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Mixed-Age Grouped Preschoolers' Moral Behavior and Understanding

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Abstract. Prior research on young children's moral development has been conducted primarily in same-age environments. The purpose of this present research was to investigate whether preschool children's moral (helping) behaviors are related to younger peer-directed internal state language (talking about a younger peer's feelings, wants, and abilities), perspective-taking skills, and attendance at a child development oriented, mixed-age child care center. Twenty-one pairs of children (older peer: 4- 6-years-old; younger peer: 2- 3-years-old) were videotaped while playing with four toys and three puzzles, which were presented singly. Results indicated that moral (helping) behaviors were positively and significantly related to frequency of vocal turns to the younger peer, to perspective-taking ability, and to length of attendance at a mixed-age center. Also, the data supported the developmental notion that perspective-taking ability is related to age. Mixed-age group care settings may facilitate young children's demonstration and understanding of some aspects of moral development, such as helping behaviors and perspective-taking ability.

The case for mixed-age or multi-age grouping has been made recently by Katz, Evangelou, and Hartman (1990). Most of the research findings that they reported indicated that participation in mixed-age groups has tended to benefit the younger participants. However, older participants may also benefit, especially in the area of socioemotional development, including moral, prosocial development involving cooperation, nurturing, and helping behaviors.

Although many studies of young children's moral development have been conducted in same-age environments (e.g., Lickona, 1988; Nucci, 1987), there has been some research investigating the effects of mixed-age grouping on children's moral behavior. For example, research has found that preschoolers attending programs using mixed-age grouping displayed cooperation (Elkind, 1987), prosocial (helping) behavior (Katz et al., 1990), and caretaking behaviors (Balaban, 1991; Roopnarine & Johnson, 1983; Whiting & Whiting, 1975). However, there have been no studies conducted in child care programs using mixed-age grouping that have tried to link these and other aspects of preschoolers' social knowledge, such as knowledge of emotions and perspective-taking.

Behavior of mixed ages of children interacting in classrooms may be similar to mixed ages of siblings interacting in the home environment. Research on siblings has studied preschool children's affective knowledge involving how internal-state language (describing others' feelings, wants, and abilities) is linked to perspective-taking ability and prosocial behaviors (Howe, 1991). Older siblings at home demonstrate their understanding of their own and other's emotions, and their moral, prosocial skills (Howe, 1991). Although mixed- or multi-age classrooms are similar to a family setting of mixed-age siblings, the children attending mixed-age child care

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programs are participating in environments with many non-homelike features. The primary question of this present study was whether the moral behavior and understanding displayed by preschool aged siblings when interacting with younger siblings at home can be seen in interactions among mixed ages in a child care center.

Research that has investigated the effects of center care on children's moral behavior indicates that prosocial behavior is related to temperament, friendship status, positive social interaction, and length of time spent in a quality program (Farver & Husby Branstetter, 1994). Mothers' expectations, day care quality (Holloway & Reichhart-Erickson, 1989), and attending half-day rather than full-day (Kalliopuska, 1991) are also related to children's moral behavior.

One study that investigated the differences between home- and center care-preschool children's understanding of moral and social transgressions found that home-care children were not as likely to understand and recognize moral transgressions from social transgressions as were children attending center care (Siegal & Storey, 1985). Thus, it may be that children attending child care centers are acquiring some different types of socioemotional knowledge than those who are at home.

None of these studies described settings where the children were participating in mixed-age or same-age groups; however, most likely, the children were attending same-age grouped classrooms. Therefore, there is a need to investigate mixed-age grouped preschool children's moral behavior and understanding.

In the study reported here, the researcher hypothesized that preschool children's nurturing and helping of younger peers (prosocial behaviors that are included in moral behavior) would be positively related to attending a child development oriented, mixed-age child care center. She further hypothesized that preschool children's moral behavior while attending mixed-age center care would be related to preschool children's understanding of the emotions of younger peers, as measured by the children's use of younger peer-directed internal state language (talking about a younger peer's feelings, wants, and abilities) and perspective-taking ability (Howe, 1991).

