

## Introduction:

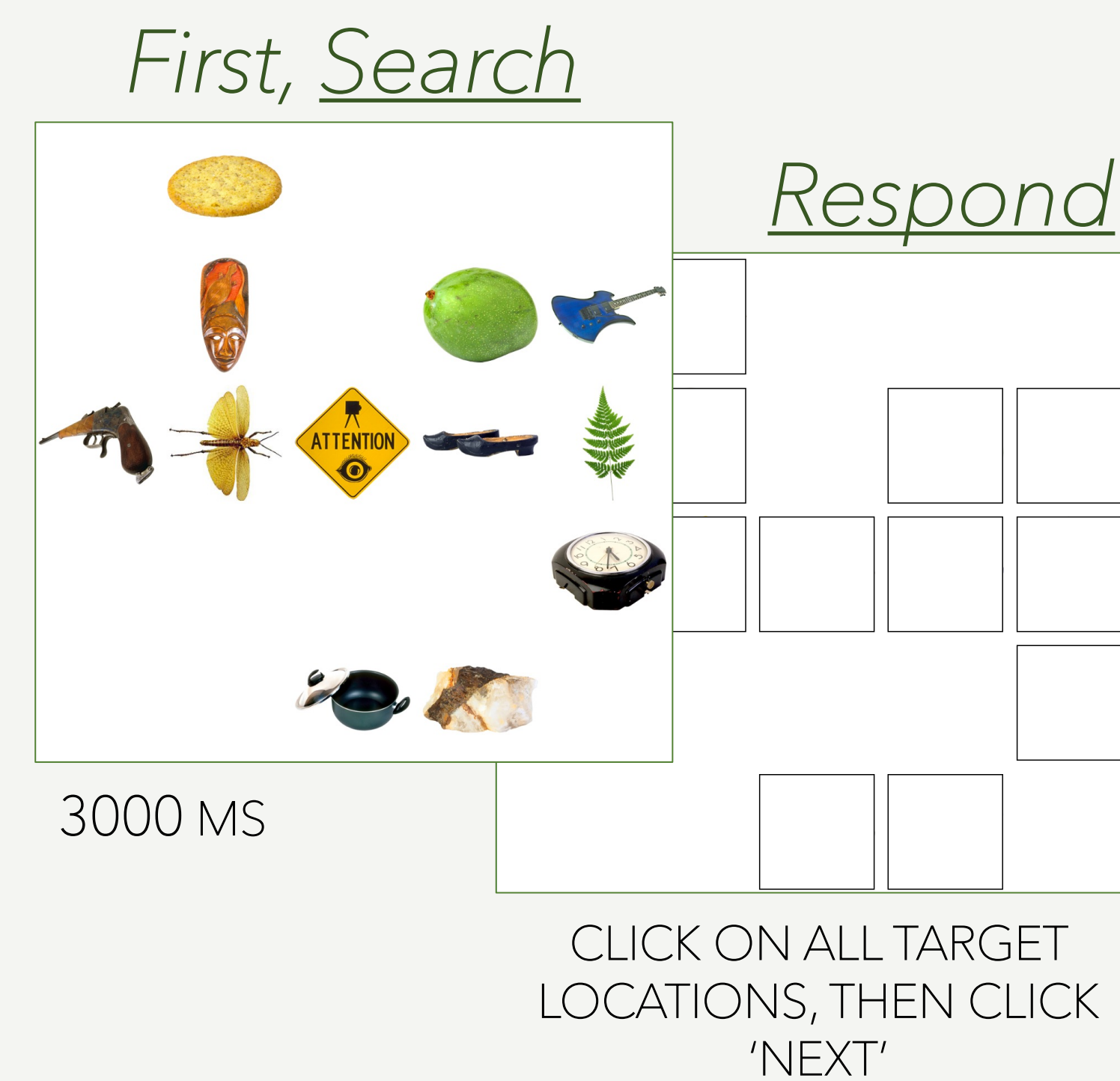
In **Visual Search**, you look for a target among distractors. In **Hybrid Search**, you look for several targets. In **Mixed Hybrid Search**, you look for some specific items (e.g., this fridge, that book) and some categories of items (e.g., any animal, any car).

In **Mixed Hybrid Search**, Os are much more likely to miss categorical targets than specific targets.

(Wolfe, Soce, & Schill, 2017)

**Do Os actually know something about those missed categorical targets? Is there hidden, partial knowledge?**

## Methods: "Look for any animal, any car, and for these specific items (picture)"



-Experiment 1-

-Experiment 2-

### AWARENESS QUESTION

Do you think you missed a target?

YES NO

IB questions asked after every missed trial and 5% of target-absent trials.

### CONFIDENCE QUESTION

How confident are you that you did not miss a target?

1 ————— 100

IB questions asked after every trial.

