MuscleHub A/B Test

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Purpose

Determine whether or not the MuscleHub fitness test intimidates prospective members.

Current Membership Procedure

1. Take a fitness test with a personal trainer
2. Fill out an application for the gym
3. Send in their payment for their first month’s membership

Dataset

Test Group	Number of Users
Group A	2504
Group B	2500

Group A will still be asked to take a fitness test with a personal trainer

Group B will skip the fitness test and proceed directly to application

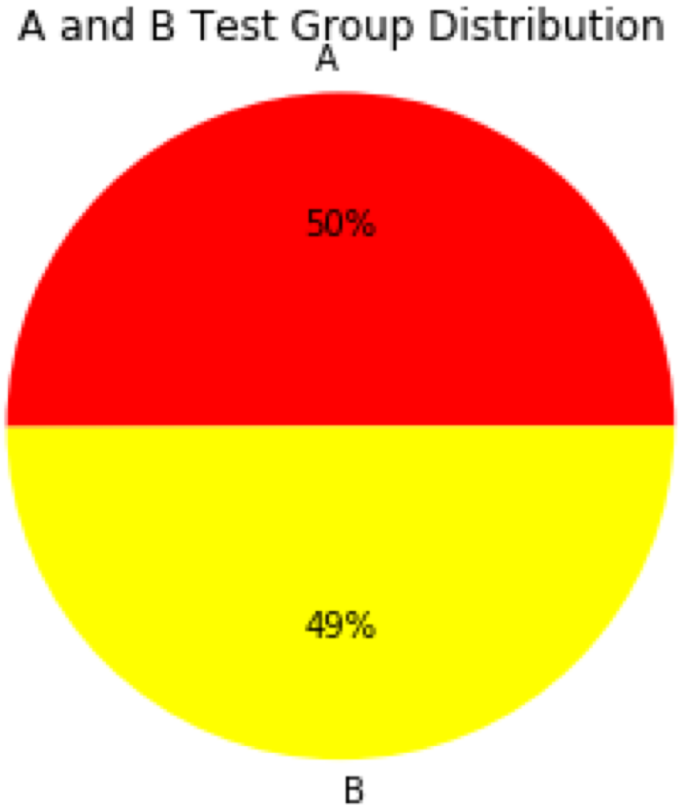


Figure 1: A and B Test Group Distribution

General Hypothesis

Visitors assigned to Group B will be more likely to purchase a membership to MuscleHub.

Test 1: Who picks up an application?

