INCREASING MUSCLEHUB'S MEMBERSHIP

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DECLINING MEMBERSHIP

- The manager of MuscleHub is concerned about membership declines.

- She believes that the decline is due to the fact that visitors are required to take a fitness test prior to applying for membership.

- Her assumption is that visitors will be more likely to join if the fitness test requirement is waived.

- We will analyze the results of her A/B Test to test her hypothesis.

ASSUMPTIONS

- Four datasets containing visitor information, fitness test dates, application dates, and membership dates were queried and analyzed. We assume that the data contained in the datasets are accurate.

- Visitors will be more likely to join if the fitness test requirement is waived.

TEST GROUPS

The pie chart displays Janet's division of the test groups. Approximately half are in Group A(no fitness test) and half in Group B(fitness test)
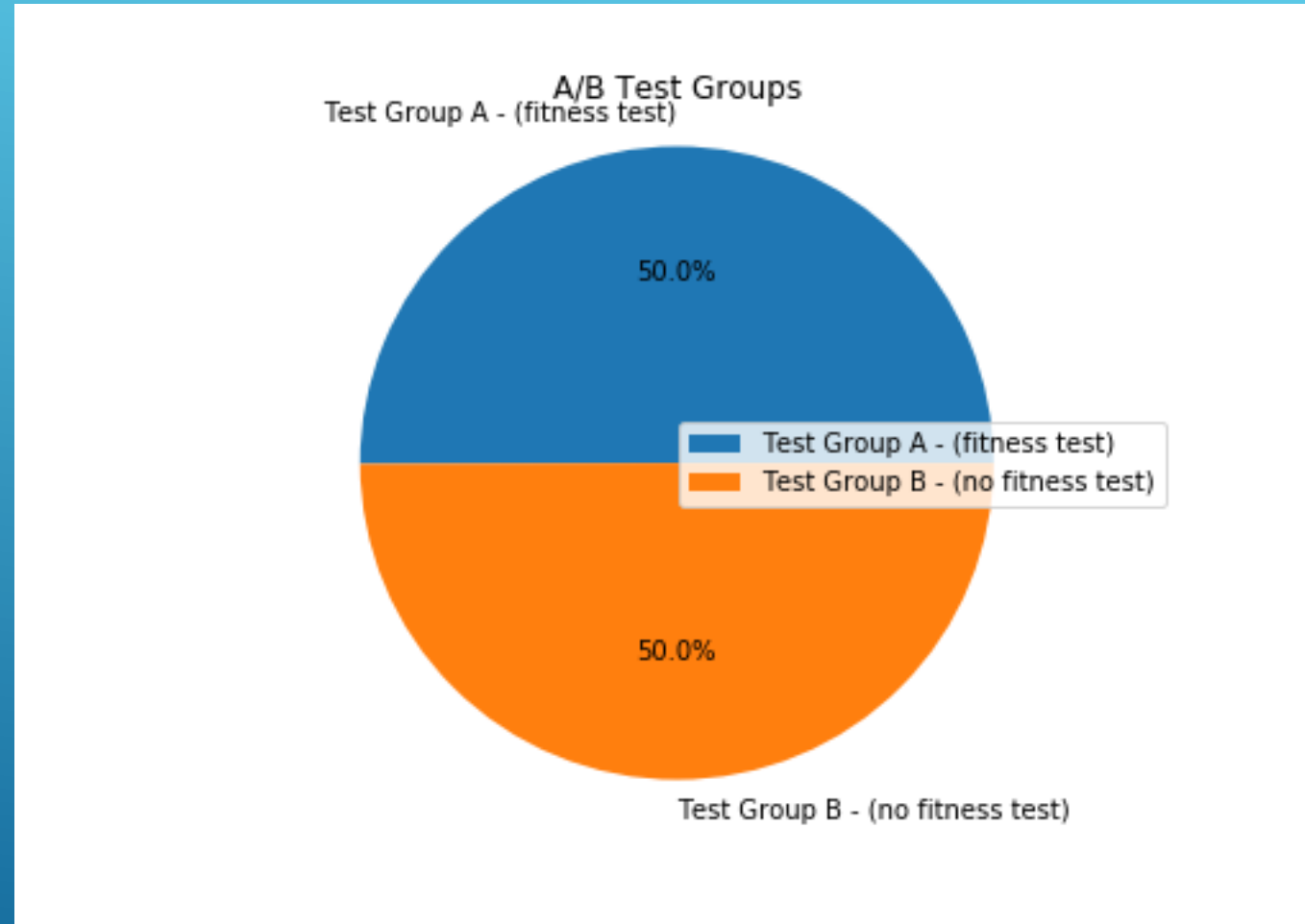
WHO APPLIED MORE

