This study investigated preschoolers' understanding of three parental emotions: happiness, sadness, and anger. The study also examined relationships of these understandings to preschoolers' emotional competence. Subjects, 70 children with a mean age of 55 months, were presented with a dollhouse and were encouraged to imagine that the dollhouse family was their own family. Using the context of pretend play, experimenters posed questions to the children (e.g. "Show me how you know that Daddy is angry...what happens?" or "Can you make Mommy feel better?"). By manipulating the dolls, children responded to the questions. All verbalizations were transcribed, and narrative records of nonverbal behaviors were coded from videotape. Teachers rated children on empathy and positive peer relations, peer competence, and aggression. Children also participated in a play session in which a familiar adult displayed emotions (sadness, anger, and pain). Children's behavioral reactions and facial expressiveness were coded. Results found that children demonstrated coherent understandings that different parental emotions have differing causes and child responses, that children could suggest specific strategies to change parents' emotions. Children's beliefs about their parents' expressive patterns, and about their own reactions and interventions in response, were related to their emotional competence in the two settings. (NM)
PRESCHOOLERS' UNDERSTANDING OF PARENTS' EMOTIONS:
IMPLICATIONS FOR EMOTIONAL COMPETENCE

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ABSTRACT

We investigated preschoolers’ understanding of their parents’ emotions, and the relations of these conceptions to their emotional competence (i.e., reactions to others’ emotions, regulation of their own emotions). 70 children (mean age = 55 mos) participated in a dollhouse assessment of understanding of parents’ emotions. Teachers rated them on empathy and peer relations, and children were observed reacting to a familiar adult’s emotions in a naturalistic play session. Children demonstrated coherent understandings that different parental emotions have differing causes and child responses, and suggested specific strategies to change parents’ emotions. Their beliefs about their parents’ expressive patterns, and about their own reactions and interventions in response, were coherently related to their emotional competence in two settings.
INTRODUCTION

Our earlier research on socialization of emotion has centered on hypothesized direct effects of parental socialization techniques (e.g., modeling of expressive patterns of emotion, coaching children about the nature and expression of emotion, and reacting to children's emotional expressiveness) on emotional competence. But, it is possible that these aspects of the socialization of emotion may have indirect effects, mediated by children's own reactions to or understanding of them.

For example, recent research has shown that even preschool children are active social cognizers, trying to understand the causes of other persons' behaviors, particularly their displays of emotion. These social cognitions about others' emotions may guide preschoolers' behavioral demonstration of emotional competence (i.e., reaction to emotions of others, understanding of emotion, regulation of their own emotion). Because parents are key agents of socialization, and children are exposed to their emotions on a daily basis, we reason that social cognitions about parental emotions may be very important in children's early interpretation of the social world.

For example, two children could have mothers who exhibited equivalently high levels of anger in everyday situations. The effects of such anger on the child's emotional competence may differ for the child who decides, "it is not my fault; Mom is angry because she's tired. I can give her a hug, and that may make her feel better" as compared to the child who decides "It's my fault; Mommy is angry at me because I am bad; I am angry too!" Thus, we investigated preschoolers' understanding of their parents' emotions. We expected these understandings to be well articulated. We also examined the relations among these conceptions and the children's behavioral and emotional reactions to others' emotions.
METHODS

To test these aspects of young children's social cognition, a new dollhouse assessment was developed to focus on understanding of the causes of three parental emotions (happiness, sadness, and anger), parents' characteristic patterns of expressiveness, and children's own reactions and potential ways of changing parents' emotions.

Children were given time to establish rapport with the female tester, and to set up the dollhouse to their own specifications. Then they were encouraged to imagine that the dollhouse family was their own family. The entire procedure was embedded within an engaging pretend play context, with simply worded questions posed by the tester (e.g., "What made Mommy so angry?" "Show me how you know that Daddy is angry...what happens?" "What do you do?" "Can you make Mommy feel better?"). By manipulating dolls, children were able to respond largely nonverbally, if necessary.

70 preschoolers (mean age = 55 mos) participated. All their verbalizations were transcribed, and narrative records of their nonverbal behaviors were coded from videotape. Two previous coding systems were adapted and extended to provide categories for children's responses (Denham & Grout, 1992; McCoy & Masters, 1985). Intercoder reliability was excellent for causes of parental emotions, parental expressive patterns, children's reactions, and children's interventions, with kappas ranging from .88 to .97.

Teachers rated all children on empathy and positive peer relations via the Olson Preschool Competence Questionnaire, on peer competence via the Harter-Pike Teacher Questionnaire, and on aggression via the Preschool Problem Behavior Questionnaire.

