VARYING PRE-SHOT CONDITIONS ON GOLF PUTT PERFORMANCE

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INTRODUCTION & PURPOSE

- Our research specifically focused on the results of varying pre-shot conditions on a golf putt.
- This study aimed to understand how different conditions can impact a golf putt with the hopes of discovering ways to improve how a golfer approaches their shot.
- We intended for the findings from this research to assist in gaining a better understanding of the psychology of golfers and methods that can be proven to help or hinder the golfer's putting execution on the course.

METHODS

- A total of 5 conditions were tested: Practice, no practice, auditory distraction, cognitive challenge, and imagery.
- Each condition was performed four times in total – two from an 8ft line and two from a 10ft line. This resulted in a total of 20 putts for each of the 12 participants.
- To measure the results of the putt, the red square in the center of the target area was valued at 3 points, the next outer square was 2 points, then 1 point for the outermost square, and 0 points for anything outside the target area.
- Each condition was delivered to the participant in a randomized order.
- At the end of the study each participant would answer a questionnaire including which condition they perceived to be the most challenging and which they found to be the easiest.

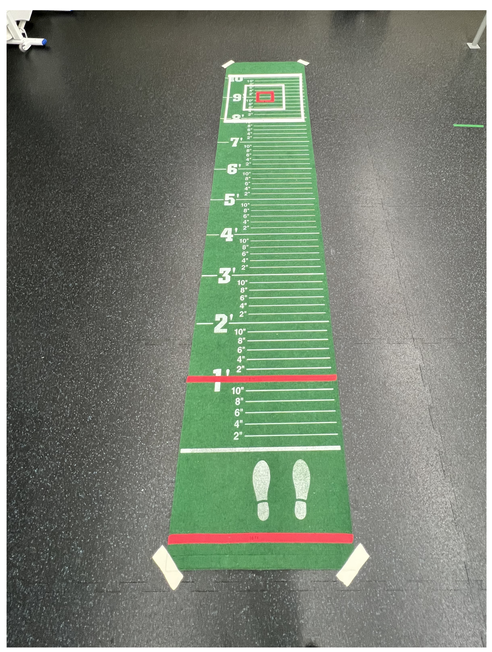

Image 1: View Of Target From Putters Perspective Including 8ft and 10ft Target Lines

PERCEIVED HARDEST CONDITION

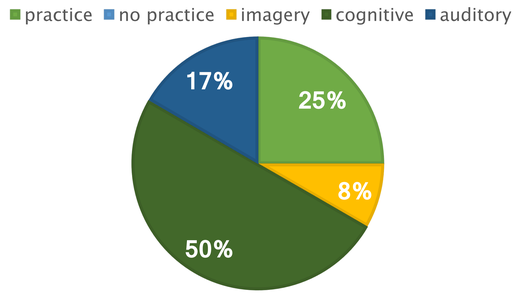

Figure 1. Each participant was asked post performance about their hardest perceived condition. Results are shown above corresponding to their given colour

PERCEIVED EASIEST CONDITION

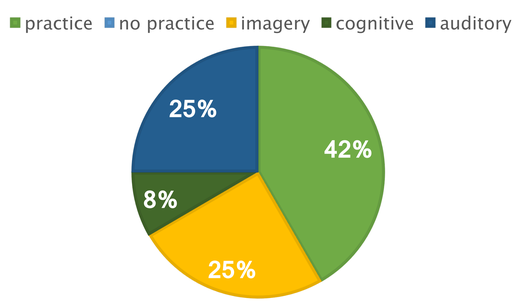

Figure 2. Each participant was asked post performance about their easiest perceived condition. Results are shown above corresponding to their given colour

RESULTS & DISCUSSION

NO PRACTICE

RESULTS

Total: 46 **Average: 0.96**

We expected 'no practice' to be one of our lowest scored conditions, and it ended up being our highest-scoring condition. This may be because 'no practice' did not give the participants a chance to overthink their shot before executing it.

AUDITORY

RESULTS

Total: 45 **Average: 0.94**

A common theme throughout our analysis was that distractions weren't always perceived as negatives among our participants. Some mentioned that being distracted by another source took the pressure away from the task at hand. Additionally, participants tended to get used to the auditory distraction and improve throughout this condition.

IMAGERY

RESULTS

Total: 45 **Average: 0.94**

Like the 'auditory' condition, 'imagery' was not perceived as having a negative impact on performance amongst participants. Imagery did score high overall but was not as beneficial as pre-study anticipations, possibly due to varying abilities to concentrate amongst participants.