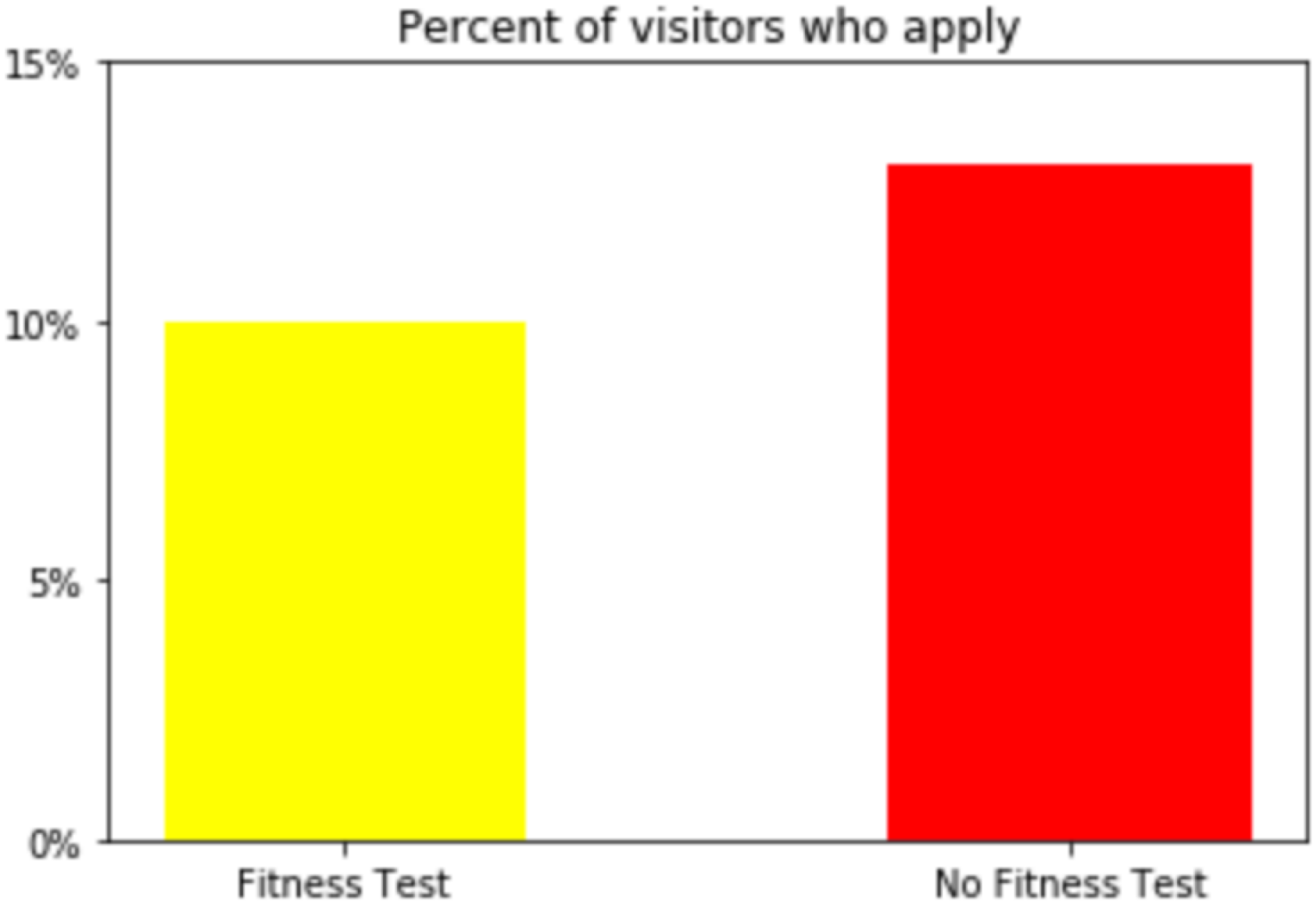
Null Hypothesis: The difference between the number of applications picked up by Group A and B is not significant.

Hypothesis Test: Chi Square Test – this is an A/B test in which half of the users complete a fitness test.

Test Group	Percent with Application
A	9.984%
B	13.000%
P-Value	0.0009648

P-Value: p-value < 0.05 so we reject the null hypothesis.

Conclusion: The difference between the number of applications picked up by Group A and B is significant. Group B users are more likely to pick up an application.



From Figure 2, it is clear that more visitors complete an application when a fitness test is not required (Group B).

Figure 2: Percent of visitors who complete an application

Test 2: Who completes an application and purchases a membership?

Null Hypothesis: The difference in the number of applications followed by memberships in Group A and B is not significant.

Hypothesis Test: Chi Square Test – this is an A/B test in which half of the users complete a fitness test.

Test Group	Percent with Purchase
A	80.000%
B	76.923%
P-Value	0.43259

P-Value: p-value > 0.05 so we accept the null hypothesis.

Conclusion: The difference in the number of applications followed by memberships in Group A and B is not significant. This data is disregarded.