Children also participated in a play session in which a familiar adult displayed scripted emotions (sadness, anger, and pain). Their behavioral reactions (from actively avoidant to actively prosocial) and facial expressiveness (happy, sad, angry, distressed) were coded.
RESULTS

We first formulated analytic strategies for our two main goals: (a) describing young children's conceptions about their parents' emotions; and (b) specifying the relations among these conceptions and emotional competence.

DESCRIPTION

Within-subject ANOVAs were performed with Emotion, and either Cause, Expressive Mode, Child Reaction, or Intervention, as repeated measures, across proportions of responses in each category as dependent variables (the very rare double-coded responses were each assigned .5 frequency in computing these proportions). The results of interest were not main effects, but rather interactions of Cause, Expressive Mode, Child Reaction, or Intervention with Emotion. That is, the interactions specified how, e.g., DIFFERING CAUSES WERE GIVEN FOR DIFFERENT EMOTIONS.

Separate analyses were conducted for conceptions of mother's and father's emotions, because preliminary analyses showed few if any differences in their ideas about maternal versus paternal emotions.

The existence of fathers' emotions was, however, denied more often than mothers' (t = -1.64, p = .10; this difference was significant for girls but not boys). But, in contrast with earlier, predominantly verbal procedures, these children did not see themselves as causing a majority of parental emotions (cf. Covell & Abramovitch, 1987; children did see themselves as causing mother's emotions more than other causes, t = 1.81, p < .08).

For almost every category, children's conceptions were well articulated according to culturally understood scenarios, and were nonrandom (see Figures 4 through 7). Examples are given of those categories which were shown, via simple effects analyses, to be used significantly often.

It should be noted, however, that these are ANOVAs of scorable responses (as opposed to unscorable or no responses). For example, over 20% of children gave unscorable or no responses to their own reactions or interventions to parental anger, and to changing parental happiness. Despite pattern many of the children's conceptions are clear and even poignant.

Relations with Emotional Competence

Prediction of teacher-rated emotional competence, and behavioral and affective responses to adults' negative emotions are shown in Tables 1 through 6. Given the relatively small sample size relative to the large number of potential predictors, spurious inflation of $R^2$ was a concern. We formulated a regression strategy considering for inclusion in the equations only those variables whose zero-order correlations with the criterion had been significant. Potential demographic predictors for step one were age and gender, with conceptions of parent emotions as potential entrants on later steps.
**Teacher Ratings.** Being a girl and demonstrating positive responses to father’s negative emotions predicted an aggregate of teachers’ ratings of emotional competence (see Table 1). Positive responsiveness in the dollhouse measure predicted actual positive responsiveness.

**Reactions to Adult Negative Emotion.** Older children and those who gave more prosocial interventions to mother’s negative emotions, and fewer antisocial interventions to father’s negative emotions, and who did not merely ignore parents’ happiness, showed more mature prosocial responding to the adult’s display of emotions (see Table 2).

In terms of affective responses to adult negative emotions, children who showed increased happy expressiveness after the adult showed sadness, anger, or pain were those who had mentioned negative reactions to parents’ negative emotions, ignoring parents’ happiness, but also suggested prosocial interventions in response to father’s negative emotions (see Table 3). Showing increased happiness in some children appeared inappropriate (as if they enjoyed the adult’s distress), and in some cases signalled pride at their own helpfulness; thus, these mixed predictors are not surprising.

Children who showed increased sad expressiveness after the adult displays were those who ignored father’s negative emotions and who depicted father as showing anger less negatively either emotionally or behaviorally (see Table 4). Perhaps their ignoring or denying displays was defensive; self-focused sadness in response to another person’s negative emotions could be seen as defensive, as well.

Those who showed increased angry expressiveness after the adult displays were those who gave more unscorable responses overall during the dollhouse measure, and depicted father as showing sadness less negatively (e.g., without crying; see Table 5). This increased anger seemed anomalous and inappropriate during interaction with the adult, and was predicted by equally anomalous dollhouse responses.

When children appeared more distressed after the adult’s displays of negative emotion, they were more likely to be boys, say they would not ignore parents’ positive emotion or behave antisocially after father’s negative emotion. However, they also were more likely to say that their father showed anger negatively and that they would not automatically respond positively to parents’ negative emotions. The complex picture emerges of children who are aware of emotion and how to intervene in it, but who are also reporting stressful conceptions of family emotion.

Children who demonstrated concern were unlikely to cite negative reactions to mother’s sadness and anger ($R = .355$, $p < .06$).
DISCUSSION

This new dollhouse methodology appeared to elicit preschoolers' rich conceptions about their parents' emotions. As such, it fits within our notion of contextually valid assessment of children's cognitions about social and affective aspects of their lives. It is possible that the methodology could be further refined and become even more useful for both basic and applied purposes.

