomly assigned to either Group A or B
- Group A conducted a fitness test prior to completing the gym application
- Group B did not complete the fitness test prior to applying
- Conducted to determine if fitness testing was scaring potential customers away
- To determine which membership path is better, we checked for statistical differences at each stage of the membership funnel
- Membership funnel:
 - a. Visit MuscleHub
 - b. (Maybe) Conduct fitness test
 - c. Complete Application
 - d. Pay membership fees and become member

The Data

- Data used in this test was collected from MuscleHub's records of visits, fitness tests, applications, and purchases
- A user's group (A or B) was determined based on whether or not visitors completed a fitness test
- Group membership is roughly equal

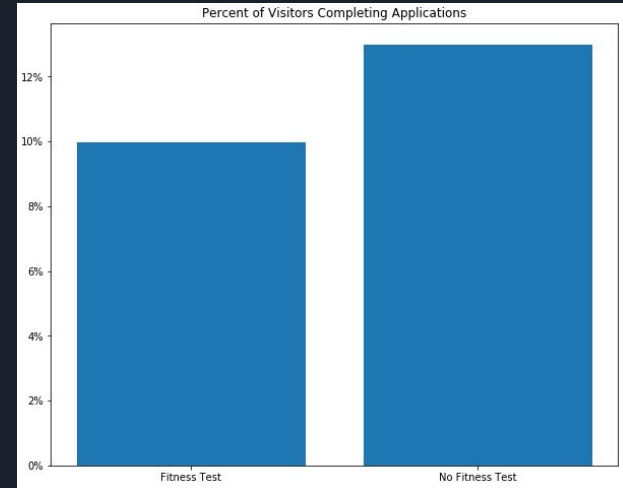


Membership Funnel - Test 1

How many people complete an application?

	Completed Application	Did not Complete Application	Total	Percent With Application
Group A	250	2254	2504	9.98%
Group B	325	2175	2500	13.00%

- Used a Chi² test to determine if there is a statistical difference between the two groups
- Chi² test returns a P-Value of 0.000964
- Results are Significant! There is a statistical difference between Group A and Group B results!
- Implies that presence of fitness test influences who completes an application during their visit

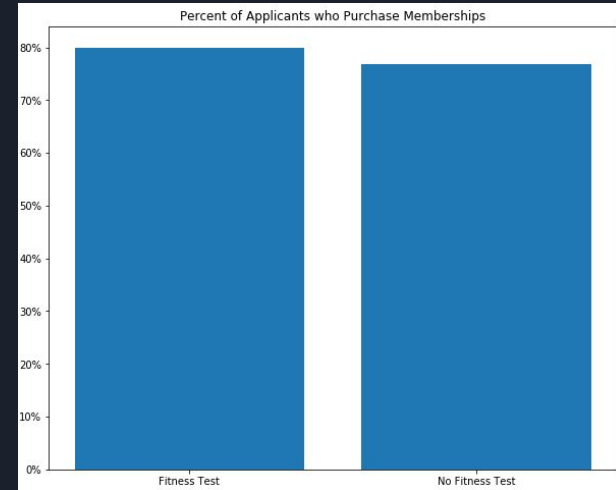


Membership Funnel - Test 2

How many applicants purchase a membership?

	Purchased Membership	Did not Purchase Membership	Total	Percent With Purchase
Group A	200	50	250	80.0%
Group B	250	75	325	76.92%

- Used a Chi² test to determine if there is a statistical difference between the two groups
- Chi² test returns a P-Value of 0.43259
- Results are not significant.
- Implies that presence of fitness test does not influence who purchases a membership once they complete an application.

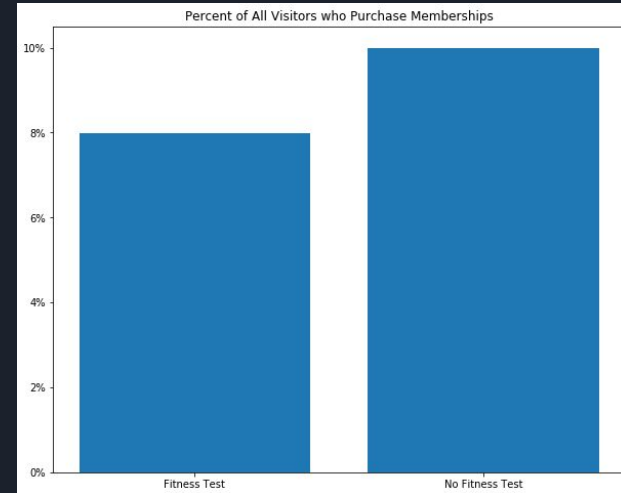


Membership Funnel - Test 3

How many visitors purchase a membership?

	Purchased Membership	Did not Purchase Membership	Total	Percent With Purchase
Group A	200	2304	2504	7.99%
Group B	250	2250	2500	10.00%

- Used a Chi² Test to determine if there is a statistical difference between the two groups
- Chi² test returns a P-Value of 0.01472
- Results are significant!
- Implies that presence of fitness test influences membership purchases when considering all potential customers





Why A Chi² Test?

- A Chi² Test is useful if data has two or more categorical data sets that need to be compared.
- MuscleHub's data required a comparison between two categorical data sets across the Groups. These categories in the 3rd test (for example) were "Purchased A Membership" and "Did not Purchase a Membership"
- Chi² test returns a p-value
- This value indicates if the Null Hypothesis is true. In MuscleHub's case, the Null Hypothesis is "There is no difference between the results for Group A and Group B"
- If p-value is < 0.05 , the Chi² test is indicating that the Null Hypothesis is false and should be rejected
- Therefore, we are mathematically proving that removing the fitness test requirement increased sales



Qualitative Data

Surveys were conducted to gauge customers' reactions to the fitness test:

Survey results were mixed. Some customers enjoyed the fitness test. Others mention they did not want to take it.

One customer noted that she appreciated a speedy application process.

Another customer noted that he disliked another gym's fitness test because it was too much effort that he was unprepared for.



Recommendations for MuscleHub

- *Stop* conducting the fitness test prior to completing a membership sale!
 - The results of the A/B test indicate that MuscleHub's sales will increase if the fitness test isn't a barrier to entry.
- *Continue* conducting the fitness test. Conduct the test after a visitor becomes a member and allow them to schedule a time to test
 - Some customers enjoy the fitness test. They use it as a mechanism to help them gauge their progress
 - Other customers don't object to the fitness test, they just want to be able to choose when they take it