



MuscleHub Membership

How Fitness Testing Impacts Purchase Behavior

Overview

In this A/B test, we evaluated how fitness testing influenced the purchasing behavior of prospective MuscleHub members. We looked at differences in applicant volume, applicant conversion, and overall likelihood that a prospective member would purchase a membership based on whether they received a fitness test prior to the application process.

We found that a lower percentage of prospective members applied after receiving the fitness test, and that this led to a lower number of memberships; however, we cannot say for certain whether fitness testing had a meaningful impact on conversion of applicants to members.

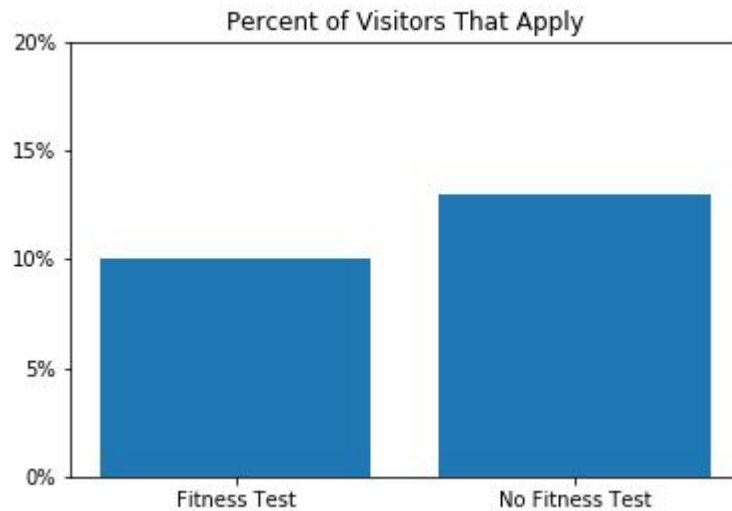
Summary of Dataset

To conduct our analysis, we used data on potential customers of MuscleHub, which allowed us to categorize potential members based on whether or not they had received a fitness test, if they had applied, and whether they had ultimately purchased a membership. The dataset consisted of 5004 individuals, 2504 of which had received a fitness test (designated as Group A) and 2500 of which had not received a fitness test (designated Group B).

These groups were further divided based on whether or not the potential customer had applied. Of the 575 potential members that applied, 250 received the fitness test while 325 did not. Of those 575 applicants, 450 became members, with 200 of that group belonging to Group A and the remaining 250 to Group B.

Impact on Applications

Fewer potential members apply after receiving a fitness test



Only ~10% of visitors apply to MuscleHub after taking the fitness test compared to 13% who did not receive the test. $p = .000965$

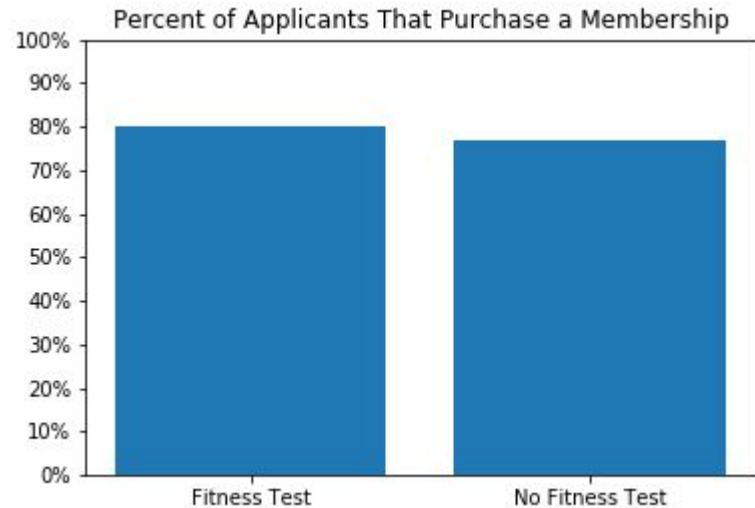
Impact on Applications

Chi-squared test indicates that the observed impact of fitness testing is statistically significant

A chi-squared test was selected to evaluate whether the observed difference between Group A and Group B arose by chance. The null hypothesis in this case would be that there is no difference in the percentage of potential members who applied based on whether or not they received a fitness test. However, our p-value of $\sim .000965$ shows that it is highly unlikely that these results arose through random chance. Because of this, we conclude that fitness testing results in a significant decrease in the number of applicants.