### 2AFC QUESTION

If you did miss one of these, which one was it?

**The critical question:** If you say "No, I did not miss anything", can you beat chance when guessing which of two items you did, in fact, miss?

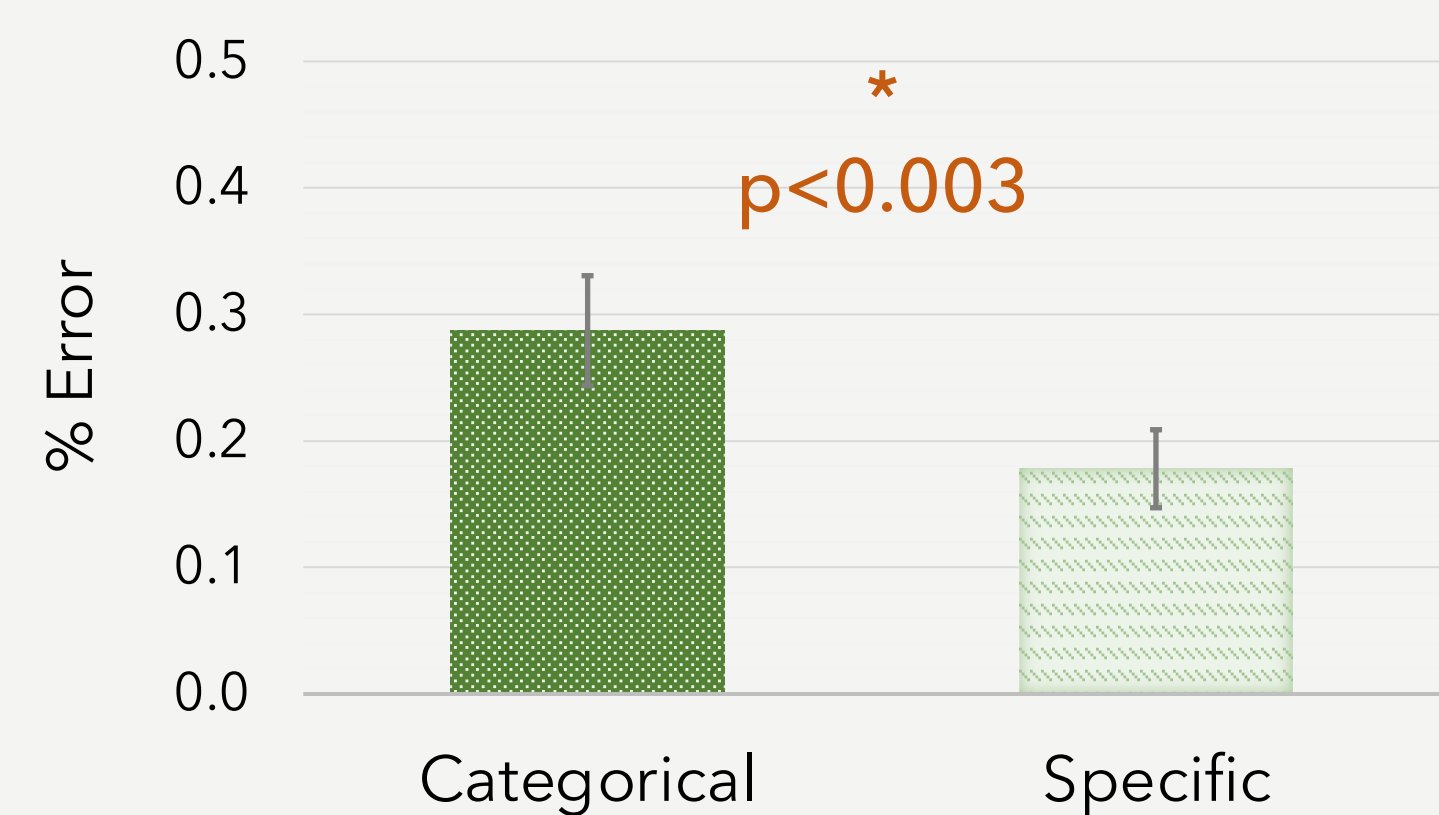
### DESIGN

- ◀ 50% target absent
- ◀ 40% 1-target
- ◀ 10% 2-target
- ◀ 20% categorical targets
- ◀ 80% specific targets

