The current study examined the influence of twin status, daycare, and number of siblings on observed inhibition and parent-reported withdrawn behaviors. It was hypothesized that these experiential factors would relate to shyness ratings, both observed and parent-report, which were previously collected. Results indicated time spent in daycare and number of siblings did not significantly predict shyness. However, (parent-reported) temperamental inhibition did significantly predict observed shyness. Additionally, observed shyness and twin status predicted (parent-reported) withdrawn problem behaviors, indicating parents reported more withdrawn problem behaviors in singletons than twins. These differences are discussed. It may be that parents are less aware of their twin's individual withdrawn behaviors due to their having a 'built-in' playmate.

### Results

- One twin from each family was randomly chosen for analyses.
- H1: On average, twins had greater temperamental inhibition and observed shyness compared to non-twins (see Figure 1).
  - However, on average, non-twins had greater parent-reported withdrawn problem behaviors.
- H2a: The first regression model found a significant effect for temperamental inhibition predicting observed shyness, see Table (left-hand side).
- H3a: A second regression model found a significant effect for observed shyness predicting withdrawn problem behaviors, see Table (right-hand side).
- Model 2 accounted for 7% of the variance in age 5 observed shyness (adj., r² = 0.05), whereas Model 2 accounted for 7% of variance in parent-report withdrawn problem behaviors (adj., r² = 0.07).

### Discussion

- Siblings offer valuable experiences for social interactions later in life (Sang & Nelson, 2017).
- Second-born children have multiple sources of stimulation from birth (a sibling and caregiver) and therefore may be at a social advantage (Kitzmann, Cohen, & Lockwood, 2002).
- Twins may benefit in a similar way due to having sibling and parent interaction from birth.
- Twins may be viewed as a 'unit' and are often thought of in context to one another; non-twins are thought of individually (i.e., lacking that 'built-in' playmate; Conlon, 2009).
- However, having a same aged playmate (e.g., a twin) may not encourage a desire to seek out opportunities that would challenge a child's shy temperament.
- Sibling relations may be more complex, e.g., birth order, sex, and age) than simply just number of siblings at home, especially when researching twins.
- Inhibited temperament seems to play a larger role in shyness behaviors than exposure to siblings or other children.
- Despite having higher reported temperamental inhibition, twins were rated as having fewer withdrawn problem behaviors than non-twins.
- If parents do indeed view their twins as a 'unit,' then the Child Behavior Checklist may be an inadequate measure for withdrawn problem behaviors in twin children.

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