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Male and Female Mice Show Similar Navigation Performance in Darkness

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Introduction

• The survival of most species depends on accurate navigation.

• Some species of mice show sex differences in landmark (visual) navigation whereas others do not.\(^1\)\(^-\)\(^3\)

• However, no studies have tested whether males and females differ in navigation in darkness.

Aim

To determine whether there is a sex difference in navigation performance maze in darkness.

Method

Subjects

Male and female C57/6J mice

Apparatus

Lashley III maze in darkness

Procedure

1. Pre-exposure:
   • Mouse was confined to individual alleys

2. Testing:
   • Food reward in goal box
   • Five trials in the same day

Results

Latency To Reach Goal Box

- Group: \(F(1,6) = .58, p = .47\)
- Trial Block: \(F(4,24) = .77, p = .55\)
- Group x Trial Block: \(F(4,24) = .58, p = .68\)

Errors During Journey

- Group: \(F(1,5) = .07, p = .80\)
- Trial Block: \(F(4.20) = 1.92, p = .15\)
- Group x Trial Block: \(F(4,20) = .32, p < .86\)

Summary

There were no sex differences in navigation performance on the Lashley III maze.

Conclusion

Further studies are needed to determine if sex differences occur in other non-visual navigation tasks.

References


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