THE YOUNG CHILDREN'S EMPATHY MEASURE:
RELIABILITY, VALIDITY AND EFFECTS OF
COMPANION ANIMAL BONDING

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Summary.—The Young Children's Empathy Measure is a brief measure of young children’s cognitive and affective perspective taking developed to assess preschool children's empathy. The Cronbach alpha coefficient of internal reliability for the empathy score was acceptable and interrater reliability across four raters was very high. The children's empathy scores were correlated with their ages and social development, but not with their IQs. Empathy toward children was correlated with empathy for pets, and children with a strong pet bond had higher scores on empathy for children than young children without pets.

Researchers interested in early childhood are concerned not only with young children's intellectual development, but there is also an increasing emphasis on the assessment of preschool children's social development. One aspect of children's social development is their empathy or ability to comprehend and share the feelings of another. The Young Children's Empathy Measure was developed as a brief, but sensitive instrument for use during home interviews, to provide a reliable and valid measure which is suitable for assessing preschool children's empathy. Empathy, as a prosocial developmental characteristic, usually refers to the increasing ability of children to understand and share the emotions of another.

There appear to be two general approaches to the measurement of empathy including the assessment of (1) "felt" empathy and (2) empathic accuracy. Bryant (1982) developed a 22-item measure from Mehrabian and Epstein's (1972) 17 empathy items to create the Index of Empathy, on which school-age children are asked to indicate how much each statement is like or unlike them. This empathy score reflected the children's perceptions of their own empathic feelings which may be described as "felt empathy." The Cronbach alpha of Bryant's Index ranged from 0.54 for first graders to 0.79 for seventh graders. The major alternative procedure has been testing the accuracy of children's perceptions of emotions in others and sharing of another's feelings through a time-consuming combination of visual media (slides or pictures) or audiotaped or oral presentations coupled with child interviews.

1This research was supported, in part, by a grant from The Delta Society and it is contribution No. 90-50-J of the Kansas Agricultural Experiment Station. For reprints contact Robert H. Poresky, Ph.D., at 312 Justin Hall, Kansas State University, Manhattan, KS 66506. The assistance of Mark Woroby, Charles Hendrix, and Barbara Drysdale, Graduate Research Assistants, is acknowledged with appreciation.
Feshbach and Roe (1968) used a basic set of eight series of slide sequences with narrations to elicit young children's empathic feelings. Half the children repeated the series and were asked about their own perception of the feelings of the children in the stories. This view of empathy anticipated the current discussions in the developmental literature under the headings of "perspective taking" which often include both affective and cognitive aspects. In 1973, Borke reported on the development of empathy in Chinese and American children 3 and 6 years of age, using the "four basic emotions of happy, afraid, sad, and angry" (p. 103). Borke found that the 3-yr.-olds could differentiate between happy and unhappy feelings in other people when presented 23 stories and that older children were more accurate. Ridley, Vaughn, and Wittman (1982) used the Borke "cognitive empathy" scale in their study of empathy skills development, and Barnett (1984) refined their scale by utilizing colored slides to enhance the children's empathic responses. Barnett and Thompson (1985) used six audiotapes of dialogues to assess the perspective taking of groups of fourth- and fifth-grade students. These approaches parallel the studies of the accuracy of children's cognitive and affective perspective taking, which generally focus on four basic emotions.

The four emotions generally used in tests of children's empathy are happiness, anger, sadness, and fear. Feshbach and Roe (1968) focused on these four emotions as did Borke (1973), while Barnett and Thompson (1985) focused on the three negative emotions of sadness, anger, and fear in spousal exchanges. Iannotti (1985) also used the four basic emotions to study the feelings of 5-yr.-olds and their perceptions of characters in 16 pictures. Barnett and McMinimy (1988) used only the two global emotions in their happy and sad sequences in their recent study of preschool children's empathic responses. The four emotions (sadness, anger, fear, and happiness) are included in the Young Children's Empathy Measure because most of the empathy research used four emotions and both positive and negative emotions are included in the classic four.

Young children's empathy is associated with their ages (Borke, 1973; Knudson & Kagan, 1982). This provides an index of both their cognitive development and their experience. Piaget and Inhelder (1969) identified both maturation (strongly associated with age), experience, and social interaction as key factors in cognitive development which is, in the Piagetian view, the basis of decenteration and the development of empathy. Levinson (1978), in his discussion of pets and development of personality, stated that empathy could be promoted by children's raising of pets. Empathy, as a prosocial behavior, would also be expected to be associated with conceptually related aspects of social development including both cooperation and reassurance. Age, children's relationships with their pets, cooperation, and
reassurance are expected to be associated with their empathy scores.

The Young Children's Empathy Measure was developed as a brief empathy measure which could be included in a one-hour in-home parental interview and child assessment. We prepared four verbal vignettes or narratives for home visitors to read to preschool children to probe their cognitive understanding and affective responses to situations involving sadness, fear, anger, and happiness. The Young Children's Empathy Measure requires no equipment to administer and it is much shorter than earlier empathy scales. It is written simply enough to be well comprehended by children as young as 3 yr. old.