Although we have not concluded who purchased a membership, it is interesting to know if the fitness test significantly affects the number of completed applications. The graph shows that more people from Group B completed an application. The following slide shows the results of our significance test.
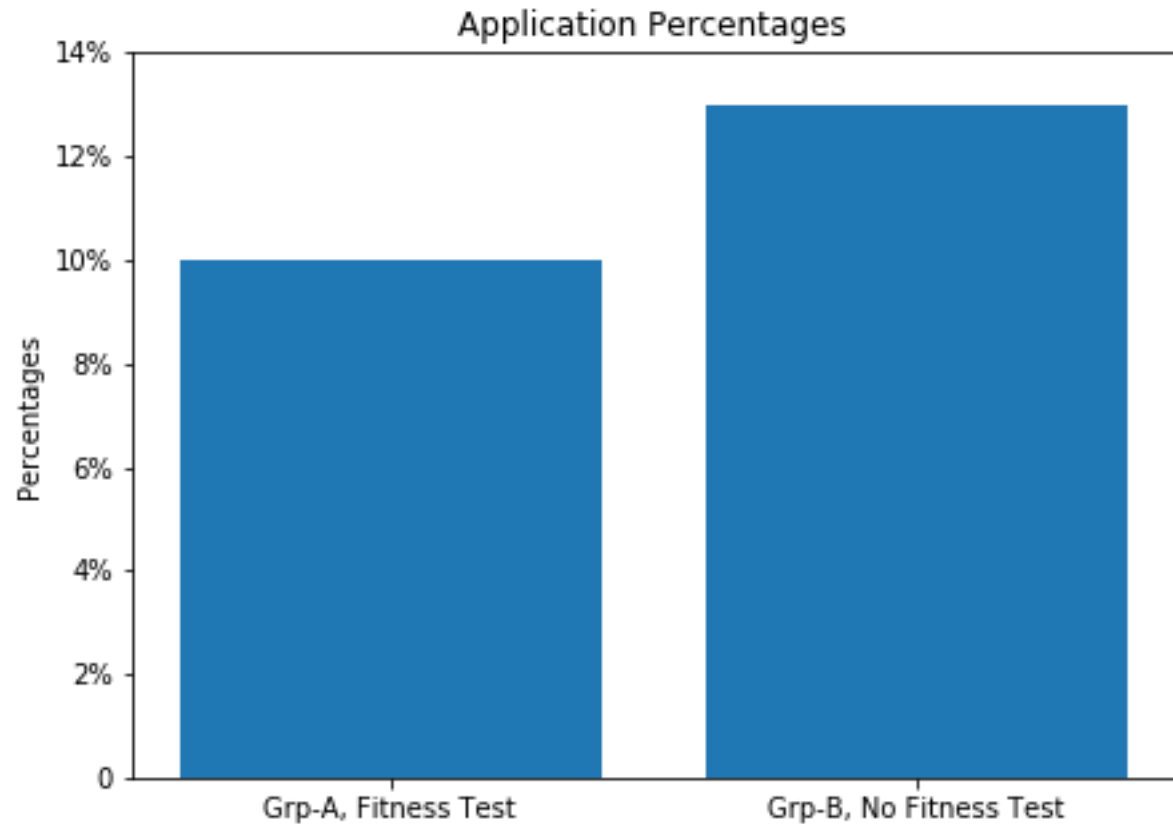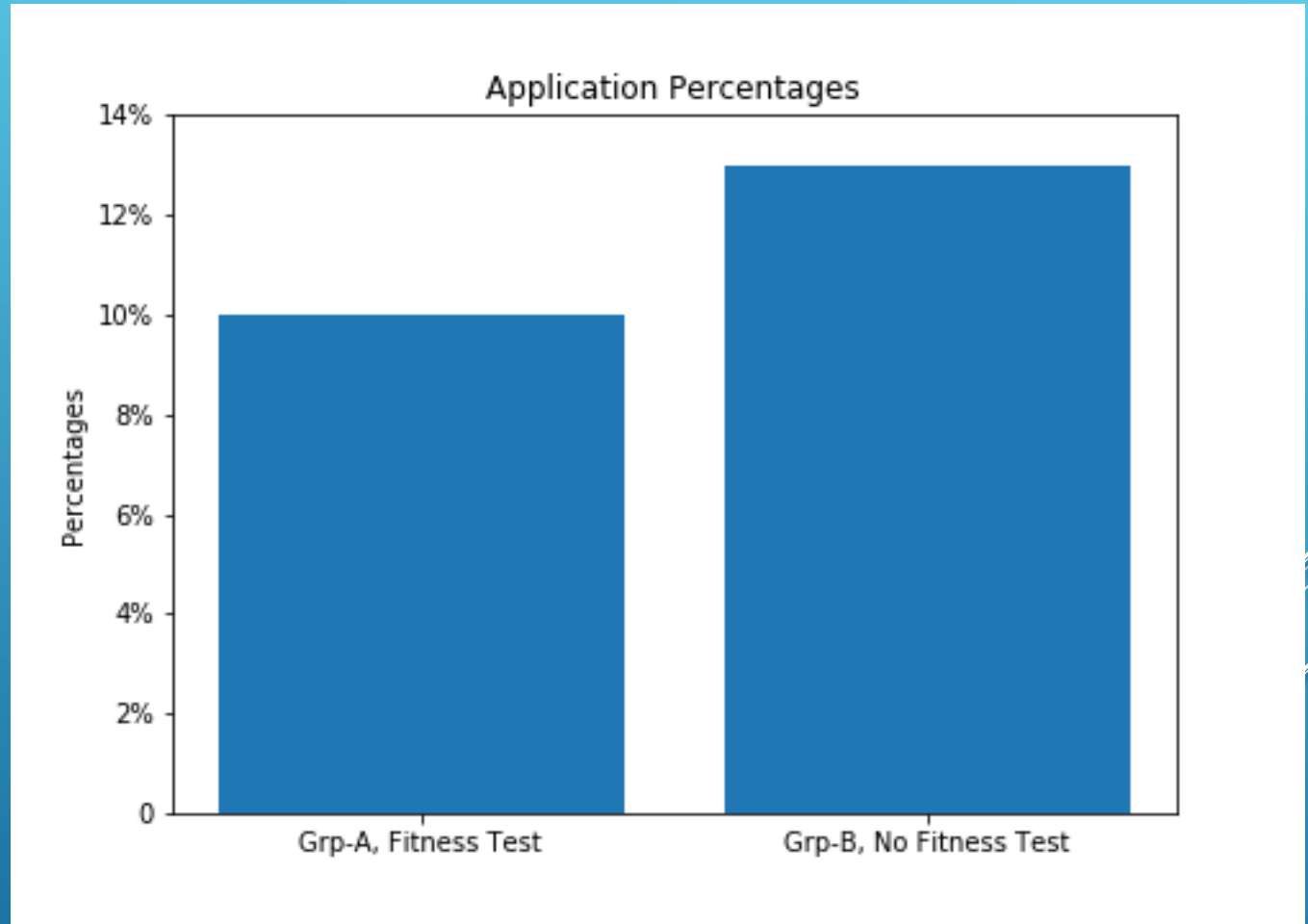
NO DIFFERENCE