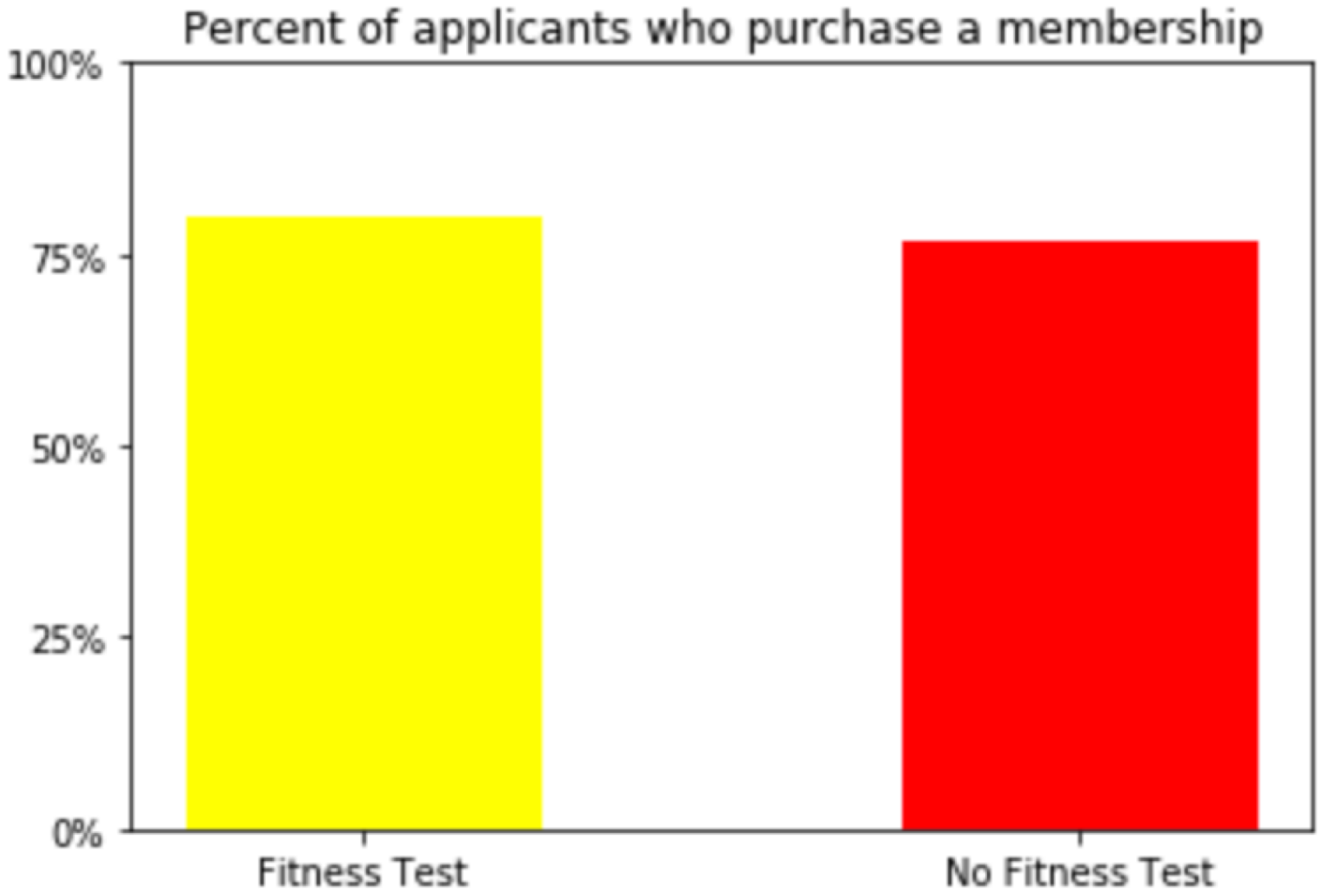


Figure 3: Percent of applicants who purchase a membership

From Figure 3, it is clear that more applicants purchase a membership when a fitness test is completed (Group A). However, these results are insignificant.

Test 3: Who gets a membership?

Null Hypothesis: The difference in the number of memberships bought by Group A and B is not significant.

Hypothesis Test: Chi Square Test – this is an A/B test in which half of the users complete a fitness test.

Test Group	Percent with Purchase
A	7.987%
B	10.000%
P-Value	0.01474

P-Value: p-value < 0.05 so we reject the null hypothesis.

Conclusion: The difference in the number of memberships bought by Group A and B is significant. Group B is more likely to purchase a membership.

