# Testing your Mettle: Do fitness tests drive gym membership?

Made for MuscleHub

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# Setting up the test

- Fitness tests are a standard feature of applying for a gym membership, used by many gyms in the area.
- Janet and the team wanted to see if these fitness tests were in fact intimidating potential members, leading to fewer people signing up to join MuscleHub.
- Beginning on July 1, half of all visitors to the gym were given a fitness test (Group A) while the others were not given this test (Group B).
- Her team then compared the different groups, to see if either were more likely to move down the membership funnel (apply, then actualy join).

# Our dataset

- The A/B test was based on a list of 5,004 potential members, who visited MuscleHub between 7/1/17 and 9/9/17 and provided their contact info:
  - First and Last Name
  - Gender
  - Email Address
  - Dates of: Visit, Fitness Test, Application, and Membership Purchase
- Among this overall population, the two groups were split almost evenly:
  - 2,504 people were in Group A (those who did a fitness test)
  - 2,500 people were in Group B (those who did not have a fitness test)
- This information was generated by Janet and her team and stored in a SQL database.

# TESTING THE HYPOTHESES

# The Three Tests

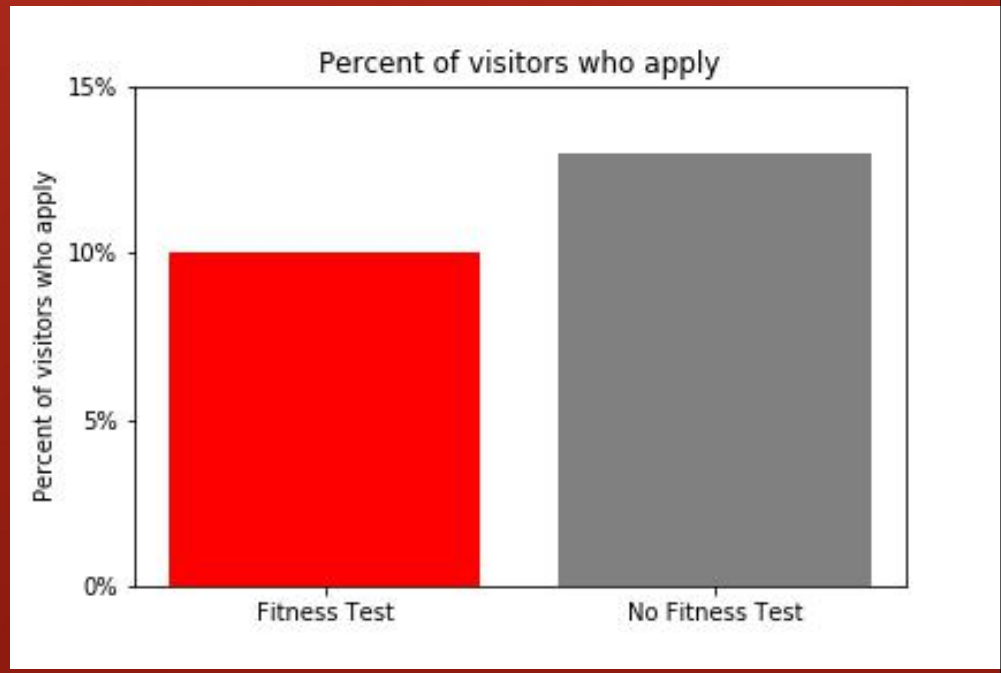
- To measure the full impact of the fitness tests on potential members, we analyzed and compared the two sample groups to see:
  - Did taking a fitness test affect the likelihood to apply for membership?
  - For those who submitted a membership application, did taking a fitness test affect those who actually signed up?
  - For all visitors, did taking a fitness test affect who purchased a gym membership?
- Janet's hypothesis is that visitors assigned to Group B (no fitness test) will be more likely to purchase a gym membership.

# Chi Square Test, explained

- For the analysis, a Chi Square test was used for all three hypothesis tests.
- This is because this test is optimal for comparing two or more categorical datasets (i.e. the data is not based on numerical values).
- Using a standard p-value of .05, we wanted to see if there was a significant difference between the group that did the fitness test, and the group that did not do the fitness test.
- If the null hypothesis is rejected (p-value<.05) then that means there was a significant difference between the two groups, and that taking a fitness test has a (positive or negative) impact on driving memberships or applications.

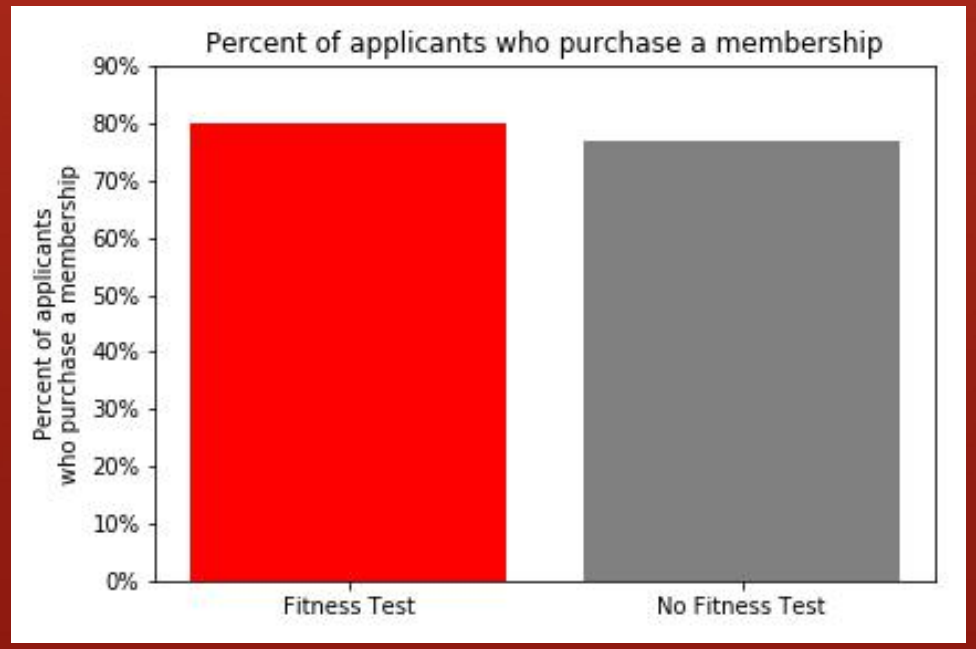
# Were those who took fitness tests more likely to submit a membership application?