Since we have categorical data with no mean nor standard deviation, but two or more datasets, I used the Chi-Squared test. My null is that there is no significance in these different percentages and it is simply random coincidence. A p-value > 0.05 will confirm this.

My resulting p-value of 0.081 indicates that there is **no significance**.

Let's move on!

Of those completing applications, which group is more likely to purchase a membership?
Surprisingly, we see from the graph that those who completed the fitness test purchased memberships at a higher rate than those who did not.
Is this difference significant or just a random event?
A p-value > 0.05 will confirm this is NOT a significant difference.

My resulting p-value of 0.81 indicates that there is **no significance**.

Purchase Percentages of Applicants
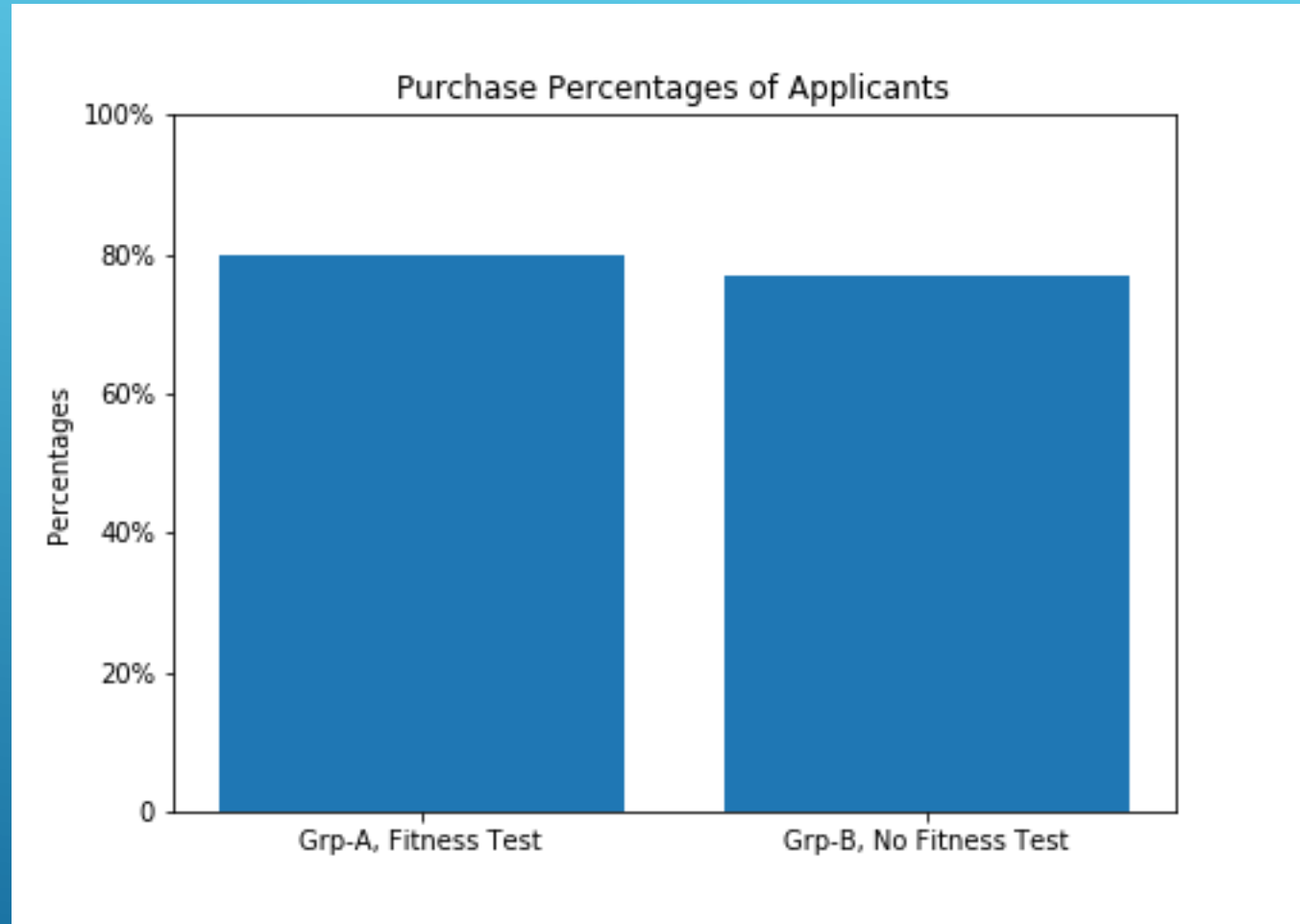
SHOW ME THE MONEY!

Finally, what we really need to know is if the fitness test affects the membership rate of all the visitors, not just those who completed an application.
The graph indicates that those who skipped the fitness test purchased memberships at a higher rate – (12% vs. 8%).
Is this difference significant or just a random event?
A p-value > 0.05 will confirm this is NOT a significant difference.