Impact on Conversion

Among applicants, fitness testing had no significant impact on conversion



Our analysis shows that there is not a significant difference between the number of applicants who become members based on whether or not they received a fitness test. $p \approx .433$

Impact on Conversion

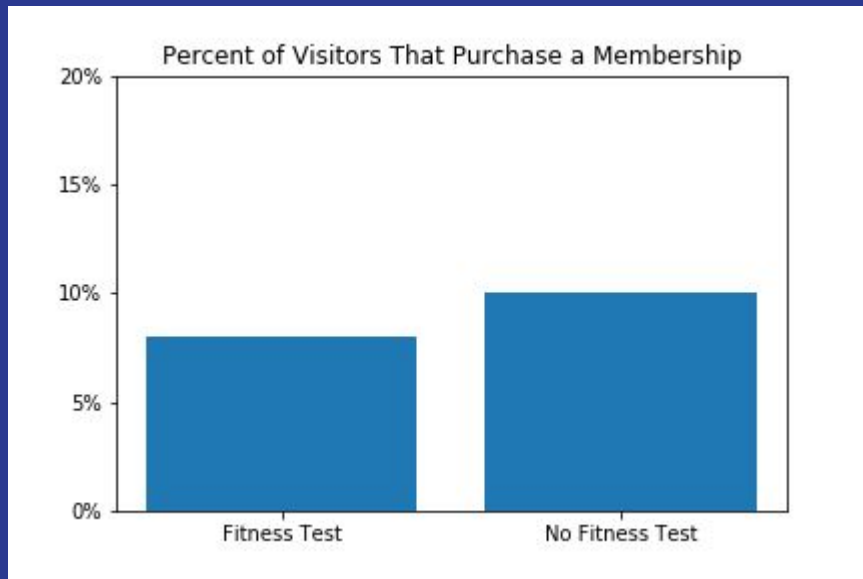
Chi-squared test indicates that conversion is not significantly impacted

We again used a chi-squared test to evaluate the significance of our finding that more applicants converted after receiving a fitness test. However, our high p-value of .433 indicates that this is likely the result of random chance and that fitness testing has little to no impact on conversion of applicants to members.

Having read the potential member interviews, we hypothesize that this is because fitness tests are administered prior to the application process. Therefore, a potential member who is scared away by the fitness test will not continue to the application stage, leading to the drop in applicants we observed. However, among those who do apply, the fact that they have or have not undergone the fitness test at that point does not seem to have any impact on whether or not they ultimately become members.

Impact on Overall Membership

Fewer visitors become members of MuscleHub after receiving a fitness test



Only ~8% of visitors become MuscleHub members after taking the fitness test compared to 10% who did not receive the test. $p = .0147$

Impact on Overall Membership

Chi-squared test indicates that fitness testing has a significant negative impact on membership

We again used a chi-squared test to evaluate the significance of our finding that fewer potential members ultimately become MuscleHub members after receiving a fitness test compared to those that did not receive the test. Our p-value of .0147 leads us to believe that these results are not a product of chance. In addition, because of the insights drawn from the two previous plots, it appears that the decrease in overall membership among potential members who receive a fitness test prior to applying is a direct result of those individuals being less likely to complete an application after testing. In other words, potential customers are scared away during the testing process and do not proceed to the application stage. Therefore, there is little impact on member conversion after that point.

Qualitative Summary

From the interviews with potential members, we gathered that the reactions to the fitness tests are mixed, and that fitness testing had a different impact on each individual's decision to apply to and/or join MuscleHub. Some members enjoyed the test and found it motivating, and some didn't mind it because of how it compared to competitors' tests. However, it seems not to have impacted the decision of one individual and had a decidedly negative impact on another. Because of this, the most definitive recommendation we can make is that the fitness test be made an optional part of the membership process.

Recommendations

We conclude that mandatory fitness testing during the membership process has a negative impact on overall membership volume. Based on our hypothesis testing, we believe that this is the result of individuals opting out of the membership process post-testing but prior to submitting an application. Because of this, we did not see any significant impact from testing on the conversion of applicants to members. However, did see an overall decrease of 2% in memberships among potential customers who received fitness testing versus those who did not, and our chi-squared tests indicate that this is a significant result.

Taking into consideration the qualitative data, we recommend making the fitness test optional. While we cannot draw any definitive conclusion on when in the membership process fitness testing might have a positive impact, further A/B testing could be conducted to evaluate the impact of fitness testing at later stages in the process, e.g. post-application but prior to membership commitments.