Social Perspective-Taking Skills in Maltreated Children and Adolescents

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The primary goal of this study was to assess the ability of maltreated school-age children and adolescents to understand the thoughts, feelings, and points of view of others. Level of egocentrism and social perspective-taking coordination were assessed in a group of 49 maltreated and 49 demographically matched nonmaltreated children. Twenty-six elementary and 23 high school students in each group were individually interviewed and their responses to hypothetical interpersonal situations coded for egocentricity and level of perspective-taking ability. The findings revealed that maltreated children and adolescents were more egocentric and delayed in their social perspective-taking development than their nonmaltreated peers and that they reported lower levels of global self-worth. However, differences within the group of maltreated children and adolescents emerged with regard to negotiating novel relationships, as those with fewer internalizing or externalizing symptoms exhibited better skills in this area than their peers who displayed more symptoms.

Keywords: perspective taking, maltreatment, development, school-aged children and adolescents

The ability to understand someone else’s thoughts, feelings, and points of view develops gradually as children become less egocentric and increasingly able to recognize and coordinate multiple dimensions of interpersonal experiences (Aristolong, 1993; Piaget & Inhelder, 1956; Shantz, 1983; Waldinger, Toth, & Gerber, 2001). Nonegocentric thinking is principally an achievement of middle childhood (Chandler, 1977; Moses & Flavell, 1990; Selman, 1980), but higher level perspective-taking skills and more sophisticated interpersonal negotiation strategies continue to improve during adolescence and early adulthood (Kuttler, Parker, & La Greca, 2002; Selman, Beardslee, Schultz, Krupa, & Podorefsky, 1986). The development of age-appropriate social perspective-taking abilities is essential because it involves a basic restructuring of children’s conceptual understanding of friendships, authorities, peer groups, and the self (Selman, 1980). As children progress to higher levels of perspective taking, their abilities to reflect upon their own and others’ psychological processes leads to new levels of empathy and advances in communication and problem-solving skills (Chandler, 1973; Mendelsohn & Straker, 1999; Pellegrini, 1985; Selman & Schultz, 1990). Children who lag far behind their peers in interpersonal awareness are likely to experience difficulty relating to others (Hildyard & Wolfe, 2002; Lyman & Selman, 1985; Pollak, Cicchetti, Hornung, & Reed, 2000).

Individual differences in the development of perspective taking may be manifested in relation to the child’s experiential history and, in particular, to parent–child relationships as child-rearing experiences in the development of competence or incompetence across a series of stage-salient tasks (Aber & Cicchetti, 1984; Cicchetti & Lynch, 1995). Within this context, the experience of child maltreatment represents an unfortunate, but informative, “experiment in nature” regarding the effects of adverse parenting on perspective taking because such disturbances can facilitate or hinder the capacity for intrapersonal and interpersonal awareness (Bolger & Patterson, 2001; Cicchetti & Carlson, 1989). Maltreated children appear less empathic and interpersonally sensitive than their nonmaltreated peers (Barahal, Waterman, & Martin, 1981; Bolger, Patterson, & Kupersmidt, 1998; McCrone, Egeland, Kalkoske, & Carleson, 1994; Straker & Jacobson, 1981) but may also be hypervigilant to environmental cues (Crittenden & DiLalla, 1988; Frodi & Smetana, 1984). Thus, the primary purpose of this study was to compare the performance of groups of demographically matched maltreated and nonmaltreated children and adolescents on two distinct and psychometrically sound perspective-taking measures.

Frameworks of Perspective Taking

Both Chandler (1973) and Selman (1980) developed paradigms of social perspective-taking skills that are congruent with a devel-
opmental, organizational view of adaptation. Within this framework, competence at one period of development sets the stage for the formation of competence at the next period, whereas early deviations or delays in functioning may lead to later maladaptation across a range of areas of functioning (Burack, 1997; Cicchetti & Cohen, 1995; Cicchetti, Rogosch, Lynch, & Holt, 1993; Rutter & Sroufe, 2000). Chandler’s (1973) focus is the cognitive abilities that are necessary to demonstrate social decentering skills that emerge in the elementary school years. Social decentering implies an appreciation of the notion that the same stimulus can generate different interpretations, depending on the amount of information that is available. Within Chandler’s (1973) framework, egocentrism is a descriptive concept of a state of undifferentiation between the self and the nonself, as the individual is confined to a highly personalized point of view while ignorant of the uniqueness of others’ perspectives, whereas perspectivism refers to the progressive capacity to differentiate between one’s own perspective and those of others. With increasing age up to approximately 10 years, children become more effective in setting aside details known only to themselves and adopting perspectives that are different from their own.