## Experiment 1:

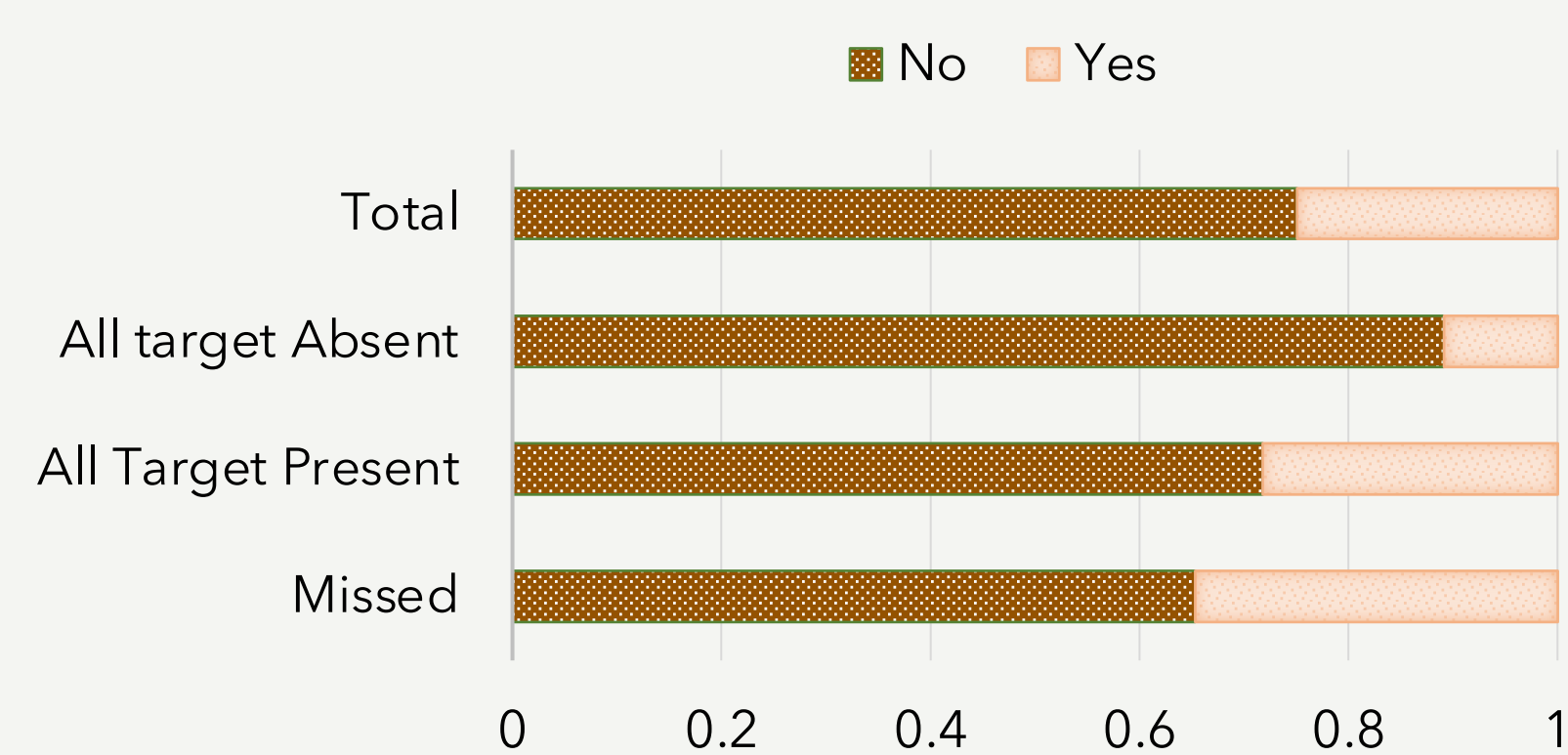
N=12

### SEARCH PERFORMANCE



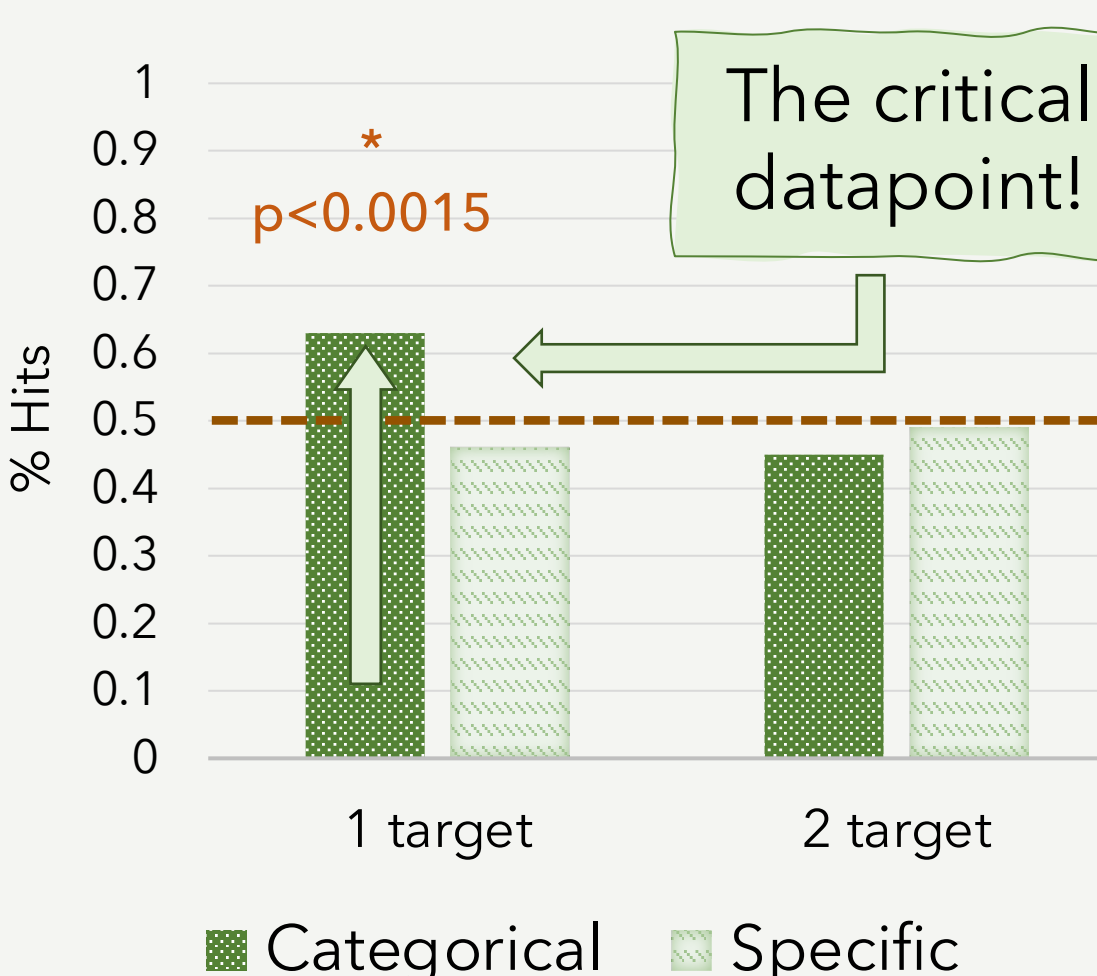
Both experiments replicated previous findings that Os are more likely to miss categorical items during search.

