MuscleHub A/B Test Analysis

Background info

From July 2017 to October 2017, we ran an A/B test to see if offering a free fitness test to MuscleHub visitors would increase the number of membership purchases.

Variant A of the test group received the free fitness test. Variant B did not get a fitness test.

NULL HYPOTHESIS: Offering a free fitness test will have no effect on the number of MuscleHub membership purchases.

ALTERNATIVE HYPOTHESIS: Offering a free fitness test will affect (increase OR decrease) the number of MuscleHub membership purchases.

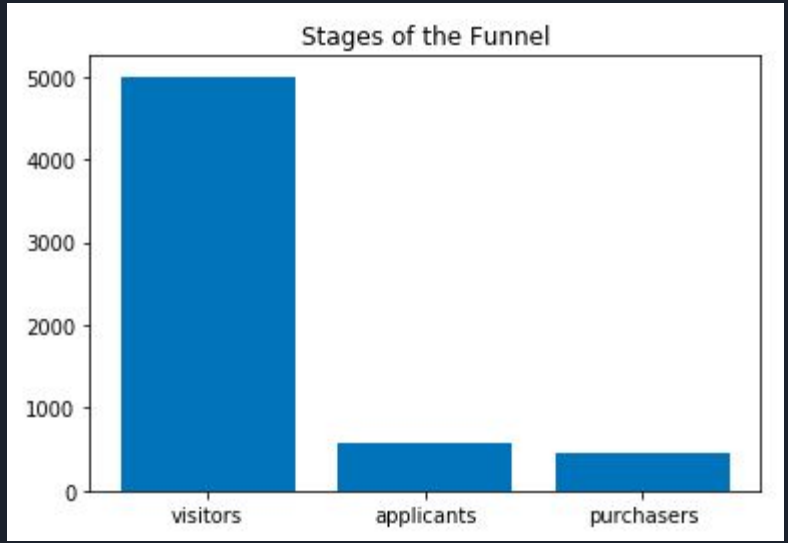
3-Stage Funnel

Potential customers have to complete 3 steps in order to purchase a membership:

1. They must visit the MuscleHub gym.
2. They must fill out an application.
3. They must send in money to complete the purchase.

The chart to the right shows how many people made it through each stage of the funnel.

Of the 5004 total visitors, 450 completed a purchase (0.09%).



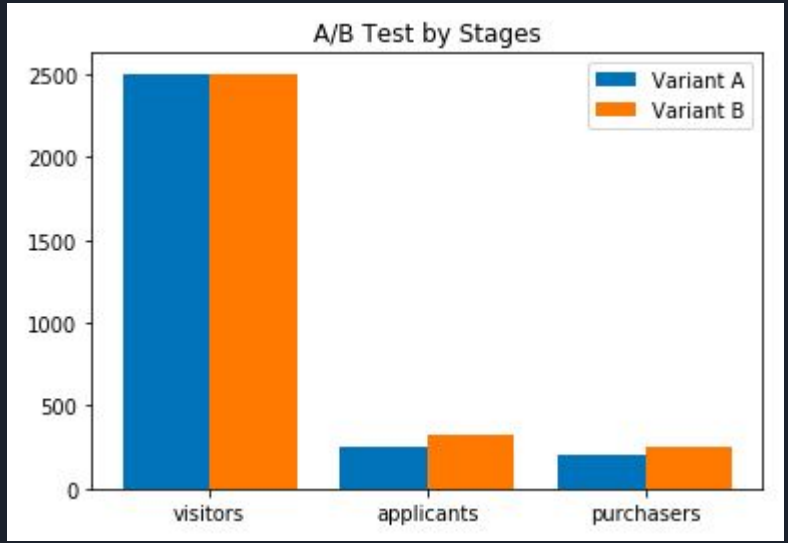
Funnel broken down by A/B test

The chart to the right shows the 3-stage funnel with Variant A juxtaposed against Variant B.

Variant A is the group that was given a free fitness test.

Variant B is the group that was NOT given a free fitness test.