Method

Subjects

Twenty-one pairs of children, consisting of an older peer (M = 4 years, 9 months) and a younger peer (M = 2 years, 7 months), were recruited from two Midwestern, university-based, mixed-age child care programs. The older peer ranged in age from 48-71 months. The younger peer ranged in age from 21-41 months. The peer pairs had an average of 25 months age difference. The age differences ranged from 14-41 months. The preschool children were randomly paired with either a younger boy or girl; 9 pairs were the same sex; 9 pairs had an older girl paired with a younger boy; and 3 pairs had an older boy paired with a younger girl. Sixteen peer pairs included a male younger peer. There were 10 male older peers and 11 female older peers. Fourteen of the older peers had siblings (10-younger, 3-older, and 1-both); 7 had no siblings.

Nearly all the children attending these child care programs came from families who were associated with the university, either as faculty, staff, or students. Twenty of the 21 preschoolers were Caucasian; one preschooler was African American. All of the younger peers were Caucasian. The children attended an average of 16 months in the mixed-age child care programs (*Range* = 1-46 months).

Procedure

During Session 1, each pair of peers was videotaped while playing with several toys that were presented singly. Session 1 lasted 15-20 minutes. The videotapes were scored for 1) frequency of vocal turns that the older peer gave to either the younger peer or to the researcher, 2) frequency and type of internal state language (feelings, wants, abilities) that was directed towards the

younger peer, and 3) affective behaviors such as smiling at, laughing with, helping, grabbing, stopping, or protesting the play of the younger peer. Each videotape was reviewed until there was 100% agreement between the scorers for each item.

During Session 2 only the older peers took the perspective-taking task used by Howe (1991). The perspective-taking task and scoring for each of the 18 questions was devised by Abrahams (1979). Session 2 scoring was completed by two trained persons who reviewed each child's audiotape and written protocol until there was 100% agreement.

Tasks. During Session 1, the peer pairs (one older child and one younger child) played together with one toy at a time. They were told to take turns putting all the pieces back together. As each toy was presented, the pieces were evenly distributed between the two children. The first toy presented was a graduated shapes form board with 20 pieces. The next game was a shape sorting ball with 14 different shapes. The next toy was a counting balls board with 5 pegs to handle from 1-5 balls. Each set of balls was a different color. The fourth toy was either a number board or a shape sorter board. The last three toys were puzzles with 12-16 pieces.

During Session 2, a week after Session 1, each older peer was asked 18 questions while looking at the perspective game involving a small child-doll, a dog, two hedges, a bird on one side of a hedge, and a bear (Abrahams, 1979). The child first sat in a chair from which the child could not see the bear behind the child-doll, and was asked what he or she could see. Then the child moved to another chair for a different perspective while a research assistant took the child's first chair. The research assistant listened to music on headphones and could not hear the child's responses. The child was asked questions that required his or her new perspective and questions that required him or her to remember what he or she saw in the first chair in order to give another's perspective.

Results

Before collapsing across subjects, several grouping variables were compared. T-tests for independent groups indicated that no differences were found between children with or without siblings for any of the dependent variables: frequency of prosocial behaviors, frequency of vocal turns to the younger peer, perspective-taking ability, or months of attendance at a mixed-age child care setting. There were no significant differences found between boys and girls and between same-sex and mixed-sex peer pairs for any of the dependent variables.

Table 1
Means, (SD), Ranges and Intercorrelations (r) for Age, Frequency of Affective Behaviors Directed Towards Younger Peer, Months in Child Care and Perspective-Taking Ability Score (N=21) Interactions

Measure	Mean	(SD)	Range	Intercorrelations 1	2	3	4	5	6
1. Age	56.7	(7.1)	48-71	—	.30	-.22	-.03	.08	.42*
2. Frequency of Helping	5.2	(3.5)	0-13		—	-.20	.46*	.42*	.50*
3. Frequency of Prohibiting	2.4	(2.2)	0-7			—	.27	.36*	-.09
4. Frequency of Vocal Turns to Younger Peer	12.3	(6.6)	2-26				—	.59**	.10
5. Months in Child Care	16.2	(12.0)	1-46					—	.37*
6. Perspective-Taking Ability	35.6	(9.3)	12-46						—

*$p < .05$ one-tailed; **$p < .01$ one-tailed

For the first hypothesis, correlational analyses indicated that preschoolers' moral prosocial behavior was significantly and positively related to months of attendance at a mixed-age child care setting ($r = .42, p = .028$) (Table 1). The longer that children attended the mixed-age program, the more frequently they displayed prosocial behaviors.