### AWARENESS RESPONSE (%)

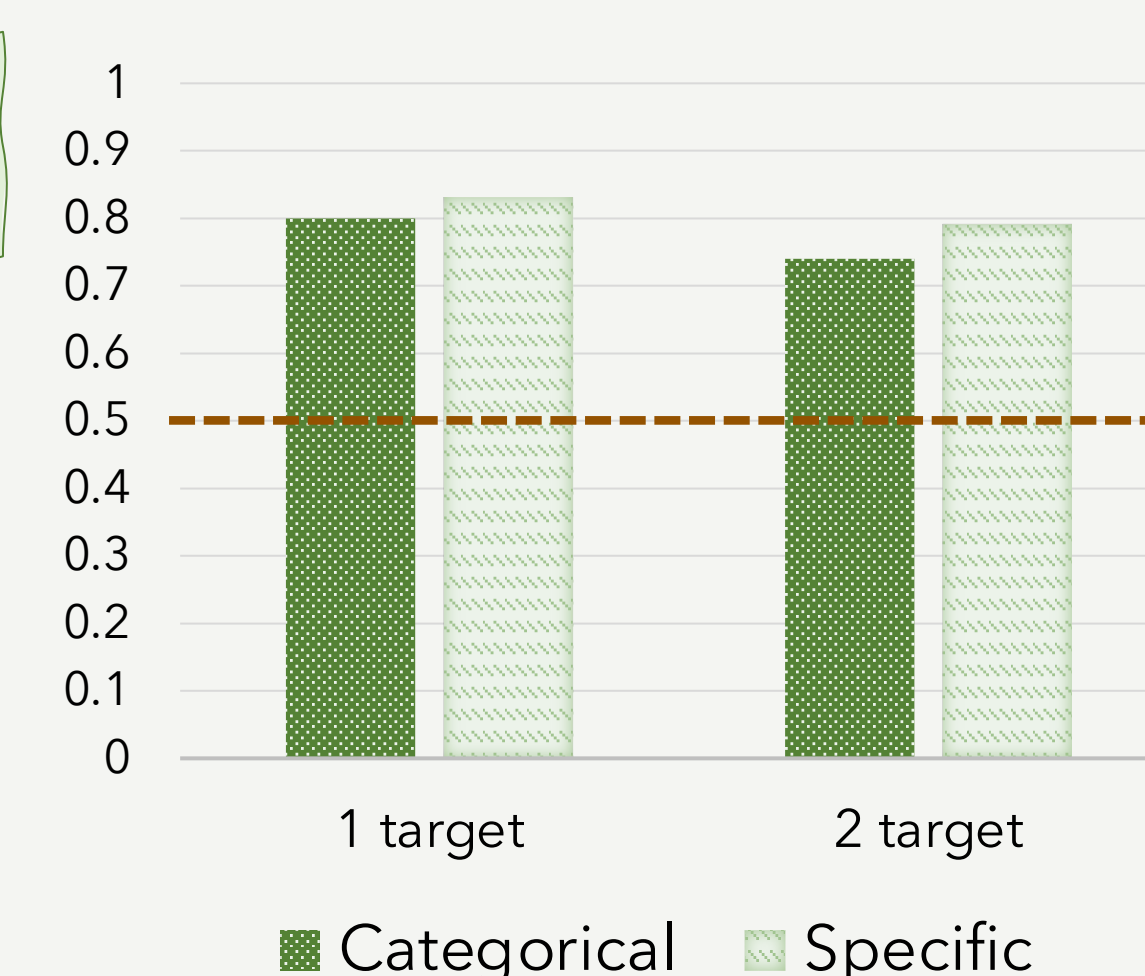


Even when they miss, Os are quite confident that they did not miss

### IB HITS FOLLOWING 'NO' AWARENESS WHEN 1 ITEM MISSED