Becoming prosocial: The consistency of individual differences in early prosocial behavior

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ARTICLE INFO

ABSTRACT

Recent research on early prosocial behavior has questioned whether young children show consistency in their prosocial responding across different tasks and over time. Two studies are reported that address this issue, one with 18-month-olds ($n = 86$) and one with older children studied longitudinally at 4.5 and 6 years ($n = 51$). In each, children's responses to multiple age-appropriate prosocial tasks were assessed using both variable-centered and person-centered analyses. Variable-centered analyses revealed generally significant associations between children's responses across tasks and, in older children, over time. Person-centered analyses revealed that children were distinguished into low prosocial, moderate prosocial, and "frequent helpers" groups with the addition of a high prosocial group in older children. These findings indicate that although situational characteristics are important, their importance varies across children and development. Results suggest that young children tend to show consistency in individual differences in their prosocial responding across situations and distinct dispositional profiles of children can be observed, including those who demonstrate high prosocial responding across situations requiring different cognitive, social and motivational skills.

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1. Introduction

Prosocial behavior (i.e., behavior intended to benefit another) emerges early in life and increases in sophistication along with growth in emotion understanding, perspective taking, and awareness of others' goals and desires (Eisenberg, Eggum, & Spinrad, 2015). According to Eisenberg, Eggum et al. (2015), early childhood appears to be a particularly important period for the emergence of prosocial responses to others. Current research about early prosocial behavior has yielded at least two important conclusions. First, very young children are far more capable of providing assistance, even to a stranger and in the absence of rewards, than was earlier believed (see Dunfield & Kuhlmeier, 2013; Svetlova, Nichols, & Brownell, 2010; Warneken & Tomasello, 2006). Second, there

also is considerable variability in responding at these early ages. According to some recent studies, young children offer to help a stranger on one task but not on another, and even those who help may not share or provide comfort to a distressed stranger. This has led some researchers to conclude that early prosocial behavior is situation-specific, contingent on the specific task demands and unlikely to reflect a generalized motivation to respond prosocially (e.g., Dunfield, Kuhlmeier, O'Connell, & Kelley, 2011). The purpose of the two studies reported here was to gather additional data on this issue by examining the consistency of prosocial behavior across multiple tasks at three ages – 18 months, 4½ and 6 years – and the stability of individual differences between ages 4½ and 6. Our goal was to determine whether consistent profiles of prosocial responding would emerge through person-centered analyses, and whether these profiles would be consistent at different tasks and stable longitudinally.

In their review of research on prosocial development, Eisenberg, Eggum et al. (2015) concluded that there is evidence for modest consistency of individual differences in prosocial responding across situations and stability over time, but that distinct types of responding (e.g., helping vs. sharing) tend to be poorly interrelated and the

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evidence for stability of prosocial behavior is weakest for younger ages. Some recent studies support this conclusion. In a study with 18- to 30-month-olds Brownell, Svetlova, Anderson, Nichols, and Drummond (2013) found modest or nonsignificant associations between children's responses to instrumental helping, empathic responding, and altruism tasks, and Sommerville, Schmidt, Yun, and Burns (2013) reported similar results for assessments of helping and sharing in a somewhat younger sample. Dunfield et al. (2011) found that there was no consistency in the responses of 18- and 30-month-olds to tasks assessing helping, sharing, and comforting. In a follow-up study, Dunfield and Kuhlmeier (2013) noted that although 2- to 4-year-olds responded consistently in multiple trials assessing the same type of prosocial behavior, children responded inconsistently across tasks related to an adult's instrumental need, emotional distress, and material desire.

One reason that young children might respond inconsistently to different kinds of prosocial tasks is that these tasks require different cognitive, social, and motivational skills of the child (Thompson & Newton, 2013). Helping tasks primarily require an awareness of the adult's goals and what is needed to assist. Sharing is, by contrast, costlier because sharing resources to another person leaves fewer for the child. Compassionate responding (i.e., empathic responding) to an adult's distress is the most costly and complex as it involves complicated judgments of the adult's emotions, its causes, and what the child can do to provide assistance (Eisenberg & Shell, 1986). In addition, another's distress can arouse personal distress rather than empathy in the child, and this might undermine assistance (Eisenberg, Eggum et al., 2015). Taken together, the different cognitive, social, and motivational requirements of alternative prosocial tasks increase the possibility that young children will respond in a task-specific manner. From a developmental perspective, this might suggest greater individual consistency emerges in prosocial responding with growth in these cognitive capacities and social understanding.

