



Musclehub A/B Test Results

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Our testing process

In this experiment we took our applicants and randomly assigned them to one of two groups in order to see which group would be more likely to purchase a membership.

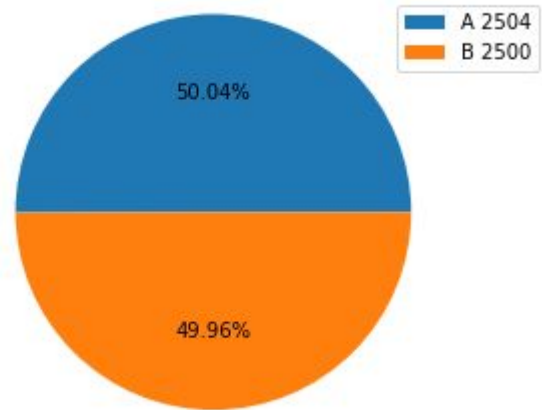
- Group A was asked to take a fitness test with a personal trainer
- Group B skipped the fitness test and proceeded directly to the application

We then assessed the following phases of the funnel to see if taking a fitness test had a significant effect on membership purchases.

- Percent of visitors who apply
- Percent of applicants who purchase a membership
- Percent of visitors who purchase a membership

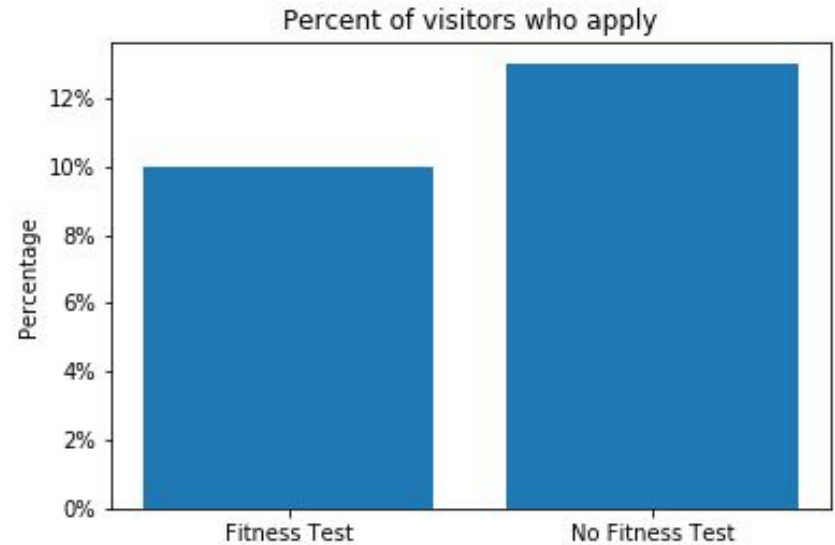
The quantitative data

- Our dataset included 5004 total visitors which consisted of about half of the visitors in group A and about half in group B.



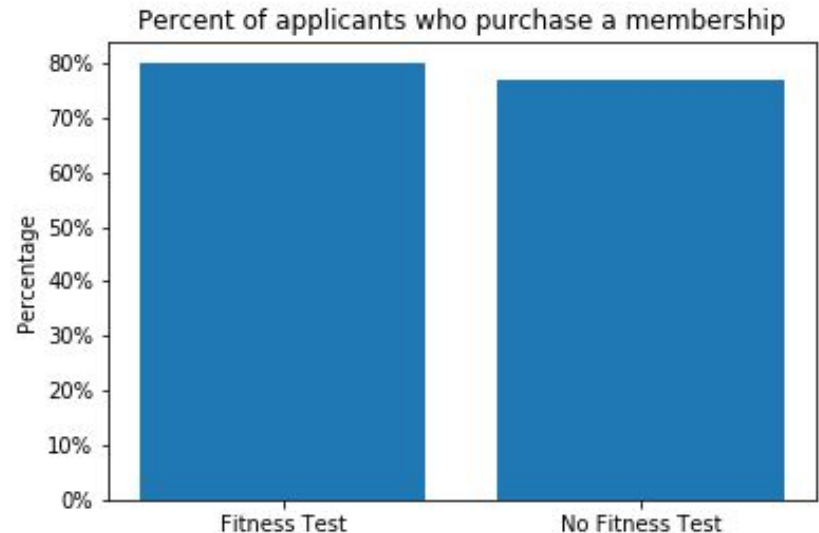
The quantitative data

- First we wanted to see what percentage of our 5004 visitors actually applied for memberships.
- Of the 2504 visitors in group A who took the fitness test only 250 applied, about 9.9% of visitors in this group.
- Of the 2500 visitors in group B who skipped the fitness test 325 applied, about 13% of visitors in this group.