DURING SEARCH



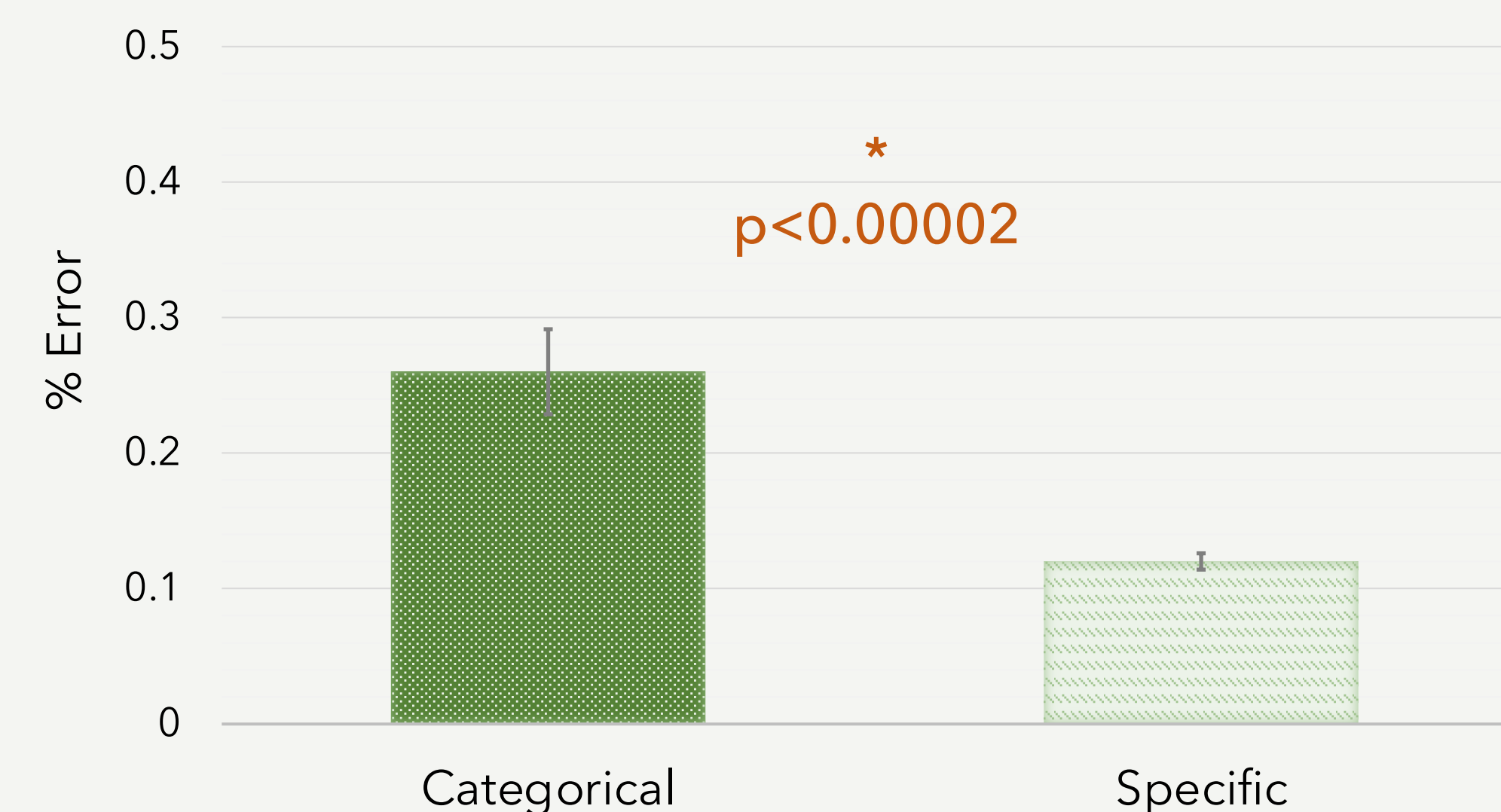
### IB HITS FOLLOWING 'YES' AWARENESS WHEN 1 ITEM MISSED DURING SEARCH



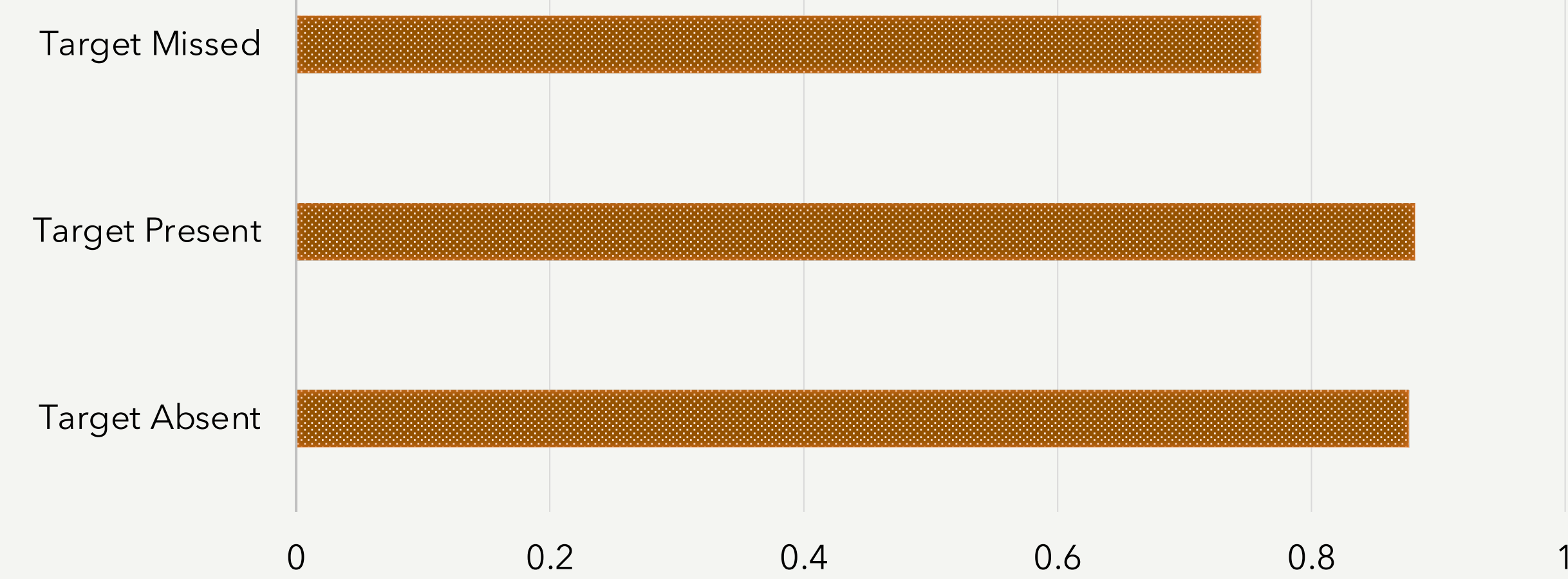
## Experiment 2:

