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Does playing video games make you an athlete?

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Recommended Citation

Murphy, Taylor; Scott, Briana; Lee, Alyandra; and Savage, Katelin, "Does playing video games make you an athlete?" (2021). *Fall Showcase for Research and Creative Inquiry*. 151.

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Does Playing Video Games Make You an Athlete?



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301-01 Dr. Ludwar

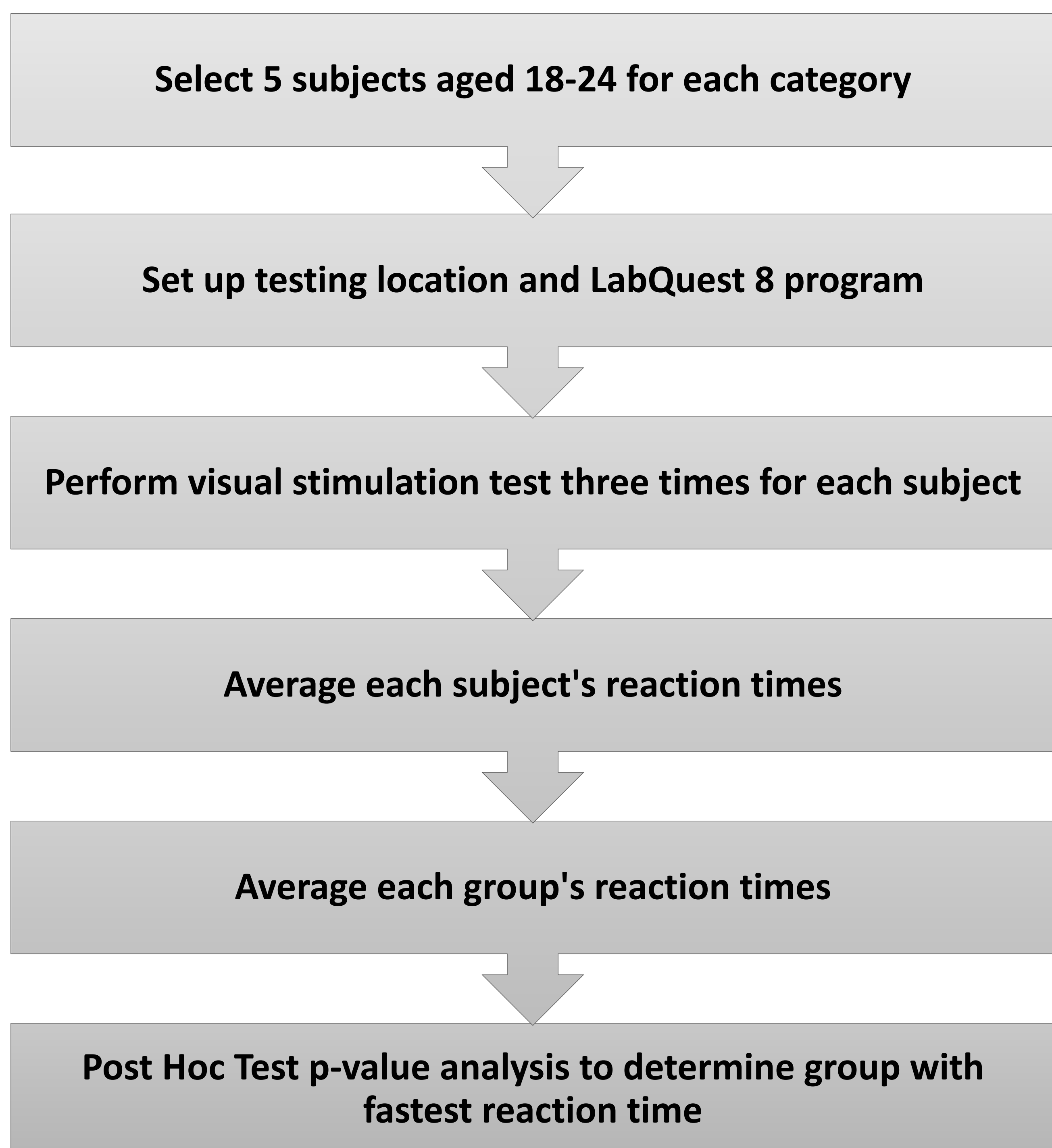
Introduction

- Studies have indicated that avid gamers outperform in "attention in space, in time, and to objects" (Kumar, 2010)
- Hypothesize that non-gamers/athletes will have the slowest reaction times, with gamers and athletes having the fastest.
- Reaction time: the time elapsed between the initial presentation of a visual stimulus and response that follows
- Hypothesize that gamers and athletes will have relatively the same reaction times/speed