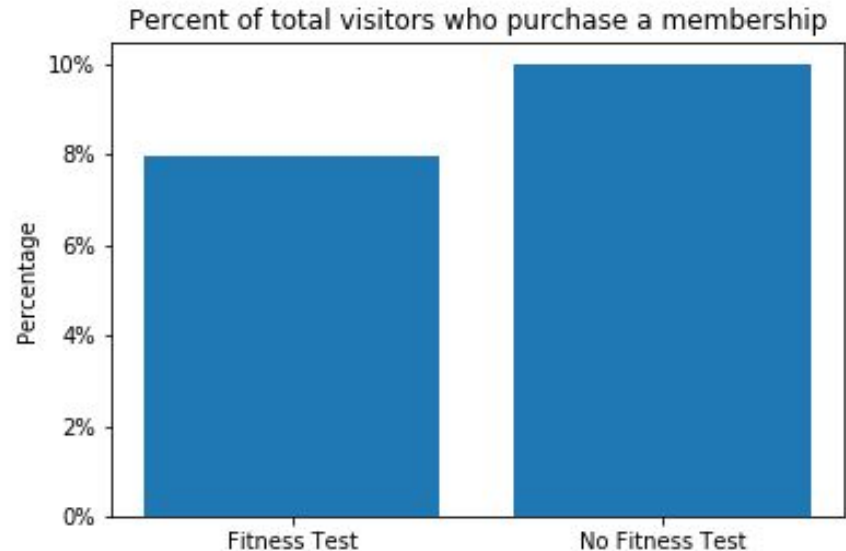
The quantitative data

- We then looked our 575 applicants which makes up only 11.5% of all visitors.
- Of the 250 applicants in group A that took the fitness test, 200 of them purchased a membership making up an 80% purchase rate.
- Of the 325 applicants in group B that skipped the fitness test, 250 purchased a membership making up an 76.9% purchase rate.



The quantitative data

- Lastly, we went back and looked at all visitors to see what percentage ended up purchasing a membership.
- Of the 2504 visitors in group A that took the fitness test, 200 of them purchased a membership making up an 7.98% purchase rate.
- Of the 2500 applicants in group B that skipped the fitness test, 250 purchased a membership making up an 10% purchase rate.





Hypothesis testing

For this experiment we went with the Chi-Square test since we're testing the significance between two or more categorical variables. In this case we're testing whether or not a fitness test is significant to the membership purchase process.

- The P value for visitors who applied was .0009647. Using a significance level of .05 we can reject the null hypothesis. It's likely that skipping the fitness test will result in more applications.
- The P value for applicants that purchased was 0.43258646. Using a significance level of .05 we can reject the null hypothesis. There isn't enough data to say whether **applicants** were more likely to buy if they skipped the test.
- The P value for visitors that purchased was .014724114. Using a significance level of .05 we can reject the null hypothesis. It's likely that skipping the fitness test will result in more purchases from overall visitors.



The qualitative data

- Of the 4 responses we received, 2 of them were from visitors who were intimidated by working out or previous fitness tests that were too intense. For one of the visitors the fitness test seemed helpful and facilitated them buying a membership.
- The other user mentioned he regretted taking the fitness test but didn't provide any further details. If it wasn't recommended by a friend they may have chosen to opt out and possibly ended up buying a membership but we didn't get enough of a response to know for sure.
- Another user who did not take a fitness test seemed to appreciate it, but did not buy a membership for other reasons.
- The last user seemed happy and bought a membership after a quick sign up process. They mentioned that their last fitness test was too intense.



My recommendation

Based on our significance tests, it's likely that Janet's original hypothesis is correct in that we see higher numbers of visitors that apply and buy memberships when they do not take a fitness test.

We also saw that once a visitor made it to the application process, there were very likely to buy a membership (80% and 77%) regardless of the fitness test. I would advise a follow up survey to understand what made visitors decide to apply since this seems to be the area of the funnel where our visitors make up their minds.

Based on some of the interview responses it seems like some beginners are scared off by intense fitness tests and experienced "worker-outers" don't need or want to be bothered with a fitness test at all. I think it would worthwhile for Musclehub to survey users at the beginning of the signup process to assess experience and see if a introductory fitness test would be helpful. Fitness tests may be useful to ease in newcomers and it should be easy enough to give visitors the choice.