

## Background

- Social stereotypes can be supported or created by how we talk about groups.<sup>1,2</sup> For example, when children hear statements about groups (like “girls are good at jumping”), they expect a new example of an individual girl to be good at jumping.
- Statements also convey information about groups that *aren't* mentioned. After hearing about two novel groups (Zarpies & Gorps), when children were told that Zarpies are good at baking pizzas, they inferred that a new Zarpie would be good at baking pizzas but that a new Gorp would *not* be good at baking pizzas.<sup>1</sup>
- We used related methods to ask whether statements about group-based opportunities lead to inferences about the mentioned and unmentioned groups.

## The Present Study

- What do children infer when they hear about special days for novel social groups?
- Using recorded vignettes, we introduced children to two novel groups. Then we told them about a special day for one of the groups to engage in an activity. We asked them to rate how good they think that group (the *mentioned* group) is at the activity, and how good they think the other group (the *unmentioned* group) is.
- In a comparison condition (between participants), the activity day was not specified to be for either group.
- We also ran the same study on a group of adults.
- All methods and analyses have been preregistered unless otherwise indicated.
- Data collection is still ongoing as of Spring 2023.

## Methods

**Group Introduction Phase:** Participants were introduced to two groups: Zarpies (Yellow) and Gorps (Green). Participants were then asked to identify Zarpies and Gorps both individually and in groups.



“Do you remember what these ones are called? Are they Zarpies or Gorps?”

**Scale Introduction Phase:** Participants were introduced to a smiley face scale to be used to rate how good they think a group is at an activity. The scale ranged from “really not good” (leftmost sad face) to “really good” (rightmost happy face). Participants were asked about each face.



“Which face would you click on if you think they are **really not good** at it?”

**Test Phase:** Participants were told about a special day for one group to engage in an activity (e.g., “Gorp sledding day”) and rated the ability of that mentioned group (e.g., “Gorps”) and of the unmentioned group (e.g., “Zarpies”) at the activity. Participants completed four trials, each with a different activity (Sledding, Hopping, Snapping, Whistling). For each trial, they were asked about both the mentioned and the unmentioned group, so each child made 4 judgments of each, 8 judgments total. We counterbalanced the position of the groups (L vs R), the group that was mentioned on the first trial (Zarpies vs. Gorps, after which they alternated), and which type of group was asked about first (mentioned or unmentioned).

**Post-Test Phase:** Participants were asked questions about their choices (“For that last question about whistling, why did you say that Zarpies/Gorps are really good at whistling?”) and what they thought the study was about.

## Example Trials – Schematic Version

### Zarpie/Gorp Activity Day Condition



“In the town, there is a Gorp sledding day.”

“Now, here are some **Gorps**. As a reminder, there is a **Gorp sledding day**. Do you think **Gorps** are really not good, not good, just okay, good, or really good at sledding? Click on the face to show me.”

“Now, here are some **Zarpies**. As a reminder, there is a **Gorp sledding day**. Do you think **Zarpies** are really not good, not good, just okay, good, or really good at sledding? Click on the face to show me.”