In contrast to Chandler’s (1973) emphasis on the role of cognition in perspective taking among children, Selman (1980) focused on the developing social ability to apply perspective taking in resolving interpersonal problems and dyadic conflicts that continue to be relevant in adolescence and adulthood. In Selman’s (1980) structural stage model of qualitative changes in children’s perspective-taking abilities, interpersonal understanding is based on the capacity to differentiate and integrate the points of view of the self and others. As children develop higher levels of social perspective-taking skills, they are able to adopt more sophisticated interpersonal negotiation strategies to resolve interpersonal conflicts (Mendelsohn & Straker, 1999; Nakula & Nikiopoulos, 2001; Yeates & Selman, 1989). Within this framework, the highest levels of perspective taking are not attained until at least 15 years of age, and sometimes are never reached (Selman et al., 1986).

Parenting and Perspective Taking

The role of parents is of particular importance to the development of interpersonal understanding because parents serve as primary identification figures and models of empathic responsiveness (Feshbach, 1989; Pillow, Mash, Aloian, & Hill, 2002). Parents who consider covert feelings, intentions, and thoughts in relation to behavior and who rely on inductive (i.e., communication and negotiation) rather than on punitive disciplinary styles provide their children with models of social perspective taking and foster their capacity for interpersonal understanding (Bolger & Patterson, 2001; Howe, 1991). Conversely, maltreating parents may pose a particular threat to their children’s development of age-appropriate perspective-taking skills. The family environment of most maltreated children lacks the elements of support, affection, empathic modeling, and inductive child-rearing techniques that are identified as important variables in the development of the capacity for understanding the feelings and perspectives of others and a coherent sense of self (Haskett & Kistner, 1991; Macliffe, Cicchetti, & Toth, 2001; Straker & Jacobson, 1981). Parents who rear their children in unresponsive or violent environments fail to foster communicative exchanges (Bolger & Patterson, 2001; Cicchetti & Carlson, 1989). Opportunities to form emotional attachments with alternative parental figures and peers are also limited, as maltreating parents tend to isolate their families from others in the community and deprive their children of opportunities for interaction (Bolger et al., 1998; Smith & Walden, 1999; Stevenson, 1999).

Accordingly, maltreated children often form insecure, conflicted relationships with primary caregivers and are at risk for delays in the development of age-appropriate self–other differentiation (Bretherton & Beeghly, 1982; Cicchetti & Barnett, 1991; Cicchetti & Carlson, 1989; Waldinger et al., 2001).

Issues of Self and Other Among Maltreated Children

Interpersonal understanding and the ability to take the viewpoint of others are intrinsic to the development of the self-concept (Noam, Kohlberg, & Snarey, 1983; Stern, 1995). Maltreated toddlers, in comparison to their nonmaltreated peers, use proportionally fewer internal state words for self and other and are more context bound in their use of language to express feelings (Beeghly & Cicchetti, 1994; Smith & Walden, 1999; Stevenson, 1999). These delays in the use of internal state language may impede the ability to clarify misunderstandings during ongoing interactions with peers and to develop positive peer relations (Alessandri, 1991; Haskett & Kistner, 1991). A little later in development, young maltreated children display exaggerated views of their competence and social acceptance even beyond the normal developmental tendency of their same-age peers to report inflated self-perceptions (Vondra, Barnett, & Cicchetti, 1989). The overreporting of competencies is especially related to externalizing disorders (Evans, Brody, & Noam, 1995; Zimet & Farley, 1985), as inflated self-concepts in aggressive children appear to reflect defensive styles rather than a type of protective strategy usually associated with positive self-worth (Hughes, Cavell, & Grossman, 1997). The need for this type of responding may be because of the common life failures experienced by many maltreated children. As compared with nonmaltreated children, maltreated children typically display lower scholastic competence, social acceptance, and demonstrate poorer behavioral conduct (Shonk & Cicchetti, 2001) but increased levels of depression (Toth & Cicchetti, 1996) and symptomatology associated with posttraumatic stress disorder (Yehuda, Halligan, & Grossman, 2001).

Goals and Hypotheses

The primary goal of the study was to examine the extent to which problematic family histories of maltreated children and adolescents would be related to social perspective-taking abilities. The children and adolescents in the maltreatment group represent a specific subgroup for whom the maltreatment was perpetrated at least partly by their biological mothers and whose families were described by case workers as chronically dysfunctional. As every developmental level is characterized by specific salient issues and tasks (Burack, 1997; Sroufe & Rutter, 1984), both elementary and high school students with and without histories of maltreatment were included. In order to study the continuity of perspective taking between the two age groups, the same version of the Chandler (1973) task was administered to both groups. However, different forms of the Selman task (Schultz, Yeates, & Selman, 1989) were administered to assess developmentally rele-
vant issues for each age group. For both tasks, we expected that the maltreated children and adolescents would display deficient performance in relation to their same-age peers, thereby reflecting the severe and pervasive effects of histories of maltreatment on perspective-taking abilities. This is in contrast to a possible alternative hypothesis that children and adolescents with histories of maltreatment would show enhanced performance because of increased sensitivity to the cues and actions of others.