- Group A visitors (fitness test) applied at a rate of 9.98%.
- Group B visitors (no fitness test) applied at a rate of 13%.
- After running a Chi Square test, we found the p-value was less than .05, rejecting the null hypothesis.
- There is therefore a significant difference between the two groups, and it is likely that those who took a fitness test were <u>less likely to apply for a gym membership.</u>



# For those who applied, did participating in a fitness test make an applicant more likely to join the gym?

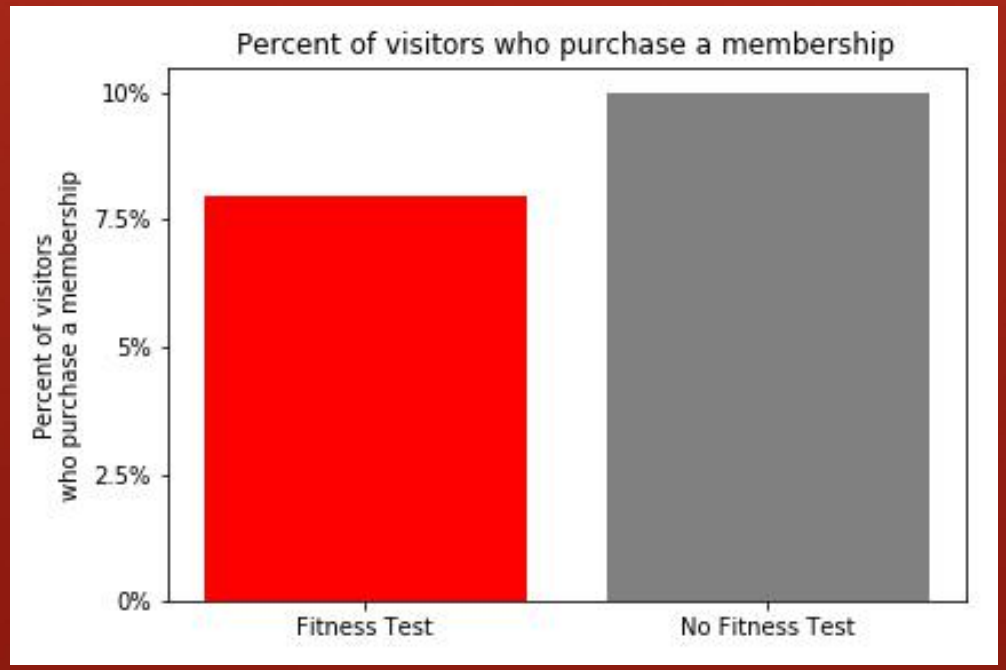
- This test is **only** looking at the population who applied (with a population size of 575 applicants. Group A: n=250, Group B: n=325)
- Group A applicants (fitness test) joined at a rate of 80%
- Group B applicants (no fitness test) applied at a rate of 77%.
- After running a Chi Square test, we found the p-value was more than .05. This means the null hypothesis was not rejected.
- There is not a significant difference between the two groups. We then cannot say for certain if fitness tests affects the likelihood of joining for those who applied for a MuscleHub membership.



# For those who visited, did taking a fitness test lead to a grater chance of purchasing a membership?

- This test is looking at the entire population, all visitors for the period.
- Group A visitors (fitness test) joined at a rate of 8%
- Group B visitors (no fitness test) joined at a rate of 10%.

- After running a Chi Square test, we found the p-value was less than .05. This means the null hypothesis was rejected for this final test.
- There is therefore a significant difference between the two groups, and that it is likely that those who did not do a fitness test were more likely to join the MuscleHub gym.



# Qualitative Evidence

- As part of this experiment, Janet also conducted interviews with potential members, to see their view of fitness tests before joining a gym:
  - *"MuscleHub's introductory **fitness test was super helpful** for me!"* - Cora, 23, Hoboken
  - *"The people [at MuscleHub] were suuuuuper friendly and the whole sign-up process took a matter of minutes. I tried to sign up for LiftCity last year, but **the fitness test was way too intense**. This is my first gym membership EVER, and MuscleHub made me feel welcome."* - Shirley, 22, Williamsburg
  - *"I took the MuscleHub fitness test because my coworker Laura recommended it. **Regretted it**."* - Sonny "Dad Bod", 26, Brooklyn
- Overall, the respondents showed that many gym applicants are a bit scared off by fitness tests, at MuscleHub and competing gyms. While some find them helpful, others definitely see them as initimidating (adding evidence to Janet's hypothesis).

# Final Recommendation

- Based on the hypothesis tests (particularly the final test), we recommend that MuscleHub **skip their fitness tests for potential gym applicants and members.**
- There are statistically significant results showing that the group that did not do the fitness test was more likely to apply for a membership, and also more likely to ultimately join the gym.
- The qualitative interviews provide further evidence that the tests are intense and un-inviting to new members, particularly if mandatory.
- Further tests might see if certain parts of the fitness test (ex. light weight training) might be more welcoming to new members, vs. the full fitness test.