### Unspecified Activity Day Condition



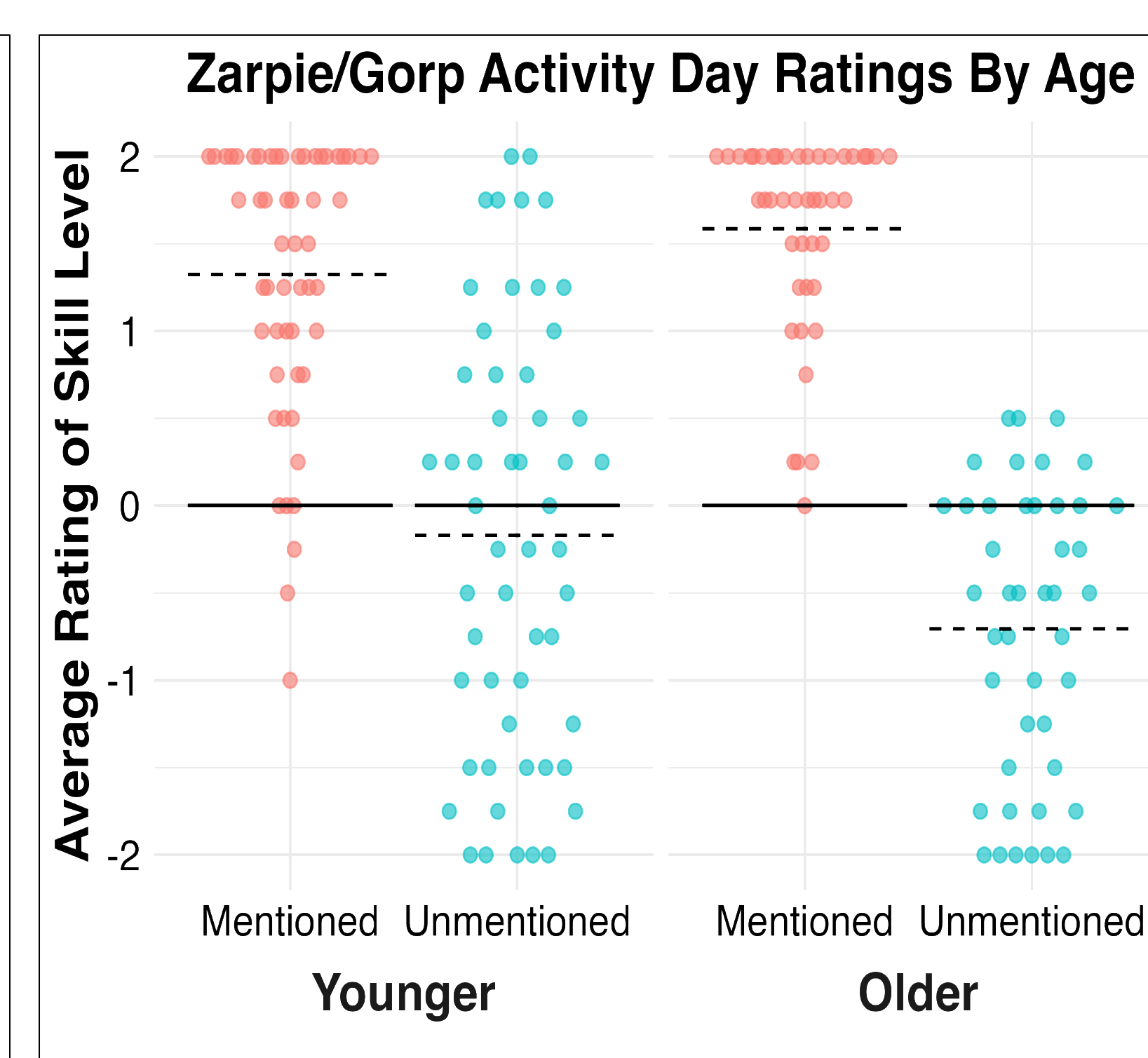
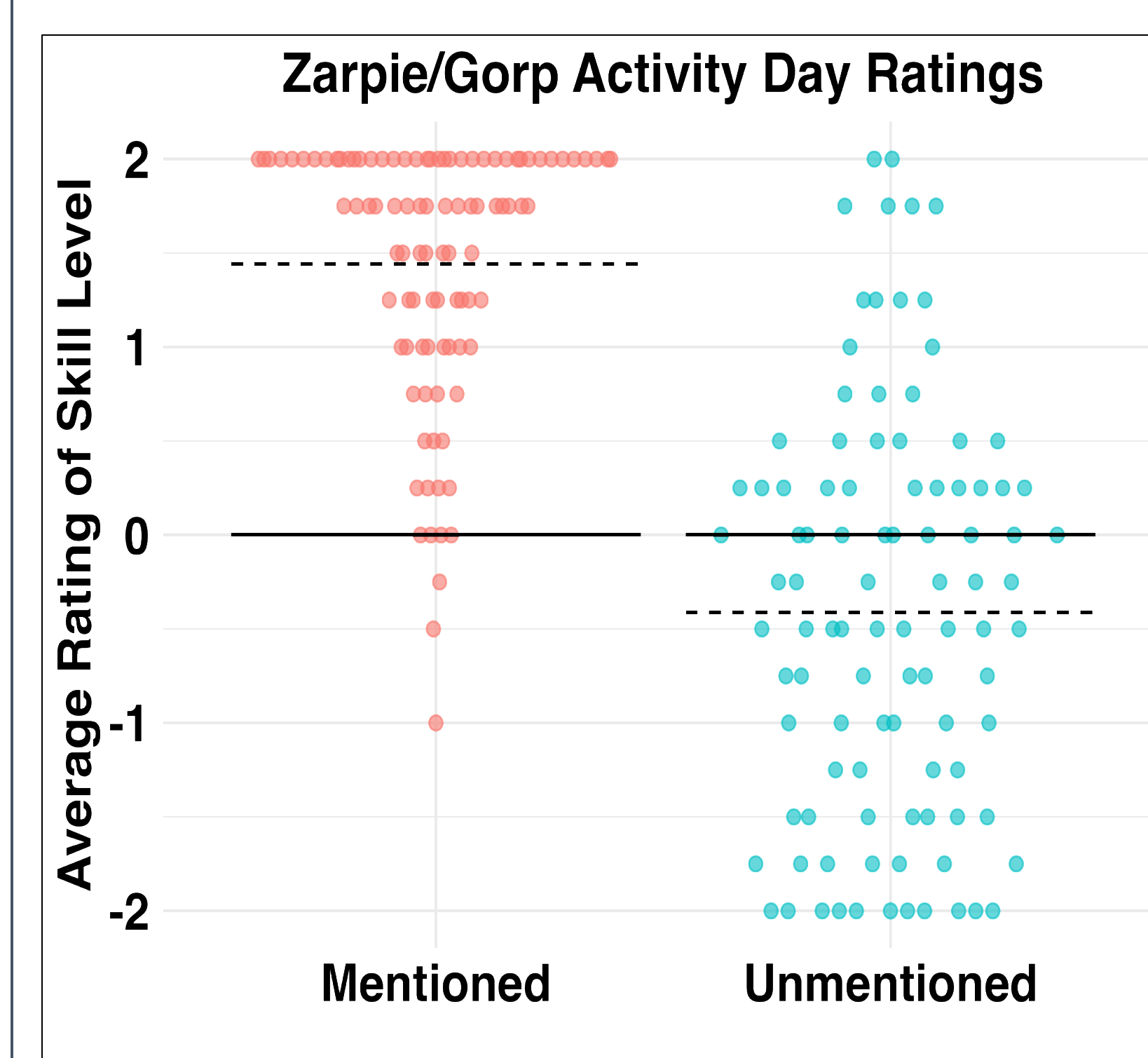
“In the town, there is a whistling day.”