A secondary goal was to examine the relationship between perspective-taking skills and important indices of present and future adaptation, such as perceived social competence and self-worth among maltreated children and adolescents. In accordance with the notion that perceived self-worth may impact interpersonal understanding, the maltreated group was divided into two groups on the basis of reported levels of global self-worth. Accordingly, we predicted that the maltreated youths who report high levels of self-worth would demonstrate better perspective-taking skills than those who report low levels.

A third goal of the study was to examine whether perspective-taking skills played an ameliorative role for some members of the maltreated group. Thus, the maltreated children and adolescents were divided into two groups on the basis of symptom levels. Consistent with the notion that strong perspective-taking skills promote present and future adaptation, we expected that levels of internalizing or externalizing symptoms would be associated with performance on the perspective-taking tasks within the group of maltreated children and adolescents.

Method

Participants

The participants included 49 maltreated and 49 nonmaltreated youths, with 26 elementary schoolchildren (3 girls, 23 boys) and 23 high school adolescents (8 girls, 15 boys) in each group. The mean age of the children was 10.3 years (7–12 years, SD = 1.7 years), and the mean age of the adolescents was 15.6 years (13–17 years, SD = 1.2 years).

The maltreated children and adolescents were recruited from social service agencies, group homes, and a program for youths with behavioral and emotional problems. The nonmaltreated children were recruited from local schools. Social workers and directors of youth protection agencies sent information letters and consent forms in which parents or legal guardians were asked to allow their children to participate. The consent forms included a brief description of the research, a description of informed consent, and a confidentiality statement. Parents and legal guardians were assured that all information would be kept in strict confidence and that information gathered for the study would be disclosed only to researchers, unless otherwise compelled by law. Both consent from legal guardians and assent from the participants were required for participation.

All the children in the maltreated group were from chronically maltreating families that required interventions by youth protection agencies and that were followed by a social worker. The files were accessed for information regarding the reasons for placement. This revealed that all of the out-of-home placements occurred as a result of chronic physical and psychological abuse and neglect.

Classification of maltreatment status was based on records by social workers, psychologists, and crisis intervention workers of documented child abuse and/or neglect cases. Workers were interviewed, and children’s files were accessed independently by two graduate-level research assistants to verify maltreatment status, demographic information, and descriptive data on the nature and circumstances of previous maltreatment experiences. Maltreatment subtypes were operationalized in accordance with the youth protection service definitions. In order to assure the confidentiality of their clients, the service agencies released only the information that was specific to the classification of maltreatment status for this study.

Interrater reliability was checked throughout the coding process, and disagreements were resolved by consensus scoring until both coders were in complete agreement regarding maltreatment status. Physical abuse was reported in 65% of the case records, physical neglect in 30%, lack of adequate supervision in 80%, sexual abuse in 10%, and exposure to family violence in 30%. Ninety percent of the maltreated children and adolescents were, according to documentation, exposed to multiple types of maltreatment, and the impact of any particular maltreatment type could not be assessed. The considerable overlap among types of maltreatment experienced is reported by other researchers, suggesting that pure forms or categories of maltreatment are atypical (Wolfe & McGee, 1994). The extent of maltreatment, rather than particular forms of abuse, appears to account for many of the detrimental effects associated with maltreatment (Crittenden, Clausen, & Sugarman, 1994).

Despite the presence of multiple, overlapping maltreatment types, adherence to specific inclusion criteria produced a sample that was relatively homogeneous on several essential dimensions. Case files and interviews with social workers from youth protection agencies were accessed to identify youths with histories of substantiated and chronic abuse who met the four inclusion criteria. These specific criteria were chosen to reduce some of the variability that is common among samples of maltreated children and adolescents: (a) All children were maltreated while living with the biological parent(s); (b) all children and adolescents lived with the biological parent(s) until at least the age of 6 years; (c), the mothers were indicated as the sole or coparenter in all cases; (d), all families were described as chronically dysfunctional (more than 2 years of monitoring by youth protection agencies) and parental discipline as harsh and inconsistent (more than two incidents of confirmed physical abuse). These four criteria were used to rule out the influence of maltreatment by persons transiently involved with the youth and to ensure similar contexts of maltreatment. Cases of the most extreme types of physical neglect and injury and cases of severe abuse in infancy were excluded, largely because most of these youths had IQs below 80 and/or other neurological impairments. Because of the highly verbal nature of the social perspective-taking tasks, only those with IQs above 80 were included. Youths who experienced sexual abuse or were exposed to family violence were also excluded if no documentation of direct and chronic experiences of physical abuse and neglect were available.