Conditions		Difference	P-Value	Significant?
No Practice	vs. Practise	9	0.40	NO
Practise	vs. Cognitive	15	0.12	NO
Imagery	vs. Practice	8	0.45	NO
Auditory	vs. Practice	8	0.46	NO
No Practise	**vs. Cognitive**	**24**	**0.01**	**YES**
No Practise	vs. Imagery	1	0.92	NO
No Practise	vs. Auditory	1	0.92	NO
Imagery	**vs. Cognitive**	**23**	**0.02**	**YES**
Auditory	**vs. Cognitive**	**23**	**0.02**	**YES**
Imagery	vs. Auditory	0	1	NO

Figure 4. Each condition was run in a single factor ANOVA against each other condition to provide individual P-values for each comparison. Results of difference between conditions and corresponding P-values are shown. Bold indicates a significant difference between the two conditions. NOTE: The highest scoring condition is always on the left of the table.

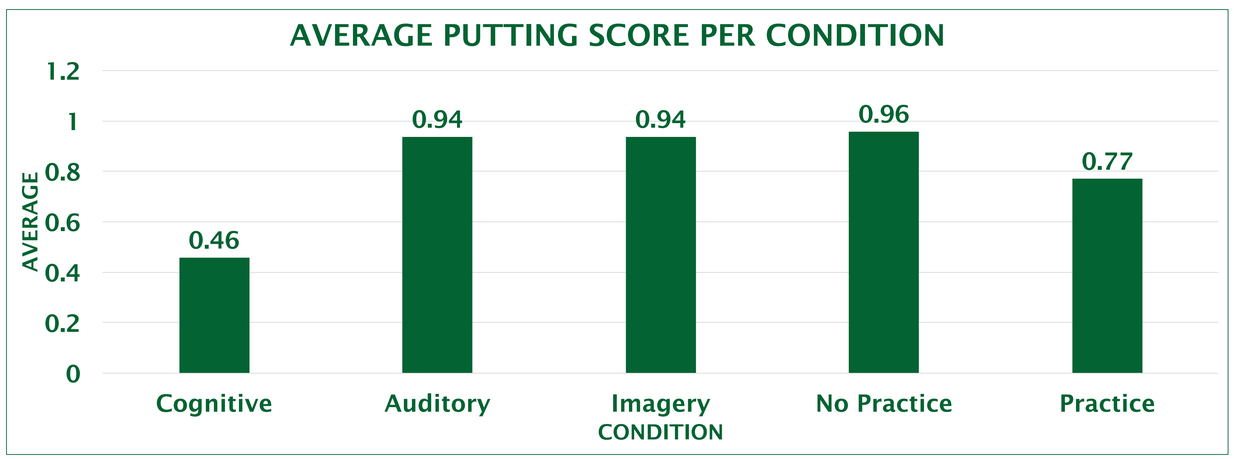

Figure 3: Each shot could result in a 0,1,2 or 3 score. Above is the total average score of every putt under each condition

PRACTICE

RESULTS

Total: 37 **Average: 0.77**

This was a condition we expected to score high amongst participants, but it was the second lowest average overall. We believe this could be from some less experienced golfers not knowing how to effectively practice their putt.

COGNITIVE

RESULTS

Total: 22 **Average: 0.46**

The 'cognitive challenge' was the lowest scoring condition as we anticipated. Pulling the focus away from the shot and setting the mind on something else caused the participants to struggle. This was used to simulate how athletes have non-golf related distractions in their heads or minds while golfing.

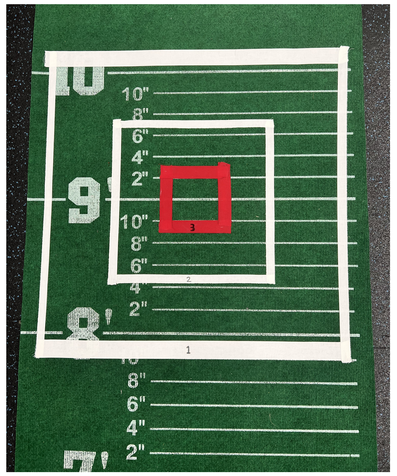

Image 2: Putt Target Area

CONCLUSION

- Three of our condition comparisons were significant; this occurred when comparing the results of 'no practice' vs 'cognitive', 'imagery' vs 'cognitive', and 'auditory' vs 'cognitive'.
- A big takeaway from this study was also how athletes might often perceive their performance differently from what the actual results and statistics say about how they did.
- It might be more beneficial to not take a practice swing specifically when putting and having a clear mind and tight focus is important in golf as the mental aspect of participants played a large role in this study's results.