“Now, here are some **Gorps**. As a reminder, there is a whistling day. Do you think **Gorps** are really not good, not good, just okay, good, or really good at whistling? Click on the face to show me.”

“Now, here are some **Zarpies**. As a reminder, there is a whistling day. Do you think **Zarpies** are really not good, not good, just okay, good, or really good at whistling? Click on the face to show me.”

## Child Results: Zarpie/Gorp Day Condition (n = 98, ages 4-10 years)

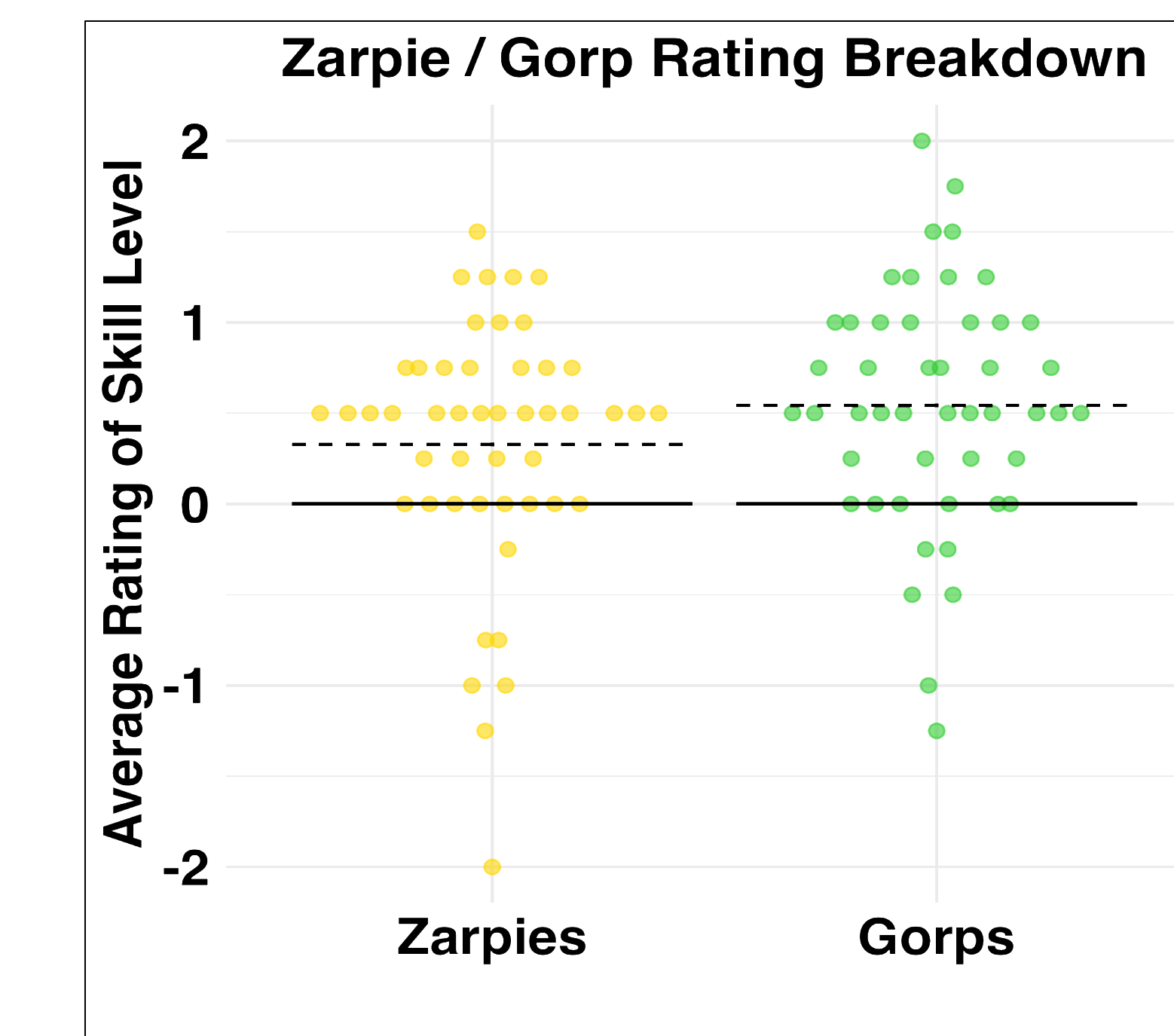
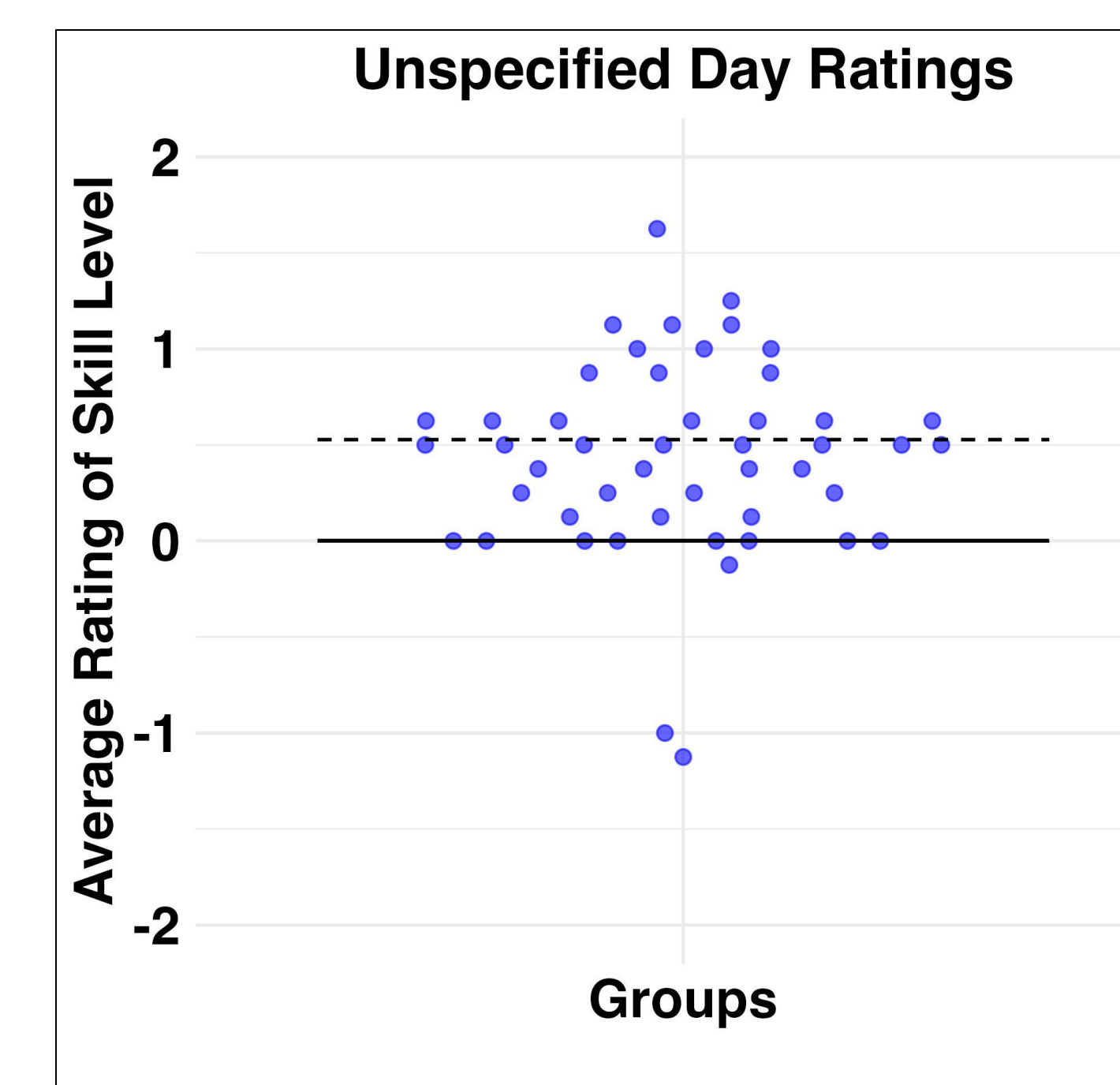
- Each child had a “mentioned group” and an “unmentioned group” rating score.
- Scores above zero correspond to positive ability ratings; scores below zero correspond to negative ability ratings. Scores at zero correspond to “Just Okay” ratings.
- Children rated the mentioned group positively** ( $M = 1.441, t(97) = 20.531, p < 0.001, d = 2.07$ ) **and the unmentioned group negatively** ( $M = -0.411, t(97) = -3.730, p < 0.001, d = 0.377$ ).
- Both younger children ( $\leq 84$  months,  $n = 54$ ) and older children ( $\geq 85$  months,  $n = 44$ ) rated the mentioned group positively (Younger:  $M = 1.324, t(53) = 12.580, p < 0.001, d = 1.712$ ; Older:  $M = 1.585, t(43) = 18.772, p < 0.001, d = 2.830$ ).
- Younger children’s ratings for the unmentioned group weren’t significantly different from zero ( $M = -0.171, t(53) = -1.031, p = 0.307$ ), but older children’s were significantly negative ( $M = -0.705, t(43) = -5.651, p < 0.001, d = 0.852$ ).