At the time of testing, 13 of the maltreated elementary schoolchildren (50%) lived in group homes, 4 (15%) were in foster care, and 9 (35%) lived at home. Of the maltreated adolescents, 18 (78%) lived in group homes, and 5 (22%) lived at home. The majority of maltreated youths (79.5%) were identified by social workers and psychologists as manifesting severe behavioral, emotional, and/or social problems. Accordingly, a measure of both externalizing and internalizing behaviors was included as a covariate in order to adjust for the possible confounding effect on perspective-taking ability.

Socioeconomic status (SES) was based on the education level and on the occupation of biological parents. Participants whose parents had received less than 8 years of schooling and who were in service, blue-collar, or household occupations were classified in the low-SES category. Children and adolescents whose parents had a university education, a white-collar job, and/or were self-employed were classified in the middle-SES category. In the maltreated group, 22 youths (45%) were from families receiving social assistance, 18 (37%) from low-SES families, and 9 (18%) from middle-SES families. Forty-one maltreated youths (84%) were from homes in which parental separation or divorce had occurred. Approximately half the maltreated youths had a biological parent who was involved in chronic drug and/or alcohol use.

The nonmaltreated youths were recruited from eight local schools and were matched to the maltreated youths on age, gender, SES, IQ, ethnic
background, and marital status (see Table 1). Approximately 65% of the youths originally recruited returned signed consent forms, and of this group, 49 youths were selected on the basis of background and demographic variables comparable to those of the maltreated group. Access to a central data bank verifying that none of the comparison children and adolescents had been reported as maltreated was denied to the researchers. However, all of the comparison children and adolescents were screened by school psychologists and/or social workers and found to have no known history of abuse or neglect. In order to further ensure that youths in the comparison group had not experienced maltreatment, they completed a parent–child relationship checklist that screened for possible maltreatment. Potential participants who reported maltreatment on this checklist were excluded from the study. They were debriefed by the research assistants and participated in follow-up sessions with a school psychologist.

**Measures**

The Kaufman Brief Intelligence (K-BIT; Kaufman & Kaufman, 1990) measure is an individually administered intelligence test that assesses the verbal and nonverbal intelligence of children, adolescents, and adults. The test comprises both a vocabulary (expressive vocabulary and definitions) and a matrices subtest. Intercorrelations between the vocabulary and matrices subtests were reported to be .60 and above. Test–retest reliability coefficients were .96 for the vocabulary subtest, .80 for the matrices subtest, and .93 for the IQ composite. Convergence scores of .80 and above with the Wechsler Intelligence Scale for Children—Revised (Wechsler, 1974) have been reported for both subtests (Kaufman & Kaufman, 1990).

The Parent–Child Relationship Checklist is a checklist that was designed by the authors to identify children and adolescents in the nonmaltreated group who may have experienced maltreatment by either parent. The 17 statements of both abusive and supportive parental behaviors were read to the participant, who was instructed to mark “never,” “sometimes,” or “often” for each statement as it applied to each parent. An example of an abusive statement is, “My mother/father punishes me unfairly,” whereas a supportive statement would be, “My mother/father listens and talks to me.”

Internal consistency was assessed at .84 for this study. Chandler’s Bystander Cartoons Test (CBCT; Chandler, 1973) was used to measure the extent to which children and adolescents were able to set aside privileged or personal knowledge and emotions and adopt the perspective of another person. Every participant was exposed to two story characters, a protagonist who has privileged information and a bystander who does not. For each of the three cartoon sequences, with eight picture frames in each, the participant was required to tell a story about the entire sequence and to describe and explain the protagonist’s feelings and behavior. After the initial description was completed, the participant was asked to retell the cartoon sequence from the bystander’s point of view, beginning with the point in the sequence at which the bystander witnesses the events.

A 5-point scoring system reflecting different levels of potential egocentric intrusion was used. The highest score of 4 was assigned to those egocentric accounts in which participants explicitly attributed to the uninformed bystander knowledge legitimately available only to themselves. A score of 3 was assigned to similar accounts that were qualified by conditional or probabilistic terms. A score of 2 was assigned whenever a participant attributed privileged information to the bystander but embedded this attribution in a series of nonegocentric alternatives. A score of 1 was used whenever participants made an egocentric attribution that was spontaneously corrected. A score of 0 was assigned to nonegocentric accounts that clearly distinguished between privileged information known only to

<table>
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<th>Table 1 Sample Demographics: Means and Standard Deviations</th>
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<td>Marital status</td>
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<td>SES</td>
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Note. K-BIT = Kaufman Brief Intelligence; SES = socioeconomic status.