N=25

### SEARCH PERFORMANCE

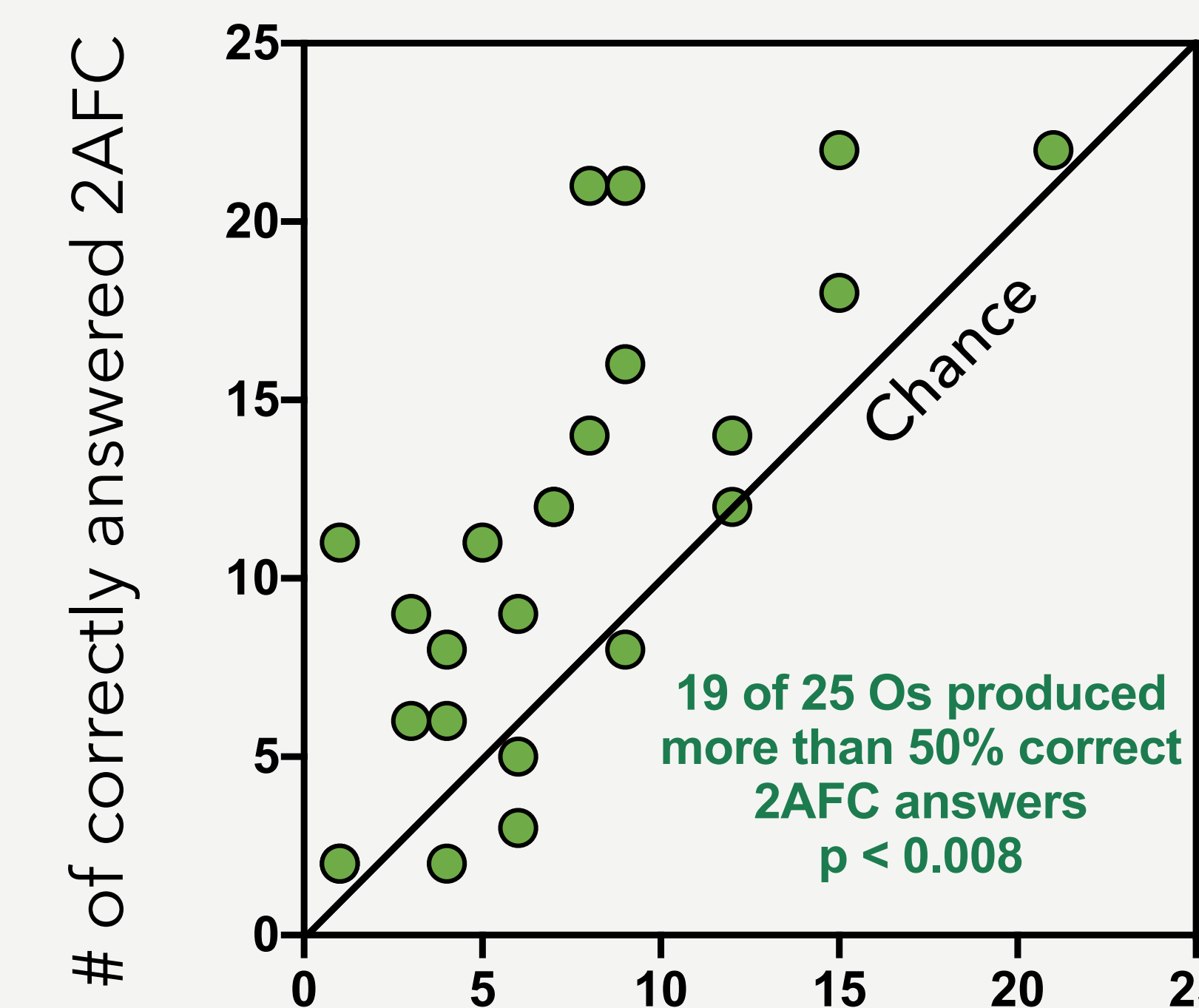


### AVERAGE CONFIDENCE

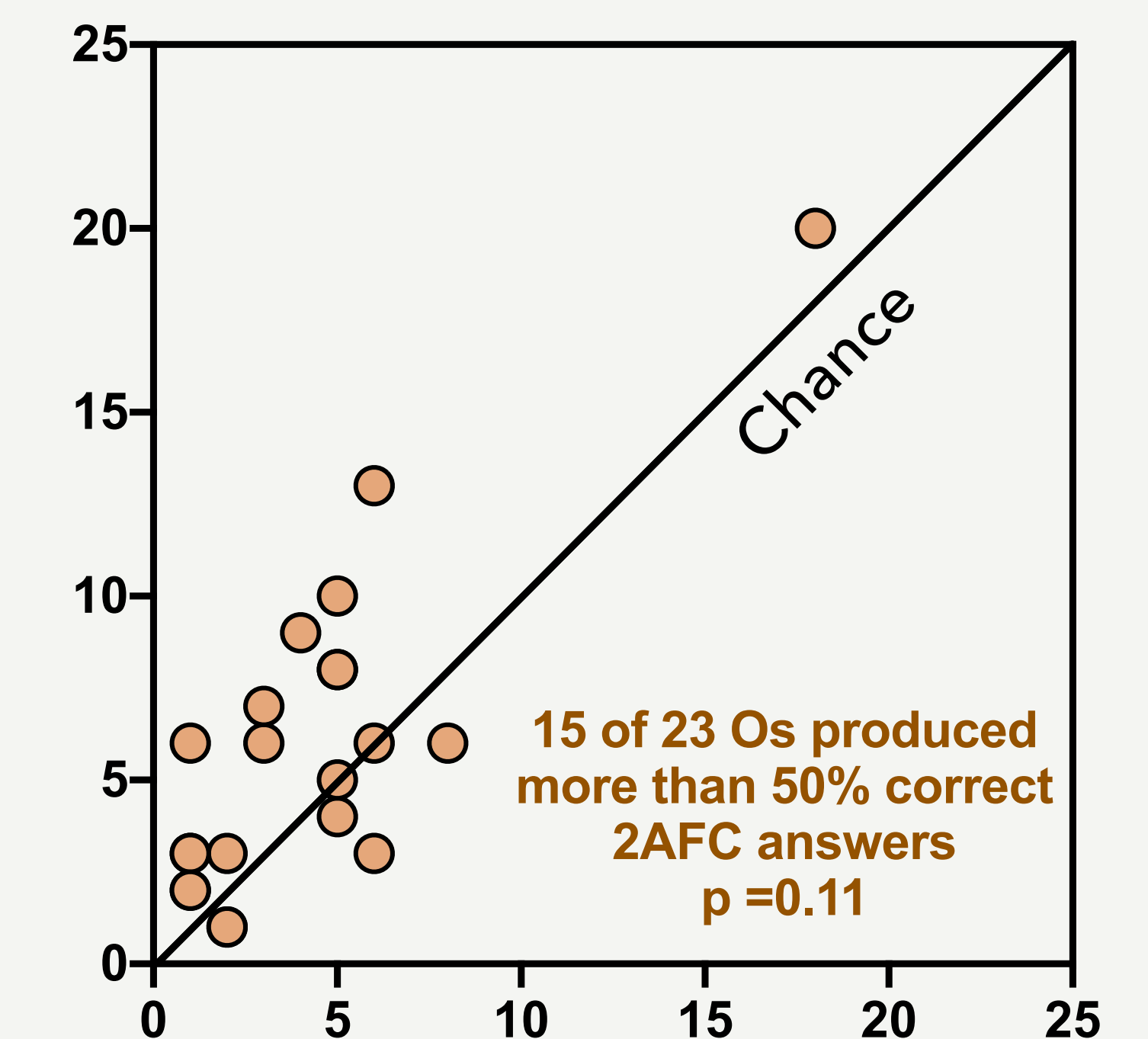


## 2AFC QUESTION TASK

### QUESTIONED ABOUT CATEGORICAL MISSES



### QUESTIONED ABOUT SPECIFIC MISSES

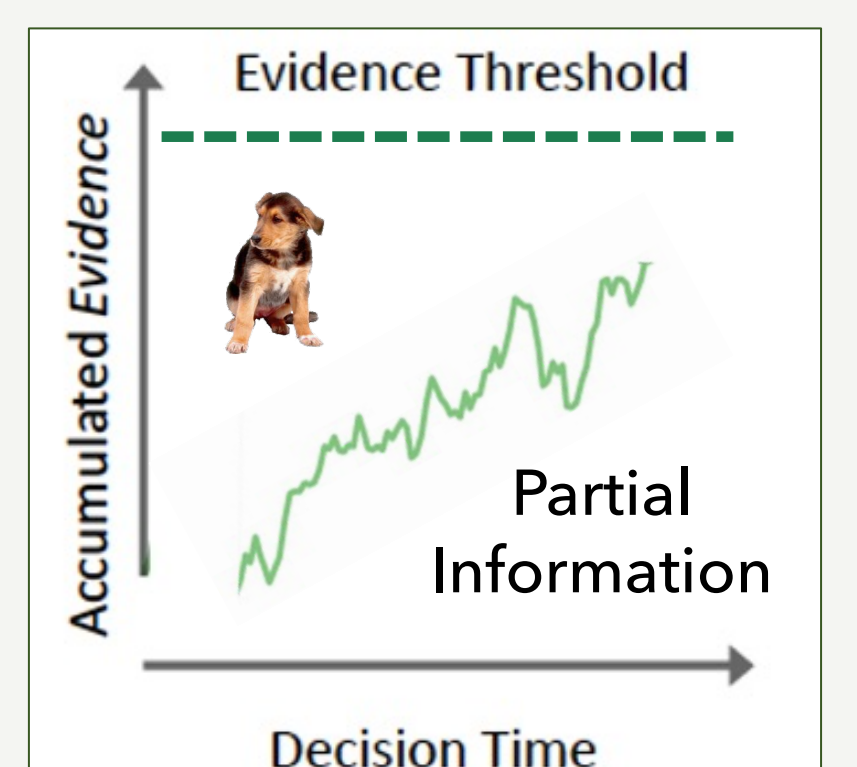


## WHAT IS GOING ON?

Some categorical targets may be missed when Os give up on processing them, even though they have been attended.

Os seem to have access to some partial information that was accumulating. They can use that information to beat chance on the 2AFC questions.

Most specific item misses probably occur when, by chance, Os fail to attend to the target. No attention, no partial information, and, thus, no ability to beat chance.



## Conclusion:

Participants perform above chance when identifying a missed *categorical* item, even when they are 'sure' they did not miss anything during the search!