For the second hypothesis, preschoolers' moral behavior was significantly and positively related to perspective-taking ability ($r = .50$, $p = .011$), and frequency of vocal turns to the younger peer ($r = .46, p = .017$) (Table 1). Frequency of vocal turns was found not to be related to use of internal state language ($r = -.18$, $p = .22$). Use of internal state language was not related to any of the other variables.

In this study, only 6% of the verbalized internal states were directed toward the younger peer and described the following younger peer's internal states: wants and abilities. The younger peer's feelings were never verbalized. These data did not match Howe's (1991) findings, which showed that 18% of all older siblings' vocal turns to the younger sibling contained references to all three internal states.

A significant and positive correlation was found between perspective-taking and age ($r = .42, p = .031$). However, perspective-taking ability was not significantly related to vocal turns to the younger peer ($r = .105, p = .325$) (Table 1). In a preliminary analysis to compare same-age ($N = 11$) with mixed-age preschool children's behaviors, the researcher found that same-age grouped preschoolers displayed significantly more total negative behaviors toward the younger peer (t-test $F = 13.286$, $p = .001$) than did the mixed-age grouped preschoolers (Derscheid, 1995).

Months of attendance at a mixed-age child care center was significantly and positively related to perspective-taking ability ($r = .37$, $p = .048$) and frequency of vocal turns to the younger peer ($r = .59, p = .003$). The longer the preschool children attended a mixed-age program, the more frequently they spoke with the younger peer and the higher their perspective-taking score.

Discussion

Preschoolers' moral behavior as measured by frequency of helping was found to be related to length of attendance at a child development oriented, mixed-age child care center. The positive influence of attending a quality program corroborates Farver and Husby Branstetter's (1994) research findings. Moral helping behavior was associated also with perspective-taking ability and to frequency of vocalizations with the younger peer. The more frequently the children displayed moral and prosocial (helping) behaviors, the more likely they were to talk with the younger peer and have a higher perspective-taking score. However, the data did not support Howe's (1991) finding of a three-way link among prosocial helping behaviors, perspective-taking ability, and use of internal state language, which was not found to be related to verbal fluency when age was controlled (Howe, 1991). Insufficient internal state language data in this study may have prohibited finding of a three-way link. Little internal state language may have occurred because the present investigation setting facilitated only cooperative play (working together to put all the pieces back on the toy) and little conflict (sharing toys with few pieces) or nonplay opportunities, as may occur at home with siblings and the mother present (Howe, 1991). Also, the recorded play interaction period (20 minutes) was relatively short compared to the play time (80 minutes) recorded by Howe (1991). It may be that a home environment is more likely to encourage emotional expressions (Dunn, Bretherton, & Munn, 1987).

Despite the small number of subjects, the present study supported prior research findings of the relationship between preschool children's attending mixed-age child care settings and their understanding and demonstration of some moral (prosocial) behaviors (Katz et al., 1990). This finding is somewhat contrary to Bailey, McWilliam, Ware, and Burchinal's (1993) finding that mixed-age groups enhanced the social behavior of younger but not the older children.

This study's data also support Piaget's (1932) notion that cooperation (as part of moral development) occurs when children interact with other children. The longer that the children attended the mixed-age child care program, the more frequently they displayed and understood some aspects of moral development: helping behaviors and perspective-taking ability.

Although perspective-taking was found to be related to age in this study, age was not related to the prosocial behavior of helping, vocal turns to the younger peer, or attendance. Thus, age (maturity) does not seem to be a link between moral helping behavior and perspective-taking ability; however, length of attendance does seem to be a link. Without a larger age span of subjects, the findings from this study seem to indicate that moral helping behaviors may not be explained as well by age-related developmental changes as by social learning acquired from extensive experiences observing prosocial models provided in quality child care programs (Eisenberg & Mussen, 1989; Farver & Husby Branstetter, 1994).

Further research is needed with a larger sample size and age range of mixed-age pairs of peers. With a larger sample, prior experience with siblings may be found to influence preschool children's moral behavior and understanding toward a younger peer.

Although this study supports the notion that mixed-age child care can benefit children's social development, a more definitive case for the moral benefits of mixed-age settings needs to be researched. Further research could compare preschoolers' moral behavior and understanding from mixed-age groups in which the peer pairs would know each other, to preschoolers from same-age groups in which the older peers would not know nor have played with the younger peers. Further research is needed to support research findings that children may acquire moral (prosocial) benefits from attending quality, child development oriented child care settings, regardless of grouping strategy or age.

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