Since the resulting p-value of 0.015 is less than 0.05, the difference **IS significant.**

Purchase Percentages of All Visitors
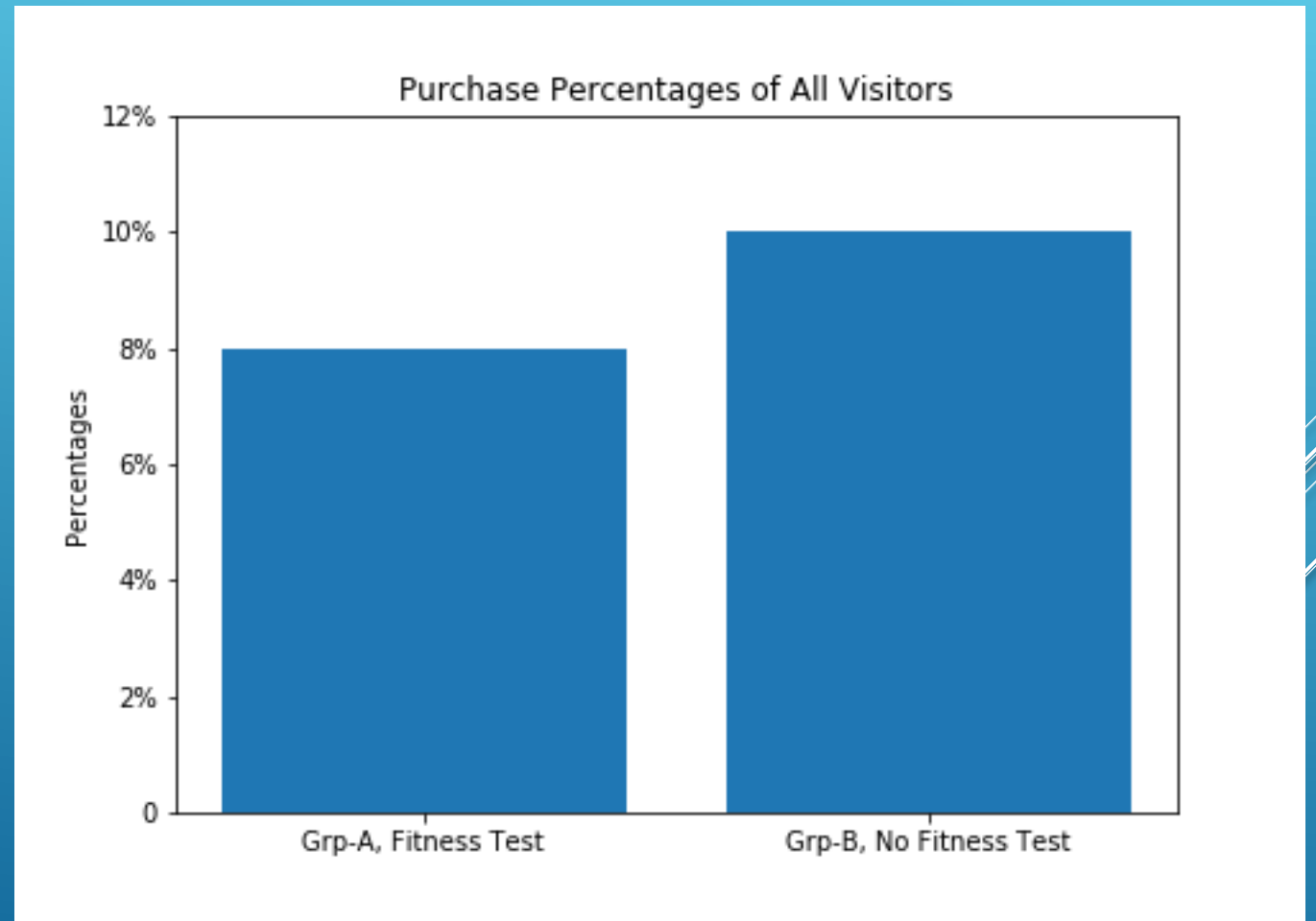
CONCLUSIONS

- Analysis shows that the fitness test makes no significant difference in the application rate.

- Analysis shows that there is no significant difference in the membership rates of those who apply.

- However, there is significance in the membership rates of the entire population of all visitors. Those who do not complete a fitness test seem more likely to join.

RECOMMENDATION

Drop the fitness test!

And give Janet a raise!