Goal

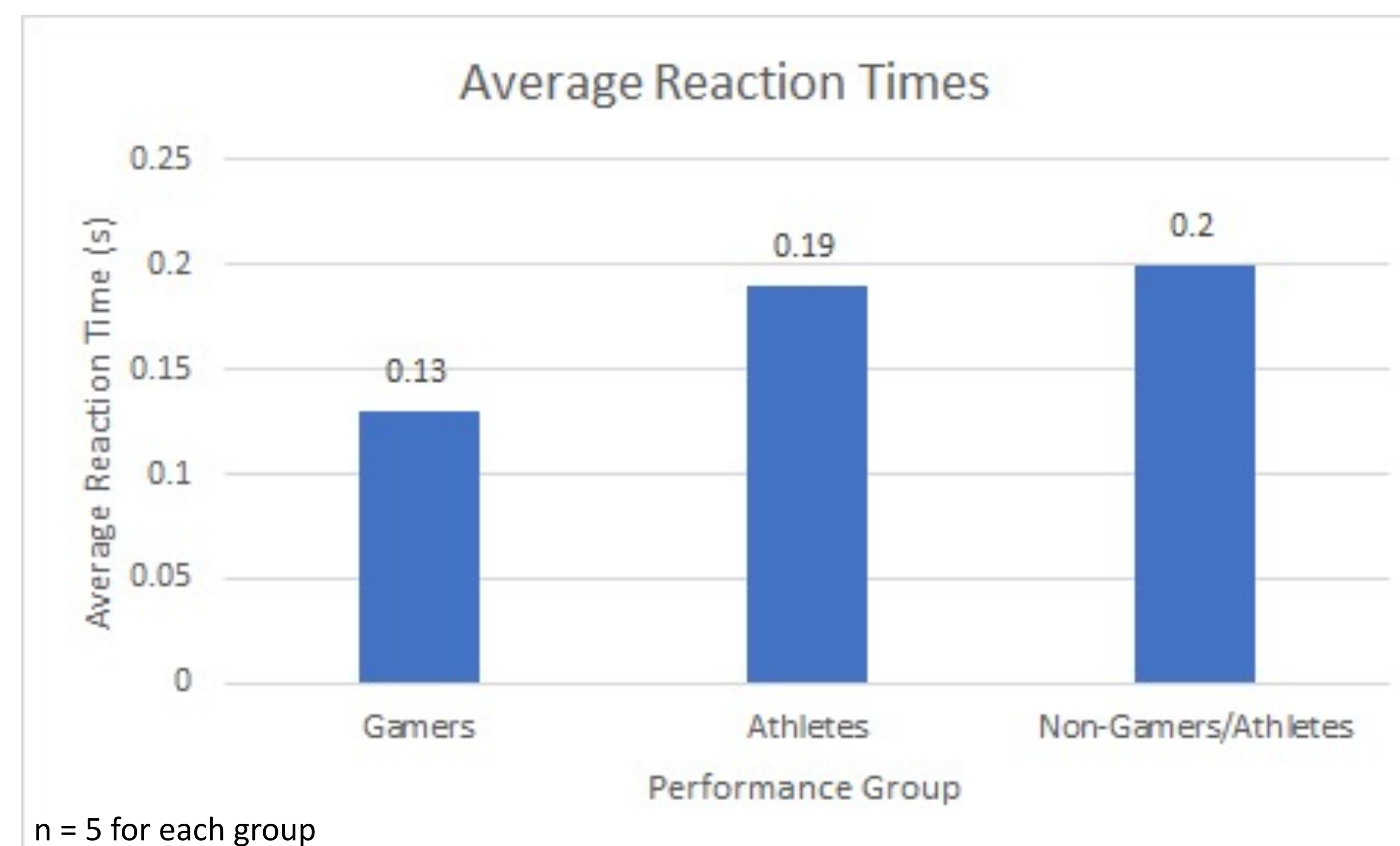
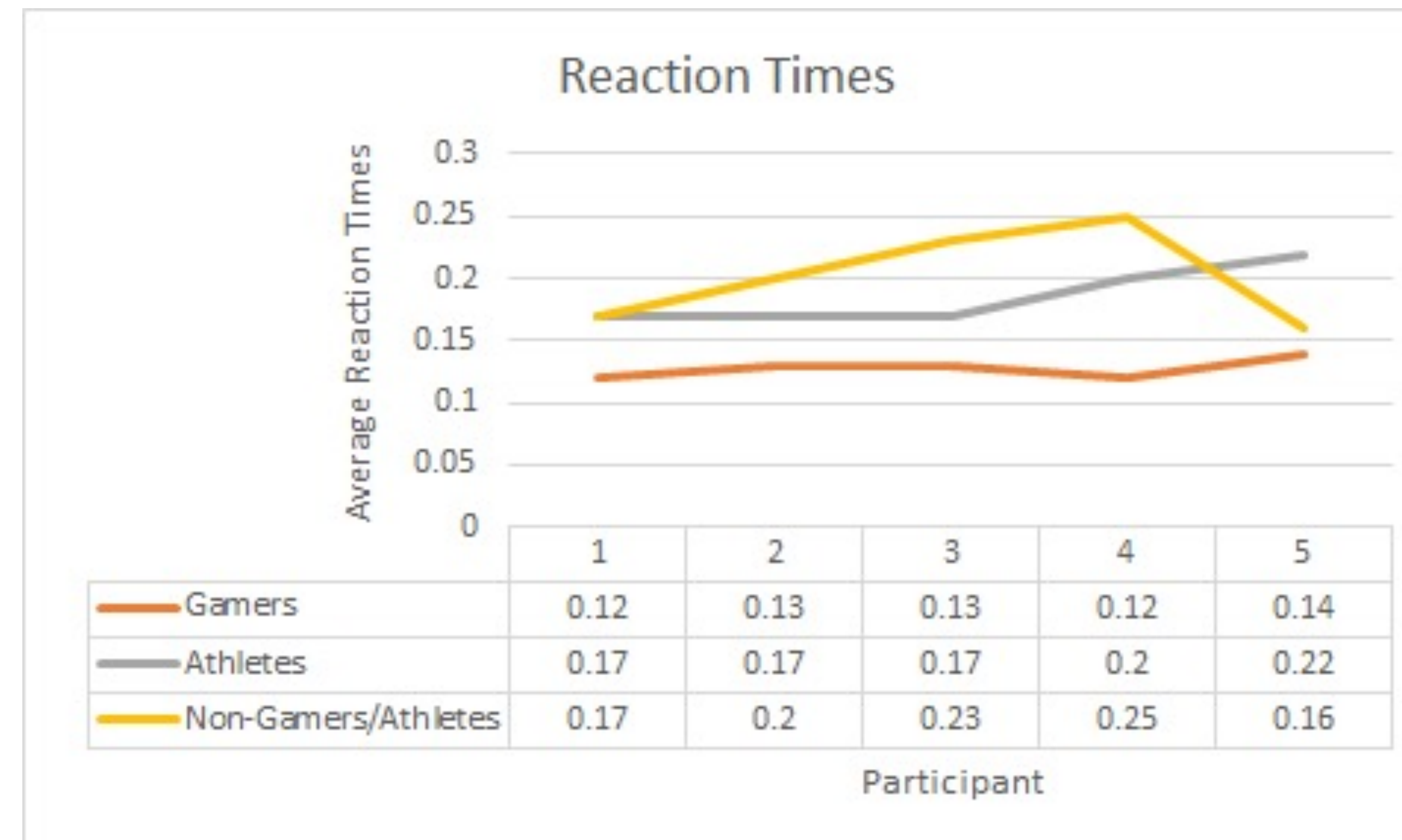
To determine which group has the faster reaction time and to inform the discussions if Esports belong in the Olympic Games

Methods



Results and Data

- Results showed that avid Gamers had statistically significant faster reaction times than both the Athletes (p=0.012) and Non-Gamers/Athletes (p=0.002) groups.



Post Hoc P-Value Test

| | Gamers | Athletes | Non-Gamers/Athletes |
|---------------------|--------|----------|---------------------|
| Gamers | 1 | 0.012 | 0.002 |
| Athletes | 0.012 | 1 | 0.613 |
| Non-Gamers/Athletes | 0.002 | 0.613 | 1 |

Conclusions

Differences Between Groups

- Differences in reaction times were statistically significant for the main effect of Gamer Status
- No significant difference in reaction times between Athletes and Non-Gamers/Athletes
- Lack of significance from the Athlete group suggests confounding variables are present such as the type of sport played
- Reaction times of a visual repetitious task are statistically shorter for participants who play five or more hours of video games per week as previously described by Knight, V.F. et al (2011).
- The statistical difference observed between Gamer and Non-Gamer groups supports the original hypothesis that individuals qualifying as Gamers would record significantly lower reaction times than Non-Gamers/Athletes and provide further support hypothesizing visual processing is enhanced in gamers.

IRB approval was obtained prior to experimentation.

References

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