* An analysis of variance revealed that there was only one significant difference between the groups. There were significantly higher overall rates of divorce in the maltreated as compared with the nonmaltreated group, F(1, 96) = 6.47, p < .05.
the participants from facts that were also available to the bystanders. Thus, a low score represents low egocentrism, or a high ability to decenter.

Interrater reliabilities for this task ranged from .78 to .95 (Enright & Lapsley, 1980; Kurdek, 1977), and a 2-week test–retest reliability score of .83 has been reported (Burka & Glenwick, 1978). The measure showed adequate construct and convergent-discriminant validity (Enright & Lapsley, 1980). There was an internal consistency score of .92 and a correlation of .30 between this task and the Peabody Picture Vocabulary Test (Chandler, 1973; Enright & Lapsley, 1980). The higher intrinsic domain correlation suggests a distinct domain apart from IQ. Egocentrism on this measure has been associated with maladjusted and delinquent behavior (Chandler, 1972, 1973). Because a short version of this test has been found to have a reliability score of .93 (Kurdek, 1977, 1978), only three of Chandler’s six original cartoon sequences (Sand Castle, Postman, and Snowman) were used in this study. Interrater reliability was assessed at .80 for this study.

The Interpersonal Negotiation Strategies Interview (INS; Schultz et al., 1989) was used to measure the developmental level of the capacity to coordinate social perspectives and to reason about the process of interpersonal negotiation as they attempt to resolve hypothetical dilemmas depicting interpersonal conflicts. There are specific INS forms for the participants between the ages of 7 and 12 (Schultz et al., 1989) and for adolescents between the ages of 13 and 17 (Selman et al., 1986). The children’s version consists of 12 short vignettes or dilemmas involving interpersonal conflicts that likely occur between a child protagonist and a friend, an unfamiliar child, a teacher, or a parent. The adolescents’ version consists of eight dilemmas that involve the adolescent in conflict situations with a friend, girlfriend/boyfriend, parent, or employer. Four dilemmas were selected for each age group on the basis of two contextual factors of relationship status and familiarity of the other participant in the story. The dilemmas included interactions with a familiar peer, an unfamiliar peer, a familiar adult, and an unfamiliar adult. A mean score for the four dilemmas was computed to yield an overall estimate of the level of social-perspective coordination development.

Each dilemma was read individually, and the children and adolescents were asked to answer a series of eight standard questions and follow-up probes. The probes were designed to assess level of perspective-taking ability in defining the problem, generating alternative strategies, selecting and implementing a specific strategy, and evaluating outcomes. Responses were scored according to four levels of perspective-taking coordination. At Level 0, subjective perspectives were not differentiated, with no recognition that another person might interpret the same behavior differently. At Level 1, subjective and unilateral strategies reflected a recognition that the significant other may have a subjective perspective different from one’s own, but a simultaneous consideration of both perspectives was lacking. At Level 2, self-reflective and reciprocal strategies indicated an ability to reflect on the self’s needs from a second-person perspective. At Level 3, reciprocal perspectives were not only acknowledged but also seen to be in need of mutual coordination. Thus, a low score represents lower levels of perspective-taking skills.

Interrater reliability scores of the INS range between .62 and .96, and a test–retest reliability score of .69 was found across a 4-month interval (Selman et al., 1986; Selman & Schultz, 1990; Yeates, Schultz, & Selman, 1991). Interrater reliability was assessed at .72 for this study. There is evidence indicating that Selman’s tasks measure a distinct domain apart from IQ and demonstrate adequate internal and external validity (Enright & Lapsley, 1980; Yeates et al., 1991). INS scores have been correlated with indices of social competence ($r = .66$ for boys and .58 for girls) and with behavior problems ($r = -.33$ for boys and $-.17$ for girls), and a correlation of .38 has been found between INS development in thought and INS development in action (Yeates et al., 1991).