Children reflections on and conceptions about parental emotions were coherently related to behavioral manifestations of emotional competence as well. For example, children who cited responding or intervening positively to parents' negative emotions were more empathic with peers and the adult. And, ignoring parents' happiness generally predicted less mature responses. Of course, there is no way to discern the direction of effect here; are children's cognitions influencing behavior or vice versa? Investigations tailored to address this question are warranted.

It was of interest that children's responses to and interventions directed towards father's emotions were often predictors of emotional competence. This findings bears further investigation; it may be that fathers are more potent socializers of emotional competence (perhaps mothers' emotions are more ubiquitous in children's lives and make less impact, or perhaps mothers vary less in their socialization). In our current work, we are observing both mothers' and fathers' socialization of emotion.
REFERENCES


Direct effects model = solid lines

Indirect effects model = dashed lines
COMPONENTS OF TEACHER QUESTIONNAIRES

(Olson POSITIVE PEER RELATIONS & EMPATHY, Harter & Pike SOCIAL COMPETENCE)

- **POSITIVE PEER RELATIONS**
  - Friendly conversations to peers and responses from peers
  - Sought after by peers
  - Interests peers in his/her activities
  - Initiates positive interaction
  - Skillfully joins peers at play

- **EMPATHY**
  - Responds prosocially to peers’ distress
  - Shows affection
  - Laughs with peers
  - Helps peers when necessary
  - Asks permission before playing with another child's toys
  - Does not become easily frustrated when does not get his/her way with peers

- **SOCIAL COMPETENCE**
  - Has friends on the playground, in preschool, and in neighborhood
  - Plays well with these friends
  - Gets asked to play
  - Goes to friends' homes and enjoys this

*Cronbach's alpha for aggregate = .89*
## Coding of Understanding Parental Emotions

**Causes, Expressive Modes, Child Reactions, How to Change**

<table>
<thead>
<tr>
<th>Causes</th>
<th>Expressive Modes</th>
<th>Children's Reactions</th>
<th>How to Change (Prosocial &amp; Antisocial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>Common Acts</td>
<td>Ignore</td>
<td>Nonverbal/Help</td>
</tr>
<tr>
<td>Verbal</td>
<td>Talk</td>
<td>Match</td>
<td>Physical</td>
</tr>
<tr>
<td>Nonverbal</td>
<td>Intense Emot.</td>
<td>&quot;Prosocial&quot;</td>
<td>Verbal</td>
</tr>
<tr>
<td>Control</td>
<td>Other Acts</td>
<td>Other Acts</td>
<td>Material</td>
</tr>
<tr>
<td>Material(Soc.)</td>
<td></td>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>Material(Nonsoc)</td>
<td></td>
<td></td>
<td>Nonverbal/Hinder</td>
</tr>
<tr>
<td>Events</td>
<td></td>
<td></td>
<td>Physical</td>
</tr>
<tr>
<td>Phys./Internal</td>
<td></td>
<td></td>
<td>Material</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td>Other</td>
</tr>
</tbody>
</table>

Expressive Modes. Common Actions: Happy—Share Fun; Sad—Withdraw; Angry—Negative Acts
CHILDREN'S CONCEPTIONS OF THE CAUSES OF PARENTS' EMOTIONS

CAUSES OF HAPPINESS: Fs and simple effects significant for both mother & father

Examples:
- **Social nonverbal** -- "Neighbors moved in." "The boy's cleaning up the mess." "I love him."
- **Social verbal (fathers)** -- "I told him something funny." "Mommy says 'I love you'."
- **Nonsocial events (mothers)** -- "She took a nice bath." "She likes cooking dinner."

CAUSES OF SADNESS: Fs and simple effects significant for both mother and father

Examples:
- **Nonsocial physical** -- "He fell down." "She fell off the roof." "She wants a baby."
- **Social physical** -- "Someone hit her." "I kicked him." "I fell down."
- **Social nonverbal** -- "When a stranger comes." "Daddy's/Mommy's angry."
- **Nonsocial material** -- "Something broke." "The sink won't work." "We have no sandwich."
- **Nonsocial events** -- "Maybe he got in jail." "Because she had to move to a new house."

CAUSES OF ANGER: Fs and simple effects significant for both mother and father.