Sample

Thirty-eight children from families involved in a study of the effects of a companion animal provided complete data on the empathy measure for this study. The larger study's sample was drawn from volunteers who were contacted through local child-care centers, newspaper birth announcements, and media coverage. The children's ages ranged from 3 to 6 yr. (M = 4.6 yr., SD = 0.9 yr.). Forty-five percent of the children were boys and 55% were girls. Their fathers' and mothers' average ages were 36.8 yr. (SD = 5.1) and 35.3 yr. (SD = 3.9 yr.), respectively. Ninety-one percent of the fathers had at least a bachelor's degree as did 76% of the mothers. The families' incomes ranged from $11,000 through $80,000 (M = $32,400, SD = $13,226) and 97% were Caucasian. The sample included 82% original marriages, 5% remarriages, and 13% mother-only households. Sixty-eight percent of the children had a pet dog or cat at home.

Instruments

The Young Children's Empathy Measure utilized a definition of empathy that included cognitive and affective response measures. Four verbally presented vignettes created for this measure probed the child's ability to identify sadness, fear, anger, and happiness in a very short story. For each of the four vignettes, an interviewer elicited and wrote down the child's responses on the two aspects of empathy by asking the child "How does the child feel?" (cognitive perspective taking) and "How do you feel about this?" (affective perspective taking). The accuracy ratings for the perspective taking responses were: 4 = exact match to the intended emotion; 3 = similar emotion; 2 = some emotion; 1 = nonemotional response; and, 0 = no response. Empathy scores were calculated by averaging the eight accuracy scores for each child. The empathy vignettes are:

1. Sadness—"A child has just lost its best friend."
2. Fear—"A child is chased by a big, nasty monster."
3. Anger—"A child really wants to go out but is not allowed."
4. Happiness—"A child is going to its most favorite park to play."
The vignettes were also administered with “dog” as the subject of each of the four statements to assess the children’s empathy toward pets (dogs specifically) and to assess the generalizability of the empathy measure. The Peabody Picture Vocabulary Test—Revised (Dunn & Dunn, 1981) was administered during the home interviews to assess whether this empathy measure was sensitive to influences of verbal comprehension within the predominantly preschool age sample. The children’s mothers completed the Iowa Social Competency Scales (Preschool Form) which includes “reassurance” and “cooperation” scales (Pease, Clark, & Crase, 1981) and Rheingold’s (1982) home-administered cooperation measure and rated the child’s cooperation.

**Results**

The mean score on the Young Children’s Empathy Measure was 3.19 ($SD = 0.40$) on the 0—4 accuracy scale. The current SPSS $x$ Reliability Analysis was used to assess the internal reliability of the eight scores (four vignettes by two aspects, affective and cognitive). Table 1 presents the mean and standard deviation as well as the Cronbach alpha for each item. The total Cronbach alpha was 0.69, which exceeds Nunnally’s (1978) minimum alpha standard of 0.50 as well as the 0.54 Bryant obtained for first graders for “felt” empathy (1982) and the 0.50 Poresky (1989) suggests as a minimum for affective measures.

<table>
<thead>
<tr>
<th>Item</th>
<th>Alpha*</th>
<th>$M$</th>
<th>SD</th>
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<tr>
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*Cronbach alpha if item is deleted.

Three additional raters were trained to score the empathy responses. Their interrater reliability Pearson correlations ranged from 0.93 to 0.99, with a simple average value of 0.96.

The Young Children’s Empathy Measure scores were correlated with the children’s age ($r = 0.41, p < .02$) but not with their Peabody Picture Vocabulary Test—Revised IQ ($r = .13$) as would be expected for scores which should
not reflect difficulties in verbal comprehension. This parallels the general finding that empathy increases with age, which also indexes experience, but not with IQ and contributes to the empirical validity of the measure. The cognitive and affective aspects of empathy toward children were correlated \( (r = .68, p < .001) \). The empathy score for children and the empathy score for pets were correlated \( (r = .44, p < .01) \). Children’s empathy scores were also correlated with their mothers’ ratings of their “reassurance” and “cooperation” \( (rs = .39 \text{ and } .32, ps < .03 \text{ and } .06, \text{ respectively}) \). The children’s empathy scores were also correlated with the home visitors’ assessment of their cooperation on the Rheingold (1982) cooperation measure \( (r = .33, p < .05) \) and the home visitors’ ratings of the children’s general cooperation during the home visits \( (r = .31, p < .06) \). These correlations suggest some generality for the empathy measure and provide more support for the measure’s validity than just face validity.

Empathy for animals also was correlated with the children’s ages \( (r = .38, p < .03) \), but not with their IQs \( (r = .29) \). Children with pets did not have significantly higher empathy scores than those who did not have pets, but those who had a strong bond with a pet had higher child empathy scores than the young children without a pet \( (Ms = 3.53 \text{ and } 3.12, \text{ respectively}; t_{13} = 3.22, p < .01) \).

The Young Children’s Empathy Measure provides a rapid assessment of preschool children’s empathy during an interview. This empathy measure has acceptable internal reliability and shows the expected correlations with children’s ages and aspects of their prosocial development but not with their IQs. These characteristics have been reported by others for empathy measures and are expected for such a developmental measure. The higher empathy scores for children whose bond to a companion animal is strong provides further evidence of the measure’s construct validity as an index of young children’s empathy.

REFERENCES


Accepted April 12, 1990.