The Self-Perception Profile for Children (SPPC; Harter, 1985) is a Likert-type scale measuring the self-perceived competence of children between the ages of 8 and 14. The six distinct domains of self-concept assessed by the 6-item subscales are scholastic competence, social acceptance, athletic competence, physical appearance, behavioral conduct, and global self-worth. Items are scored on a scale from 1 to 4, where a score of 1 indicates low perceived competence, and a score of 4 reflects high perceived competence. Internal consistency of the subscales is reported to range from .71 to .86 and test–retest reliability from .69 to .87 (Harter, 1985). In this study, the domains of social acceptance, behavioral conduct, and self-worth were assessed because they are correlated with attachment status (Harter, 1985) and are sources of problems among maltreated children (Okun, Parker, & Levendosky, 1994).

The Self-Perception Profile for Adolescents (SPPA; Harter, 1988) is an extension of the SPPC to adolescence. Harter’s nine domains of self-concept are scholastic competence, social acceptance, athletic competence, physical appearance, behavioral conduct, job competence, romantic appeal, close friendships, and global self-worth. Internal consistency of the subscales are reported to range from .75 to .91 (Harter, 1988). In order to compare children with adolescents on equivalent domains, only the scores for social acceptance, behavioral conduct, and global self-worth were assessed.

The Child Behavior Checklist-Teacher’s Report Form (CBCL-TRF; Achenbach & Edelbrock, 1986) is a 113-item questionnaire that requires teachers to rate on a 2-point scale ranging from 0 (not true) to 2 (often true or very true) the extent to which children present specific behavior problems in school. The scale includes two broad band scales, derived from a factor analysis, that characterize symptoms as externalizing (delinquent, aggressive behavior) and internalizing (withdrawn, anxious, depressed, somatic complaints). The CBCL-TRF yields scores that have been standardized separately for gender differences across three age groups. It has been reported to have good discriminative validity and a test–retest reliability of .84 (Achenbach & Edelbrock, 1986).

Procedure

All children and adolescents were interviewed individually in one session of approximately 1.5 hr in their group home or school by one of four graduate psychology students. The research was presented as an opportunity to learn about how children, at different ages, understand other people’s points of view. Participants were further told that the information gathered about social thinking and problem-solving may provide new ways to help children in their relationships with adults and with classmates.

The CBCT was initially administered, followed by the INS, the SPPC or SPPA, the K-BIT, and the 17-item Parent-Child Relationship Checklist. Children were given candies, and adolescents were paid $5 for their participation.

The responses on the perspective-taking measures were audiotaped and later transcribed and scored by three psychology graduate students blind to the identity of the participant’s group. To assess reliability, 30% of the Chandler cartoon stories and 30% of the INS interview protocols were coded for egocentrism and level of perspective-taking coordination by two trained raters who were blind to the research hypotheses. The raters achieved 86% exact agreement for degree of egocentrism on Chandler’s measure (Cohen’s $\kappa = .80$) and 78% exact agreement when scoring the developmental level of responses to each INS question (Cohen’s $\kappa = .72$). Disagreements were resolved by discussion among the two raters.

Youth’s externalizing and internalizing behavioral scores were based on the CBCL-TRF (Achenbach & Edelbrock, 1986) ratings by the student’s primary homeroom teacher, who was uninformed about the research hypotheses.

Results

Preliminary Between-Group Analyses

No group differences were found on potentially confounding variables such as IQ and SES. However, univariate analyses of
variance revealed higher rates of divorce, $F(1, 96) = 6.47$, $\eta^2 = 0.06$, $p < .05$, and more externalizing, $F(1, 96) = 64.32$, $p < .001$, $\eta^2 = 0.40$, and internalizing behaviors, $F(1, 96) = 49.88$, $p < .001$, $\eta^2 = 0.34$, in the maltreated group. Accordingly, marital status and a composite of internalizing and externalizing behaviors were included as covariates in subsequent multivariate analyses of covariance (MANCOVAs).

**Effect of Maltreatment Status on Perspective-Taking Skills**

Race (Caucasian or other) did not distinguish scores on either measure of perspective-taking, $F(1, 96) = 1.44$, $p = .23$, $\eta^2 = 0.01$, for the CBCT, $F(1, 96) = 0.78$, $p = .38$, $\eta^2 = 0.01$, and for the INS. Also, race was not a significant predictor of performance on the CBCL, $F(1, 96) = 0.001$, $p = .98$, $\eta^2 = 0.00$.

Means and standard deviations of scores on the dependent variables are presented in Table 2. The measure of egocentrism (CBCT) was highly skewed for all groups except the maltreated elementary school-age children and had a marked floor effect for the adolescent groups. All of the adolescents obtained a perfect score of 0.

Pearson correlations were computed to examine the relations among the two social perspective-taking measures, perceived competence (social, behavioral, and global self-worth), internalizing/externalizing behaviors (see Table 3), and the relations among the dependent measures (see Table 4).

