Hamster and Mouse Performance in a Maze

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Abstract. I chose to research hamster and mouse performance in a 64.5 cm by 66.5 cm wooden T-maze because I am interested in animal sciences. I prepared the maze by placing a treat (carrots, lettuce or oats) at the end of the maze. I did not use the same treat every trial, but from the results, the type of treat did not affect their speed and maze solving skills. I allowed the hamster to sniff the treat and placed it at the end of the maze. Then, I started the timer and recorded how much time it took for it to finish the maze. The mouse finished the maze faster than the hamster. I conclude that the activeness and weight of the mouse affected its success towards finishing the maze quicker. I had 9 trials.

Keywords: Hamster care; Mouse care; Experiments involving mice and a maze.

INTRODUCTION

There are 2 parts to solving a maze: skill and randomness. When someone first solves a maze they use randomness, but the next time they have a sense of learning. If randomness is important than the animal that moves the fastest will run to the end faster. Each animal is suitable for being a small, handheld rodent pet. The average heart rate for an average mouse is 500-600 bpm. The average heart rate for an average hamster is 450 bpm.

METHODS

I used a wooden 64.5 cm by 66.5 cm T-maze with 8 choices. I made the rodent smell the treat (carrots, lettuce or oats) I’m using then hid the treat at the end. I placed the rodent in the maze and started the timer. I then waited and recorded.

RESULTS

The mouse finished the maze faster than the hamster. The mouse's average was 74.4 seconds and the hamster's average was 319.1 seconds. The mouse's standard deviation was 52.9 seconds and the hamster's standard deviation was 354.9 seconds.

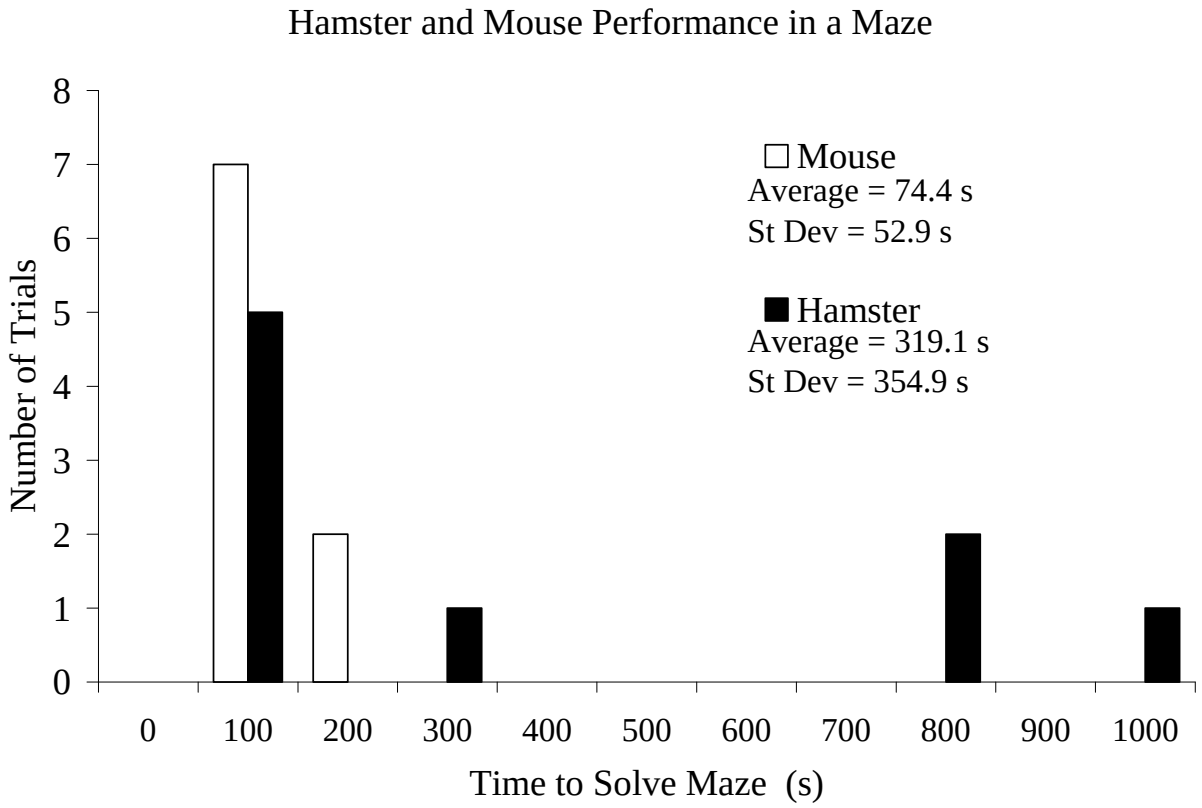

FIGURE 1. The horizontal axis shows the time taken to solve a maze. The vertical axis shows the number of trials of the mouse and hamster ran.

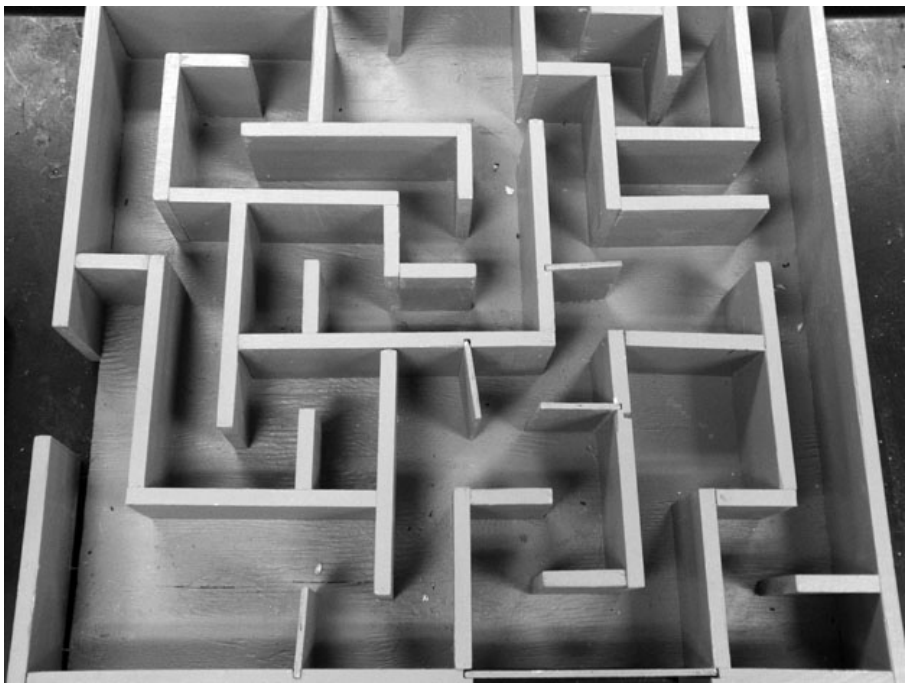

FIGURE 2. This is a wooden 64.5 cm by 66.5 cm T-maze. The maze used for the mouse and hamster to run.

DISCUSSION

From my results, I saw that the mouse was faster than the hamster. I don't know whether this was do to the difference of the individuals or the difference of the species

CONCLUSIONS

The result of studying hamster and mouse the mouse performance in a maze, I observed that the mouse ran the maze faster and solved it significantly faster than the hamster. From this, I conclude that speed influenced the success the mouse had on solving the maze.

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