

The facilitating effect of oxytocin on sexually conditioned partner preference in the female rat

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Introduction

- Rats can be classically conditioned to prefer cues associated with sex.
- These associations have been demonstrated using scent cues.
- In prairie voles, oxytocin is necessary for the formation of partner preferences – this has yet to be shown in rats.
- In rats, studies showing sexually conditioned partner preference typically use 10 conditioning trials.

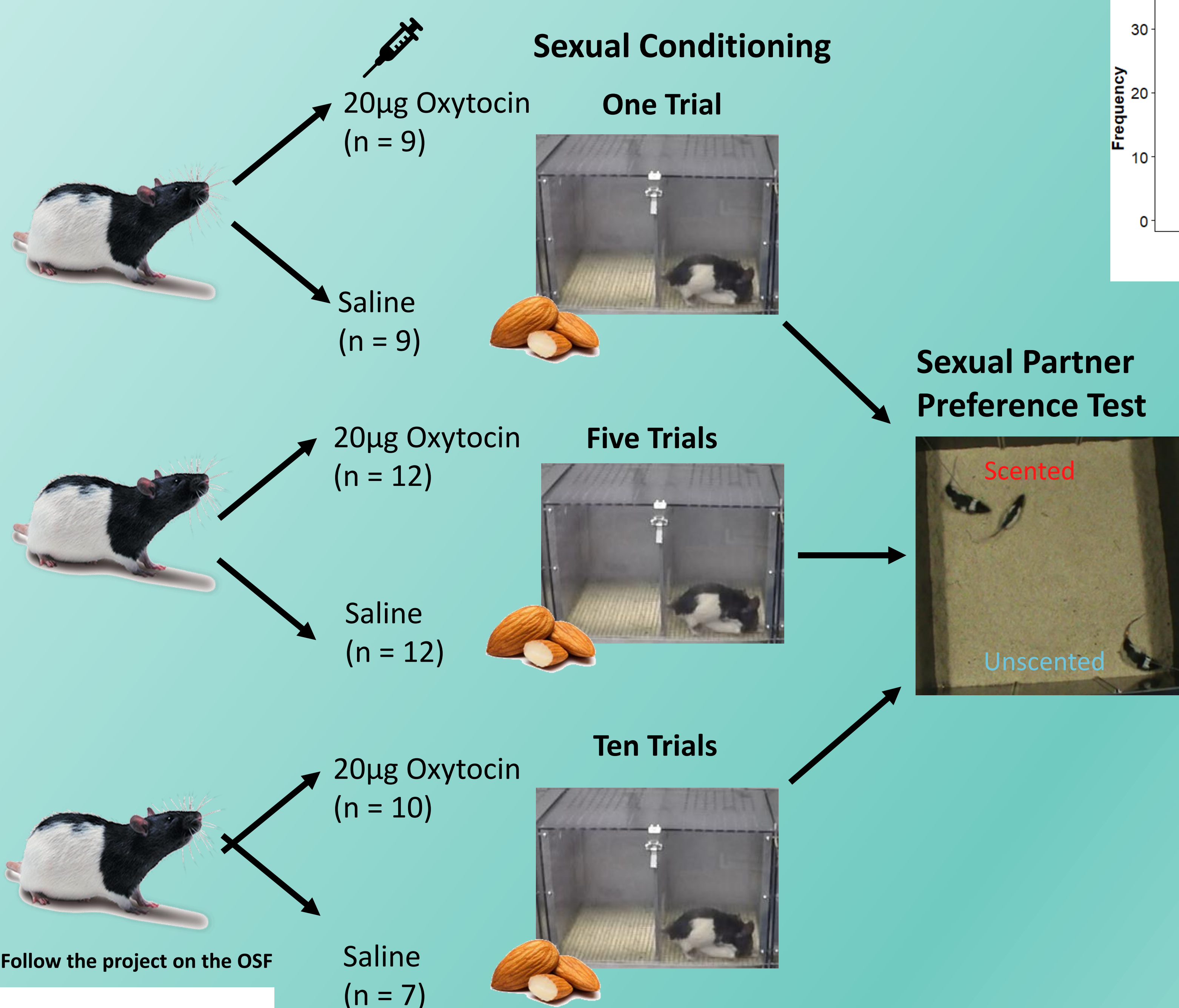
Research question:

- Does oxytocin facilitate the formation of sexually conditioned partner preference in female rats?