It looked as if Variant B performed better than Variant A, so we had to run some significance tests to find out.



Chi-Square Test

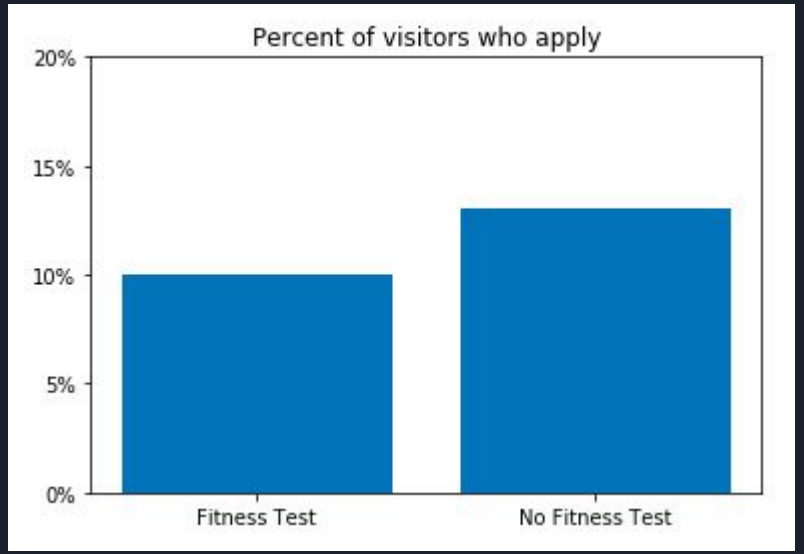
We used a Chi-Square Test to find out if the fitness test was helpful for increasing membership purchases.

We chose the Chi-Square Test because it deals with categorical data (like the A and B variants) and determines if an observed distribution is due to chance.

In total, we performed 3 Chi-Square tests to determine if the fitness tests had any effect on visitors submitting applications, applicants purchasing memberships, and visitors purchasing memberships.

Chi-Square Test Results: Visitors Who Apply

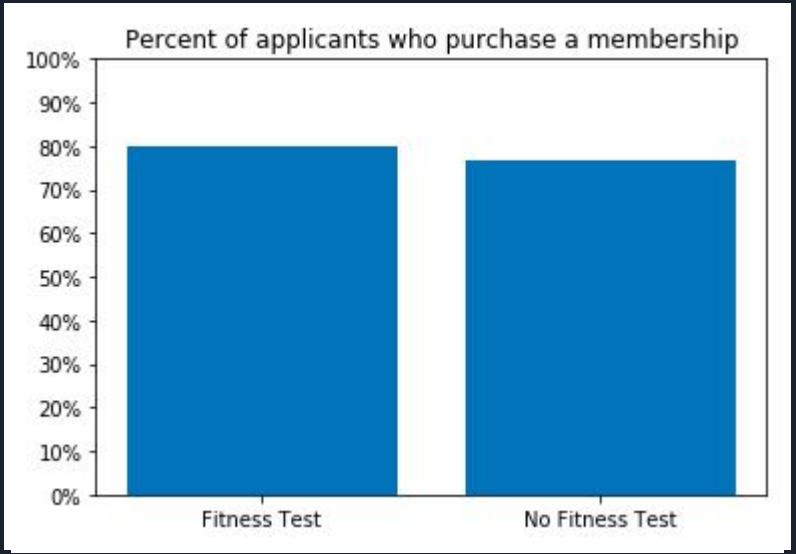
First, we wanted to know if the free fitness test had any effect on how many visitors submitted applications.



The p-value was 0.00096. That means that there was a 0.096% chance that the null hypothesis is valid. So we would reject the null hypothesis, recognize that the differences between the variants are significant, and say that offering a fitness test decreases applications.