Within the maltreated group, children’s egocentrism (CBCT) was positively correlated with perceived social competence ($r = .45$, $p < .05$) and global self-worth ($r = .45$, $p < .05$). Within the nonmaltreated children’s group, higher scores in social perspective-taking coordination (INS) were related to increased internalizing behaviors (i.e., anxiety, depression, and somatic complaints) ($r = .50$, $p < .01$).

Social perspective-taking coordination and egocentrism were not correlated with externalizing behaviors in either of the maltreated or nonmaltreated groups. This is likely because of the lack of sufficient variance in level of behavior problems and perspective-taking skills within the groups. Among the adolescents, social perspective-coordination skills were not significantly correlated with the dependent measures of competence in either group. The correlates of egocentrism could not be examined for the high school group because of the marked floor effects of the CBCT measure at this age level.

A 2 x 2 (Group x Age) MANCOVA was conducted, with the INS and CBCT as the dependent variables and marital status and a composite of externalizing and internalizing behaviors included as covariates. This analysis revealed overall group differences for

### Table 2

**Mean Scores on the Dependent Variables for the Maltreated and Nonmaltreated Children and Adolescents**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Children</th>
<th>Adolescents</th>
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<tr>
<td></td>
<td>Maltreated ($n = 26$)</td>
<td>Nonmaltreated ($n = 26$)</td>
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<tr>
<td></td>
<td>M</td>
<td>SD</td>
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<tr>
<td>Perspective taking</td>
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<tr>
<td>INS</td>
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<td>0.23**</td>
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<tr>
<td>CBCT</td>
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<td>1.55*</td>
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<td>Self-perception</td>
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<td>SPPC Social</td>
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<tr>
<td>SPPC Behavioral</td>
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</tr>
<tr>
<td>CBCL-E</td>
<td>65.31</td>
<td>10.78**</td>
</tr>
<tr>
<td>CBCL-I</td>
<td>67.35</td>
<td>10.93**</td>
</tr>
</tbody>
</table>

*Note.* INS = Interpersonal Negotiation Strategies; CBCT = Chandler’s Bystander Cartoons Test; SPPC = Self-Perception Profile for Children; CBCL = Child Behavior Checklist; E = Externalizing; I = Internalizing. * $p < .05$. ** $p < .01$. *** $p < .001$.

### Table 3

**Correlations of Children’s Scores on the Two Social Perspective-Taking Measures (INS and CBCT)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Maltreated children</th>
<th>Nonmaltreated children</th>
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<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
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<td>2</td>
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<tr>
<td>Perspective taking</td>
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<td></td>
</tr>
<tr>
<td>1. INS</td>
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<td>—</td>
</tr>
<tr>
<td>2. CBCT</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Self-perception</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. SPPC Social</td>
<td>-.30</td>
<td>.30*</td>
</tr>
<tr>
<td></td>
<td>.04</td>
<td>.06</td>
</tr>
<tr>
<td>4. SPPC Behavioral</td>
<td>-.25</td>
<td>.27</td>
</tr>
<tr>
<td></td>
<td>-.01</td>
<td>.11</td>
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<tr>
<td>5. SPPC Self-Worth</td>
<td>-.16</td>
<td>.45*</td>
</tr>
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<td></td>
<td>-.16</td>
<td>.08</td>
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<tr>
<td>Behavior problems</td>
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<td></td>
</tr>
<tr>
<td>6. CBCL-I</td>
<td>-.07</td>
<td>.09</td>
</tr>
<tr>
<td></td>
<td>.50***</td>
<td>-.05</td>
</tr>
<tr>
<td>7. CBCL-E</td>
<td>-.33</td>
<td>.07</td>
</tr>
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<td>-.26</td>
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<td>Intelligence</td>
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<td>8. IQ</td>
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<td>.04</td>
</tr>
<tr>
<td></td>
<td>.24</td>
<td>-.30</td>
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</table>

*Note.* INS = Interpersonal Negotiation Strategies Interview; CBCT = Chandler’s Bystander Cartoons Test; SPPC = Self-Perception Profile for Children; CBCL-I = Child Behavior Checklist-Internalizing; CBCL-E = Child Behavior Checklist-Externalizing. * $p < .05$. *** $p < .001$. 
Effects of Perceived Self-Worth on Perspective-Taking Skills for the Maltreated Group

Preliminary analyses revealed that the children scored higher on global self-worth than the adolescents, $F(1, 94) = 5.58, p < .05$, $\eta^2 = 0.06$, and that the children scored lower than the nonmaltreated group, $F(1, 94) = 3.69, p < .05$, $\eta^2 = 0.04$.