Preregistered Hypotheses:

- Oxytocin will increase preference for scented-males with fewer conditioning trials.
- Measured as:
 - increased ejaculations received from a scented male compared to an unscented male.
 - increased solicitations made toward a scented male compared to an unscented male
 - females will solicit the scented male first and receive its ejaculation first from a scented male
 - An increase in the number of trials will increase partner preference

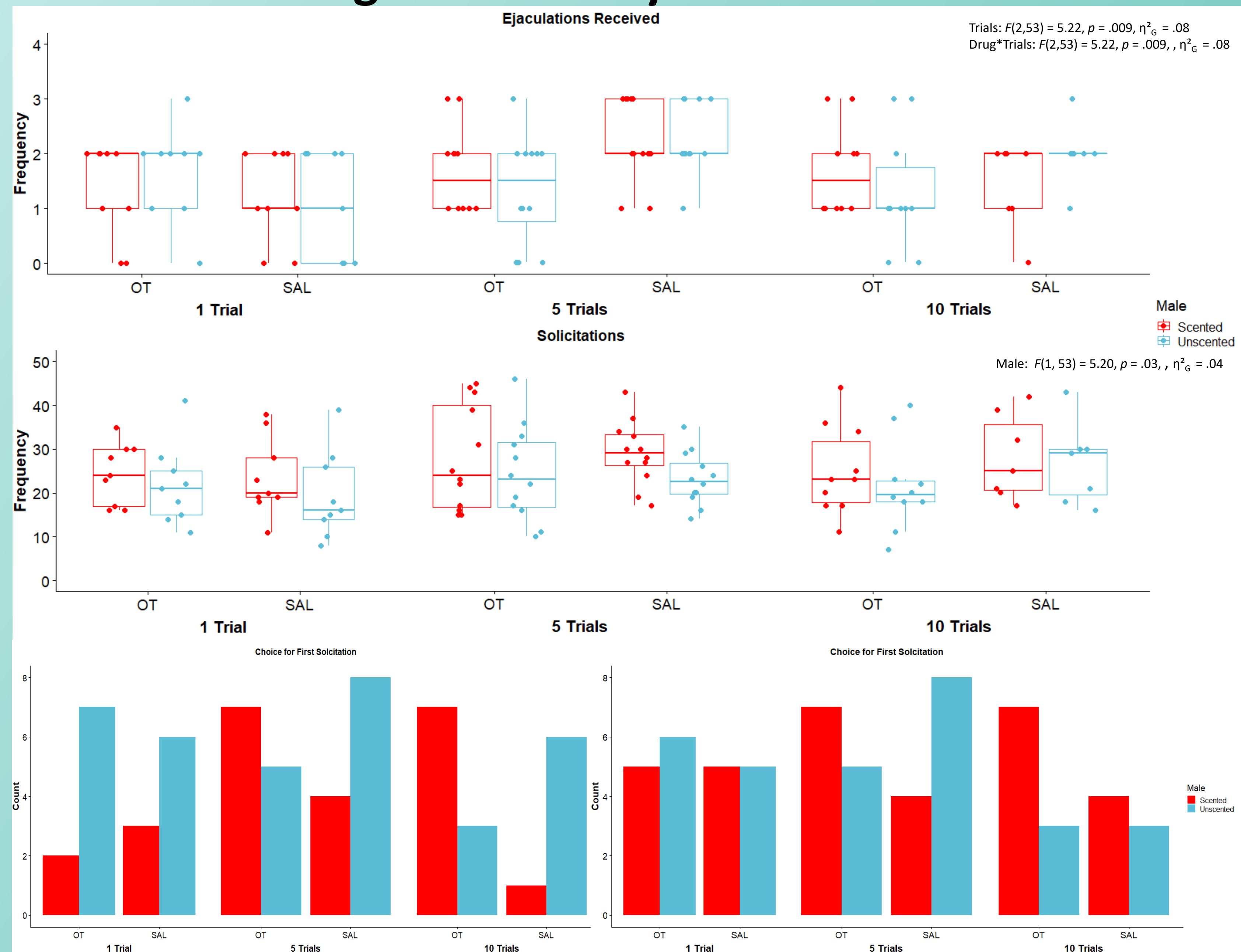
Methodology



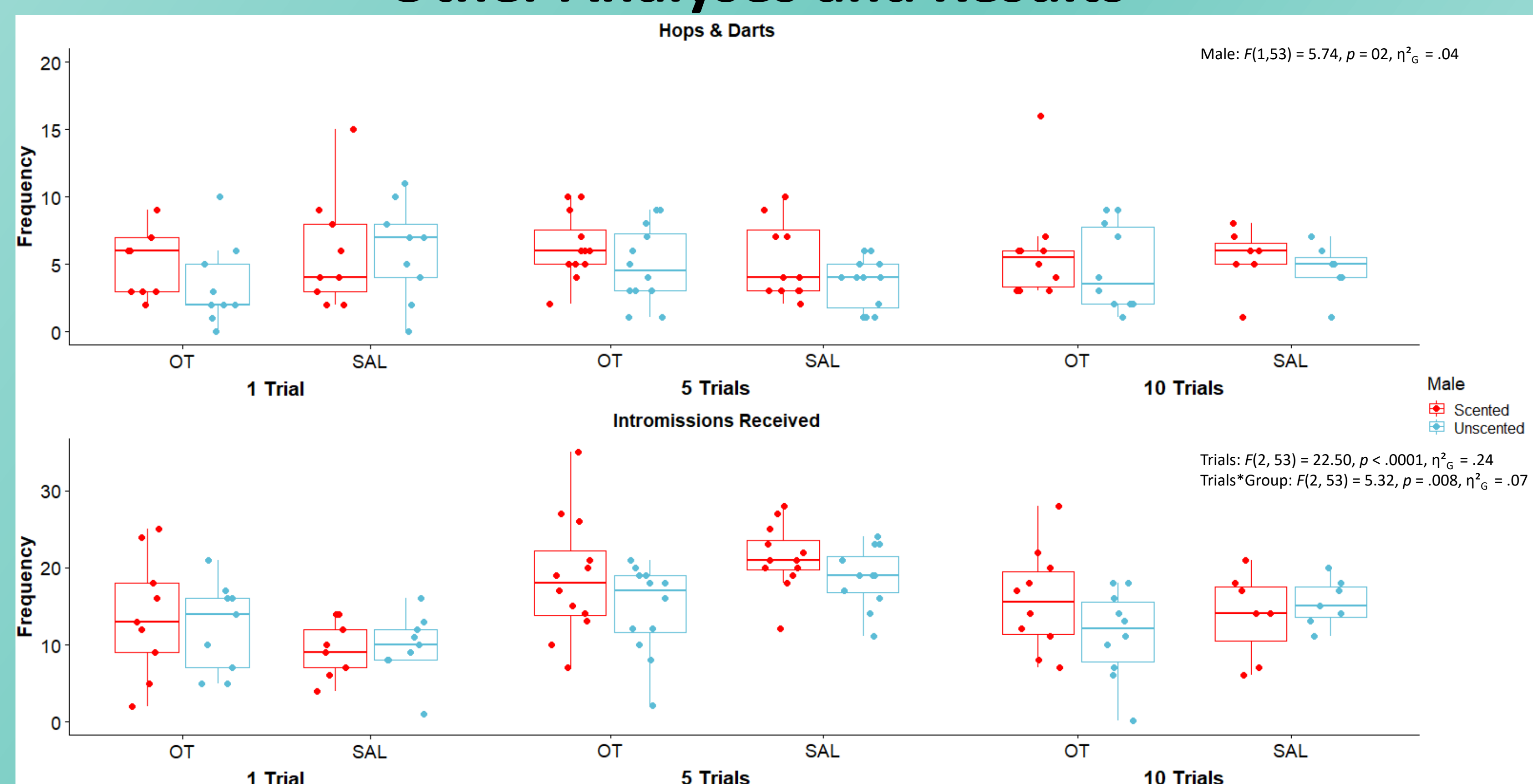
Follow the project on the OSF



Preregistered Analyses and Results



Other Analyses and Results



Discussion

- a) Females treated with oxytocin did not receive more ejaculations from the scented male with fewer trials.
- b) Females treated with oxytocin did not solicit a scented male more and with fewer trials. Females solicited the scented males more regardless of number of trials and oxytocin treatment.
- c) The male from which the female received the first ejaculation from was not determined by the number of trials and oxytocin treatment.
- d) The number of trials did not increase partner preference.
- Sexual experience, i.e. more conditioning trials, increased consummatory sexual behaviours but this was not directed toward a specific male, i.e. ejaculations and intrusions received.

Take-away message:

- These findings replicate previous studies that female rats can be conditioned to solicit scented males.
- Administration of oxytocin does not appear to facilitate conditioned partner preference in female rats.