**BACKGROUND**
- Children begin to understand and use adults' emotions between 9 and 15 months of age.
- However, it is not clear when they begin to understand and use their peers' emotions.
- Children begin to show empathic responses to adults in distress by 14-18 months of age.
- However, they do not systematically display empathy towards peers until later, despite earlier interest in peers.

**HYPOTHESES**
- Understanding of other children's emotions and empathic responding to another child's distress develop in parallel over the second year of life.
- Children who are more advanced in one of these skills may be more advanced in the other.

**PARTICIPANTS**
- Social referencing: Empathy:
  - 12 mos (N= 19)
  - 18 mos (N=17)
  - 24 mos (N=17)

<table>
<thead>
<tr>
<th>Age</th>
<th>Social referencing</th>
<th>Empathy</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 mo</td>
<td>19</td>
<td>N=19</td>
</tr>
<tr>
<td>18 mo</td>
<td>17</td>
<td>N=16</td>
</tr>
<tr>
<td>24 mo</td>
<td>17</td>
<td>N=19</td>
</tr>
</tbody>
</table>

**PROCEDURES**

**Peer Social Referencing**

- Emotion presentation (20 sec video)
  - 6-yr-old child; 2 neutral toys
  - **Trial 1**: Neutral affect toward one toy
  - **Trial 2**: Positive or Negative affect toward one toy
  - Toys and sides counterbalanced

<table>
<thead>
<tr>
<th>Play period (30 secs)</th>
<th>After each trial</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target Touch</strong>: Touch to target toy (duration)</td>
<td></td>
</tr>
<tr>
<td><strong>Peer Emotion Responsiveness Score</strong>: Touch to target toy following emotion - Touch to target toy following neutral affect (duration difference)</td>
<td></td>
</tr>
</tbody>
</table>

**Empathic Response to Baby**

- Realistic-looking baby doll
  - On high cart, out of toddler's reach
  - Audiotaped crying or neutral sounds
  - 30 secs

- **Condition 1**: Distress
- **Condition 2**: Neutral
- Order counterbalanced

<table>
<thead>
<tr>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number Empathic Responses (stop play, look, point, talk/label baby, approach, ask to see baby, offer toy to baby)</strong></td>
</tr>
<tr>
<td><strong>Baby Emotion Responsiveness Score</strong>: Empathic responses to crying baby - Empathic responses to neutral baby (frequency difference)</td>
</tr>
</tbody>
</table>

**PROCEDURES**

**EMOTION PRESENTATION**

- **Condition 1**: Distress
- **Condition 2**: Neutral

**Measures**

- **Number Empathic Responses** (stop play, look, point, talk/label baby, approach, ask to see baby, offer toy to baby)
- **Baby Emotion Responsiveness Score**: Empathic responses to crying baby - Empathic responses to neutral baby (frequency difference)

**CONCLUSIONS**

- Children's interest in and responsiveness to other children's emotions increases over the second year of life.
- Toddlers respond increasingly to an infant's vocally conveyed emotions, and distinguish between neutral and distressed affect.
- By the 2nd birthday, toddlers play more with a toy toward which an older peer displayed affect than with a toy toward which a peer showed only neutral attention.
- Toddlers who are responsive to other children's emotions in one context (i.e., social referencing), are also more likely to respond to peers' emotions in another (i.e., displaying empathy).
- At every age, children who are more responsive to a crying baby than a neutral baby are also more responsive to a toy toward which an older child has displayed negative affect compared to a neutral-affect toy.
- Future research should address possible contributors to this individual difference in emotional responsiveness to peers as well as possible sequelae.

For more information contact: Sara Nichols, Psychology Dept, 210 S. Bouquet, Pittsburgh, PA 15260 (srm1@pitt.edu).