^^ = not preregistered; exploratory analysis

## Child Results: Unspecified Day Condition (n = 48, ages 4-10 years)

- Children in the Unspecified Day condition rated both Zarpies and Gorps **positively** ( $M = 0.435, t(47) = 5.940, p < .001, d = 0.857$ ).
- There was no significant difference in the way they rated Zarpies versus Gorps, showing that simply contrasting the two groups did not cause them to be rated differently ( $t(47) = -1.651, p = 0.105$ ). ^^



Same Data

## Adult Results: Both Conditions (N = 44, ages 18-21 years)

- Adults in the Zarpie/Gorp Day condition (n = 30) rated the mentioned group positively** ( $M = 1.7, t(29) = 24.181, p < 0.001, d = 4.415$ ) **and the unmentioned group neutrally** ( $M = -0.175, t(29) = -1.809, p = 0.081$ ).
- Adults in the Unspecified Day condition rated both Zarpies and Gorps **positively** ( $M = 0.580, t(13) = 4.174, p = 0.001, d = 1.115$ ).
- We did not find statistical differences between adult and child data in preliminary analyses.

## Conclusions

- After being introduced to two novel groups and hearing about a special activity day for one group, children rated that group’s ability for the activity strongly positively and rated the other (unmentioned) group’s ability mildly negatively.
- Adults rated the mentioned group positively and the unmentioned group neutrally.
- Participants in a comparison condition heard about a special activity day that was not just for one group; their ratings of ability were mildly positive.
- It appears that the Zarpie/Gorp Day manipulation did affect ratings of both mentioned and unmentioned groups’ ability in children, and possibly in adults.
- These findings may be relevant to help us understand how real-world themed days might influence children’s opinions about groups (e.g., Girls In STEM Day).

## References and Acknowledgments

- Moty, K., & Rhodes, M. (2021). The unintended consequences of the things we say: What generic statements communicate to children about unmentioned categories. *Psychological Science*, 32(2), 189-203.
- Chestnut, E. K., Zhang, M. Y., & Markman, E. M. (2021). “Just as good”: Learning gender stereotypes from attempts to counteract them. *Developmental psychology*, 57(1), 114.

Thanks to Wesleyan Alumni Co-Authors: Leah Vaidya, Courtney Litts, Selena Delgado, Rachel Hsu; to the CT Science Center and all participating families; and to K. Moty & M. Rhodes for making their stimuli, which we adapted for this task, publicly available