Examples:
- **Social control** -- "Because I ran away." "Because I go to bed with gum in my mouth."
- **Social physical (fathers)** -- "Brother hit sister." "I spanked him."
- **Nonsocial physical/internal (fathers)** -- "He's feeling mean." "He had a bad day."
- **Nonsocial events (fathers)** -- "He almost got ran over."
CHILDREN'S CONCEPTIONS OF PARENTS' MEANS OF EXPRESSING EMOTIONS

- MEANS OF EXPRESSING HAPPINESS. F and simple effects significant for both mother and father.
  Examples: Shared Activities--"He dances." "She makes a pie." "She would buy things for us."

- MEANS OF EXPRESSING SADNESS. F and simple effects significant for both mother and father.
  Examples: Withdrawal--"He goes to sleep." "She lays in her bed."
  Other--"She went to the doctor." "Daddy wants a new kid."

- MEANS OF EXPRESSING ANGER. F and simple effects significant for both mother and father.
  Examples: Negative expression--"She goes and breaks all the furniture." "He gives spankings."
  "Daddy goes out the door, bye-bye, and SLAM!"

- SOMETIMES CHILDREN DENIED THE EXISTENCE OF PARENTS' NEGATIVE EMOTIONS.
  Examples: "Oh, I know why she was crying, she was happy, it was her birthday."
  "My mommy never gets angry."
  "No, he ain't sad, he ain't."
CHILDREN'S CONCEPTIONS OF THEIR OWN REACTIONS TO PARENTS' EMOTIONS

- REACTIONS TO HAPPINESS. Results not significant.

Examples: Share affect—"Give her/him a hug, kiss."

- REACTIONS TO SADNESS. F and simple effects significant for both mother and father.

Examples: Comfort—"Give her my teddy bear."
"Give her a hug/kiss."
"Everyone by his side."

- REACTIONS TO ANGER. Results not significant.

Examples: Comply—"I would stop what I'm doing."
"Try and make her happy."

Match affect—Katelyn hits mother doll with rocking horse. Give her a spank.

Withdraw—"I hide from him."
"I go outside; I don't like him when he's mad."
CHILDREN'S CONCEPTIONS OF HOW TO CHANGE PARENTAL EMOTIONS

- **CHANGING HAPPINESS.** Es and simple effects significant for both mother and father.

  Examples:
  - Nurturant physical (mother)—"Give her a hug/kiss."
  - Nurturant verbal (mother)—"Look ma, I fixed up the house."
  - Nurturant material (father)—"Buy him a mountain bike." "Give him a raise."
  - Nurturant helping (father)—Get him a bandaid.

  They usually changed the story to repair something or share good things. Clearly children had trouble conceiving of changing happy to "just okay."

- **CHANGING SADNESS.** Es and simple effects significant for both mother and father.

  Examples:
  - Nurturant physical: "Give a kiss/hug." "Rub his back."
  - Nurturant material (mother)—"Give her something to eat."
  - Nurturant helping (mother)—"Let her sleep." "Clean up the mess."
  - Nurturant verbal (mother)—"Say sorry."

- **CHANGING ANGER.** Es and simple effects significant for both mother and father.

  Examples:
  - Nurturant physical—"Give a kiss/hug."
  - Nurturant material (mother)—"Give him an apple"
  - Nurturant helping (mother)—"Clean up the house." "Not bother him."
  - Nurturant verbal (mother)—"Say 'don't be mad, mom.'" "Say 'I love you.'"
## PREDICTION OF EMOTIONAL COMPETENCE AGGREGATE

*(POSITIVE PEER RELATIONS, EMPATHY, HARTER–PIKE SOCIAL BEHAVIOR)*

<table>
<thead>
<tr>
<th>PREDICTORS</th>
<th>MULTIPLE R</th>
<th>R-SQUARED</th>
<th>F-Equation</th>
<th>F-Step</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. GENDER</td>
<td>0.246</td>
<td>0.061</td>
<td>4.39*</td>
<td>4.39*</td>
<td>0.246</td>
</tr>
<tr>
<td>2. POSITIVE RESPONSE TO FATHERS' EMOTIONS</td>
<td>0.373</td>
<td>0.139</td>
<td>5.41**</td>
<td>6.11**</td>
<td>0.288</td>
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</tbody>
</table>

* p < .05, ** p < .01, (N = 70)