Chi-Square Test Results: Applicants Who Purchase

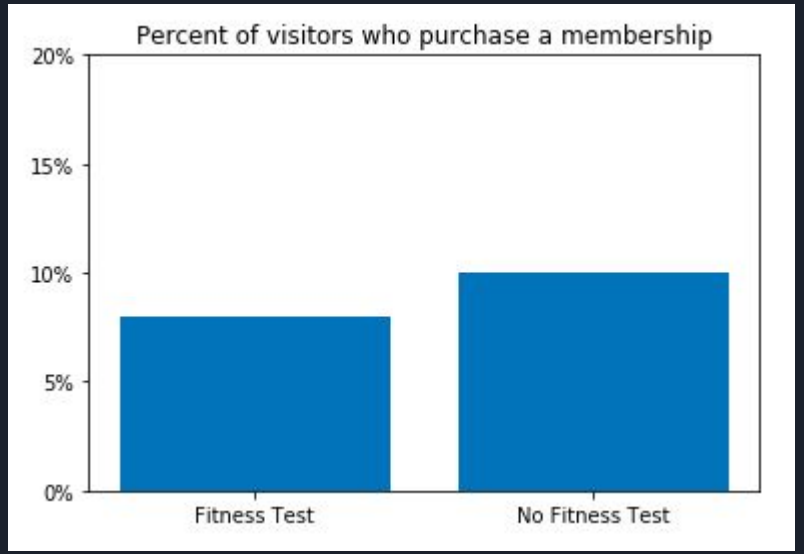
Next, we wanted to know if the free fitness test had any effect on how many applicants purchased a membership.



The p-value was 0.43259. That means that there was a 43.26% chance that the null hypothesis is valid. So we would NOT reject the null hypothesis, recognize that the differences between the variants are NOT significant, and say that offering a fitness test causes no significant change in the number of applicants who purchase a membership.

Chi-Square Test Results: Visitors Who Purchase

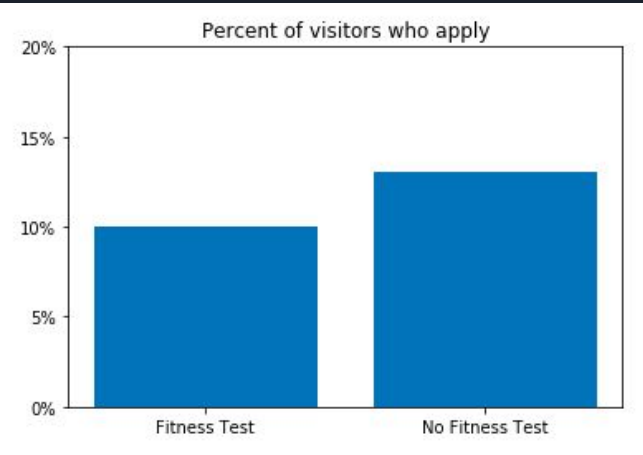
Finally, we wanted to know if the free fitness test had any effect on how many visitors purchased a membership.



The p-value was 0.01472. That means that there was a 1.472% chance that the null hypothesis is valid. So we would reject the null hypothesis, recognize that the differences between the variants are significant, and say that offering a fitness test decreases membership purchases.

Chi-Square Test Results Recap

SIGNIFICANT



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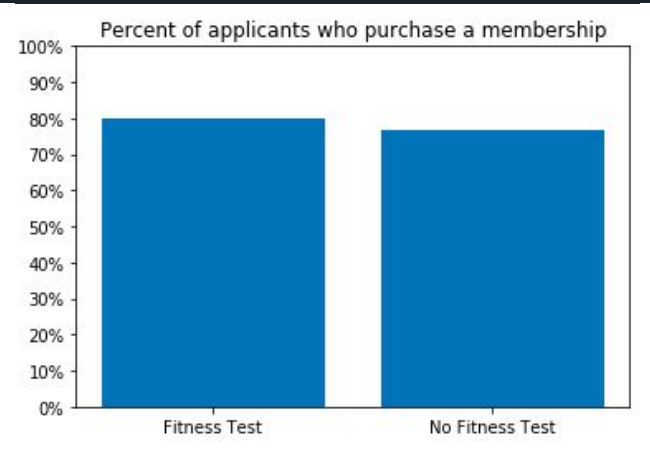