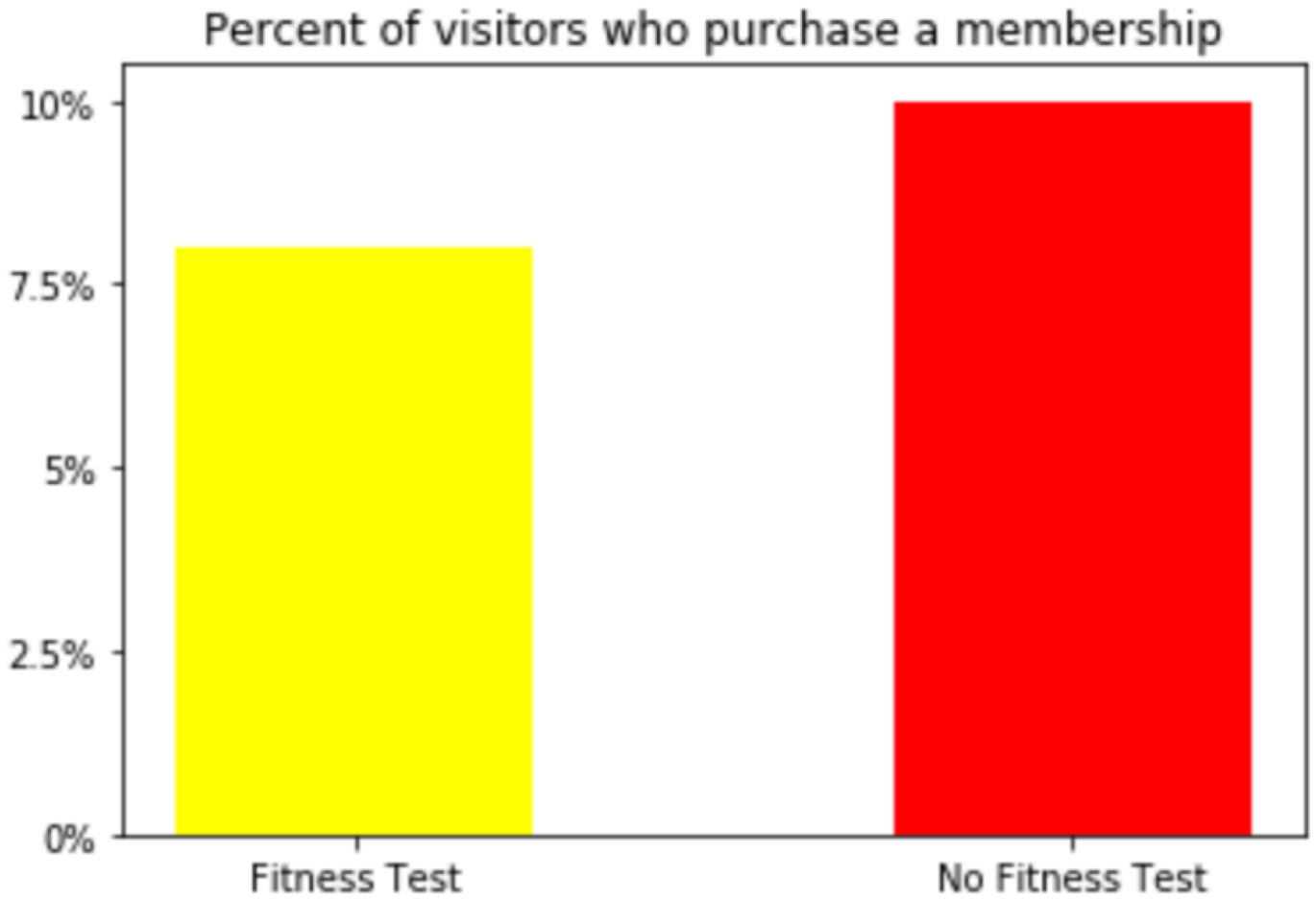


Figure 4: Percent of visitors who purchase a membership

From Figure 4, it is clear that more visitors purchase a membership when a fitness test is not required (Group B).

Conclusion

The fitness test intimidates prospective members. Therefore, we **accept** the general hypothesis. Visitors assigned to **Group B** are **more likely** to purchase a membership to MuscleHub.

Recommendations

Implement the **Group B** format for all MuscleHub visitors by having an **optional fitness test**.