*Prediction of empathy scores by child’s positive reactions only, R = .291, p < .02*
<table>
<thead>
<tr>
<th>PREDICTORS</th>
<th>MULTIPLE R</th>
<th>R-SQUARED</th>
<th>F-STEP Beta</th>
<th>F-STEP p</th>
<th>Rs-Equation F-Step</th>
<th>Rs-Equation F-Step p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>0.269</td>
<td>0.069</td>
<td>0.269*</td>
<td>0.0231+</td>
<td>4.195</td>
<td>0.0231+</td>
</tr>
<tr>
<td>2. Prosocial to Mother</td>
<td>0.285**</td>
<td>0.020</td>
<td>0.285**</td>
<td>0.020</td>
<td>4.195</td>
<td>0.020</td>
</tr>
<tr>
<td>3. Antisocial to Father</td>
<td>0.241</td>
<td>0.006</td>
<td>0.241</td>
<td>0.006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Ignoring Parents</td>
<td>0.216</td>
<td>0.003</td>
<td>0.216</td>
<td>0.003</td>
<td></td>
<td></td>
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</table>

(N = 61)
### Table: Prediction of Happy Response to Adult Sadness, Anger, and Pain

(Mean of pre- and post-display difference scores for two displays of each negative emotion)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Multiple R</th>
<th>R-Squared</th>
<th>F-Equation</th>
<th>F-Step</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Negative Reactions to Parents</td>
<td>0.244</td>
<td>0.057</td>
<td>7.21***</td>
<td>7.21***</td>
<td>-0.244*</td>
</tr>
<tr>
<td>2. Prosocial Interventions to Father</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.406**</td>
</tr>
<tr>
<td>3. Ignoring Happiness</td>
<td>0.524</td>
<td>0.275</td>
<td>7.21***</td>
<td>7.21***</td>
<td>-0.244*</td>
</tr>
</tbody>
</table>

*p < .05. **p < .01. (N = 61)
PREDICTION OF SAD RESPONSE TO ADULT SADNESS, ANGER, AND PAIN

(MEAN OF PRE- AND POST-DISPLAY DIFFERENCE SCORES FOR TWO DISPLAYS OF EACH NEGATIVE EMOTION)

<table>
<thead>
<tr>
<th>PREDICTORS</th>
<th>MULTIPLE R</th>
<th>R-SQUARED</th>
<th>F-Equation</th>
<th>F-Step</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. IGNORE FATHERS' NEGATIVE EMOTIONS</td>
<td>0.435</td>
<td>0.189</td>
<td>5.58*</td>
<td>5.59*</td>
<td>0.435</td>
</tr>
<tr>
<td>2. FATHER SHOWS ANGER NEGATIVELY (YELLING, ETC.)</td>
<td>0.744</td>
<td>0.551</td>
<td>14.28***</td>
<td>18.82***</td>
<td>-0.345</td>
</tr>
</tbody>
</table>

* p < .05  ** p < .01  *** p < .001  (N = 61)
### PREDICTION OF ANGRY RESPONSE TO ADULT SADNESS, ANGER, AND PAIN

(MEAN OF PRE- AND POST-DISPLAY DIFFERENCE SCORES FOR TWO DISPLAYS OF EACH NEGATIVE EMOTION)

<table>
<thead>
<tr>
<th>PREDICTORS</th>
<th>MULTIPLE R</th>
<th>R-SQUARED</th>
<th>F-Equation</th>
<th>F-Step</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. UNSCORABLE RESPONSES (ALL CATEGORIES)</td>
<td>0.556</td>
<td>0.309</td>
<td>10.74**</td>
<td>10.74**</td>
<td>0.556</td>
</tr>
<tr>
<td>2. FATHER EXPRESSES SADNESS NEGATIVELY (CRYING, ETC.)</td>
<td>0.672</td>
<td>0.152</td>
<td>9.49***</td>
<td>6.01*</td>
<td>-0.345</td>
</tr>
</tbody>
</table>

p < .05. **p < .01. (N = 61)
### Prediction of Distress Response to Adult Sadness, Anger, and Pain

(Mean of pre- and post-display difference scores for two displays of each negative emotion)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Multiple R</th>
<th>R-Squared</th>
<th>F-Equation</th>
<th>F-Step</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender</td>
<td>0.244</td>
<td>0.060</td>
<td>3.74*</td>
<td>3.74*</td>
<td>-0.244*</td>
</tr>
<tr>
<td>2. Ignore Parents' Happiness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.307*</td>
</tr>
<tr>
<td>3. Antisocial Interventions to Father</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.267*</td>
</tr>
<tr>
<td>4. Father Shows Anger Negatively</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.227*</td>
</tr>
<tr>
<td>5. Positive Reaction to Parents' Sadness &amp; Anger</td>
<td>0.528</td>
<td>0.278</td>
<td>4.26**</td>
<td>4.16*</td>
<td>-0.222+</td>
</tr>
</tbody>
</table>

* p < .10,  *p < .05,  **p < .01,  (N = 61)

[Prediction of concern response by negative reaction to mother's distress only. R = .355, p = .08.

Beta = -355.]