Before concluding that early prosocial behavior is primarily situational, however, other considerations are warranted. The procedures used by researchers in this field vary significantly, for example, in ways that can potentially affect young children's prosocial responses and their consistency across tasks. The amount of time provided for children to respond is one example. Response times range from 10-s (Dunfield et al., 2011) to 30–60-s (Brownell et al., 2013), which may be significant especially for young and temperamentally reserved children. Another example is the complexity of the tasks themselves, which range from procedures involving a series of graded prompts to elicit prosocial responding (Brownell et al., 2013; Svetlova et al., 2010) to simple situations involving nonverbal cues of goal obstruction (Warneken & Tomasello, 2006). In some cases, the child is directly asked for assistance, in other cases not. A third consideration is how researchers evaluate children's prosocial responses. Whereas some researchers index only whether young children performed the full criterion response (Dunfield & Kuhlmeier, 2013; Dunfield et al., 2011), others use more graded indices that include concerned attention, hypothesis testing, verbal comments or questions relevant to need, and partial responses (e.g., Brownell et al., 2013; Hastings, Rubin, & DeRose, 2005; Trommsdorff, Friedlmeier, & Mayer, 2007; Vaish, Carpenter, & Tomasello, 2009). Each of these procedural variations could affect assessments of the rate and consistency of prosocial responding, especially of young children.

To the best of our knowledge, all or nearly all of the research in this area uses variable-centered analytical methods involving correlations, regressions, and related methods to denote the consistency of prosocial responding across tasks. Such approaches are conventional for the field, but increasingly, developmental researchers are using person-centered analytical methods when they seek to distinguish groups of respondents on the basis of their common profiles on a variable set. Person-centered analyses are designed to identify groups of individuals who share common configurations of variables; group membership is determined by the associations of the variable set within groups. Examples of person-centered analyses include cluster analytic methods and Latent Profile Analysis (LPA). Person-centered analyses are increasingly used in developmental study, such as in research efforts to distinguish children according to their stress reactivity, knowledge profiles, or other behavioral characteristics (see Hubbard, Smith, & Rubin, 2013; Schneider & Hardy, 2013). Where the study of early prosocial responding is concerned, a person-centered analysis is better designed to distinguish groups of children who are high or low in their responses to prosocial tasks, or to distinguish groups of children in other ways related to their responding (such as those who help on low-cost tasks from those who assist when resources must be shared). Moreover, in developmental analysis, it is possible to compare whether the groups derived from person-centered analyses at one age are similar to those derived from the responses of older or younger children. Person-centered analyses are a useful complement to variable-centered analyses in studying the reliability of prosocial responding by evaluating whether children empirically aggregate into groups that are distinguished by the rate of prosocial responding across tasks, and whether such groups are stable over time.

The two studies reported in this manuscript were designed with these considerations in mind. In each study, one with 18-month-olds, and the other a short-term longitudinal study with children at ages 4½ and 6 years, children were observed in age-appropriate assessments of their helping, sharing, and compassionate responding. These tasks were selected because they vary significantly in their requirements of the child, and are the kinds of tasks for which evidence of the situation-specificity of children's responding is greatest in prior research. In Study 1, we studied 18-month-olds because this is the youngest age for which researchers have developed a full complement of prosocial tasks. We assessed children's prosocial behavior in three different types of tasks including instrumental helping, sharing, and compassionate responding. In Study 2, we studied preschoolers because this is when individual differences in prosocial responding may begin to become stable, and thus provided a suitable comparison to the toddler sample. As with Study 1, we focused on three different types of prosocial responding tasks: instrumental helping, sharing, and compassionate responding. Although different prosocial tasks share some common characteristics, instrumental helping primarily requires understanding the experimenter's goals and how they are impeded, while sharing requires giving up resources and compassionate responding involves emotional appraisals. These different task requirements may be one reason why prior studies have indicated that more children, and children at younger ages, provide instrumental helping compared to sharing and empathic responding (Eisenberg, Spinrad, & Knafo, 2015).

The studies were designed to provide children at each age with adequate time to appraise the circumstances and respond, and we conducted a graded coding of their responses at each age that credited children with partial efforts to assist the experimenter. Children responded to simple tasks involving the experimenter's obstructed goals, need for resources, and distress following an accident, and the experimenter never requested help from the child nor thanked the child for assistance. Both variable-centered and person-centered analyses were used to examine the consistency of prosocial responding across tasks at each age and the stability of individual differences in prosocial behavior from age 4½ to 6 years.

We hypothesized modest consistency of individual responding across the different prosocial assessments at 4½ and 6, but less intraindividual consistency at 18 months because these responses involve capacities that are early in development. We also antic-