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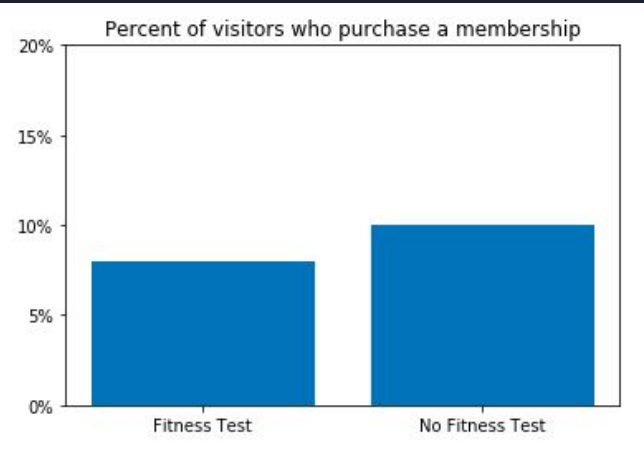


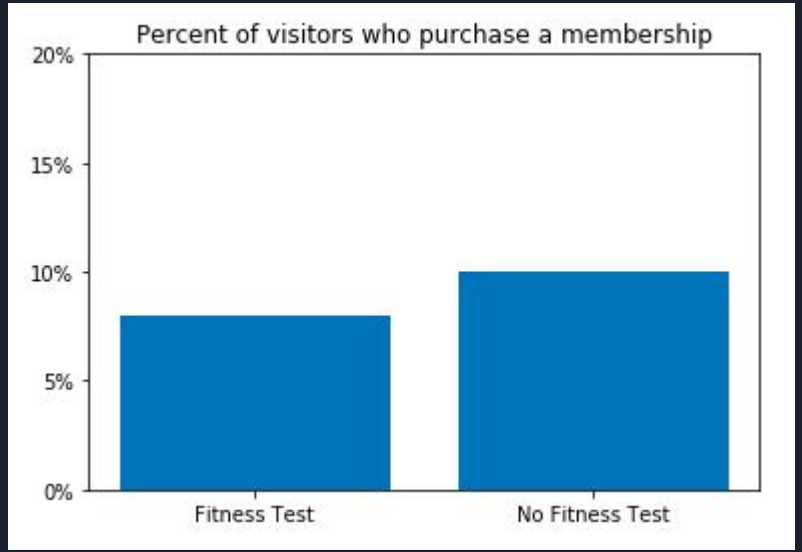
The fitness test affects how many visitors apply for a membership, as well as how many visitors purchase a membership. The fitness test has no effect on how many applicants ultimately purchase a membership.

Conclusion: This A/B test indicates that the free fitness test is causing us to lose out on sales.

Why are fitness tests decreasing the chance of purchase?

Possible reasons the fitness test is causing us to lose sales:

- Our product isn't great. People get a taste of our membership with the free fitness test and choose not to do business with us because they believe our product isn't great.
- The fitness test isn't what our customers want. People think that the rest of the membership will be equally bad/frustrating.
- The fitness test seems like an annoying sales tactic and people don't like being sold to.



Interview Summaries

We conducted interviews with 4 visitors. Overall, 4 is not a big enough sample to put much hope in, but the interviews can still give us food for thought to help fill the holes in our understanding of our data.

According to Jesse and Shirley, fitness tests at a competitor are “sales mumbo jumbo,” “TOOOO much,” and “way too intense.” And Sonny didn’t enjoy our fitness test either.

Conclusion: Our quantitative and qualitative data both agree that the fitness test is not turning our visitors into customers.

Recommendations for improvement

Based on the A/B test and interviews conducted, I suggest the following:

- Stop doing the free fitness tests.
- Run another A/B test to see if making applicants pay right when they apply will have any effect on whether they become customers. (This makes sense because there is some drop off in applicants becoming members. We have to make it easier to purchase a membership so we don't lose out on sales unnecessarily.)
- Bring in a consultant and/or talk to staff members to gage whether the MuscleHub membership is truly a great product. If you don't have a great product, you won't retain your customers.