To assess the effects of perceived global self-worth on perspective-taking skills, the maltreated group was divided into two groups on the basis of reported levels of global self-worth. In keeping with methods of analysis used with other at-risk populations (see Luthar, 1991, for a similar design), the maltreated group was dichotomized into low ($n = 11$) and high ($n = 12$) global self-worth categories. High global self-worth was defined as a score of one or more standard deviations above the grand mean for the age group on the SPPC or SPPA. Low global self-worth was a score of one or more standard deviations below the grand mean for the age group. No significant results were found for global self-worth as a predictor of perspective-taking skills among the maltreated group.

Effects of Behavioral Symptomatology on Perspective-Taking Skills for the Maltreated Group

In order to assess perspective-taking abilities in the maltreated group, a univariate analysis of variance (ANOVA) was conducted, with the INS as the dependent variable. Again, in accordance with typical practices in the field (e.g., Luthar, 1991), the maltreated group was divided into behaviorally low- ($n = 40$) and behaviorally high-functioning ($n = 9$) categories in order to better assess the possible mediating role of behavioral competence. Thus, a high level of functioning was defined as a score of one or more standard deviations below the grand mean on either an externalizing or an internalizing scale. A low level of functioning was operationalized as a score of one or more standard deviations above the grand mean for the group for either externalizing or internalizing behaviors. All measures of externalizing and internalizing behavior were taken from the CBCL. Analyses of functioning status (low or high) revealed only one significant result. Maltreated children who were classified as high functioning were significantly better at interpersonal negotiation with an unfamiliar peer than their lower functioning maltreated counterparts, $F(1, 47) = 10.33, p < .003$, $\eta^2 = 0.18$.

Discussion

The findings presented here are consistent with the hypothesis that maltreated children and adolescents with behavioral problems exhibit significant deficits in social perspective-taking skills. Even when marital status and a composite of externalizing and internalizing behaviors were covaried, maltreated youths, in comparison to nonmaltreated youths, exhibited higher levels of age-inappropriate egocentric thinking and delays in differentiating and coordinating conflicting needs and points of view. The maltreated adolescents were more egocentric and used more impulsive, unilateral levels of perspective-taking coordination than their nonmaltreated peers. These differences were so pronounced that the overall level of perspective-taking ability attained by the maltreated adolescents was similar to that achieved by the nonmaltreated elementary schoolchildren. However, levels of perspective taking ranged considerably among the maltreated children and adolescents, as those

Table 4

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<td>-.07</td>
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<tr>
<td>2. CBCT</td>
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<tr>
<td>Self-perception</td>
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</tr>
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<td>3. SPPC Social</td>
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<td>.34*</td>
<td>.62**</td>
<td>.25*</td>
<td>.24*</td>
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<td>4. SPPC Behavioral</td>
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<td>.15</td>
<td>.32**</td>
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<td>5. SPPC Self-Worth</td>
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<td>—</td>
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<td>Behavior problems</td>
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<tr>
<td>6. CBCL-I</td>
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<td>—</td>
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<td>7. CBCL-E</td>
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<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Note. INS = Interpersonal Negotiation Strategies; CBCT = Chandler’s Bystander Cartoons Test; SPPC = Self-Perception Profile for Children; CBCL-I = Child Behavior Checklist-Internalizing; CBCL-E = Child Behavior Checklist-Externalizing.

* $p < .05$, ** $p < .01$. 

maltreatment status, multivariate $F(2, 91) = 28.91, p < .001$, $\eta^2 = 0.39$, and for age, multivariate $F(2, 91) = 30.09, p < .001$, $\eta^2 = 0.40$. Maltreated youths, in comparison to nonmaltreated youths, scored significantly lower on social perspective-taking coordination, $F(1, 92) = 56.11, p < .001$, $\eta^2 = 0.38$, and significantly higher on egocentrism, $F(1, 92) = 12.38, p < .001$, $\eta^2 = 0.12$. Adolescents, as compared with children, provided egocentric responses, $\chi^2 (1, N = 52) = 5.20, p < .05$, and $8$ of the maltreated and none of the nonmaltreated adolescents exhibited egocentrism, $\chi^2 (1, N = 46) = 9.68, p < .05$. 

A chi-square analysis of the number of children and adolescents who exhibited egocentric intrusions revealed significant group differences. Of the maltreated children, $20$, as compared with $11$ of the nonmaltreated children, $\chi^2 (1, N = 93) = 5.58, p < .05$, $\eta^2 = 0.21$. No significant Age $\times$ Group interaction effects were found.

The findings presented here are consistent with the hypothesis that maltreated children and adolescents with behavioral problems exhibit significant deficits in social perspective-taking skills. Even when marital status and a composite of externalizing and internalizing behaviors were covaried, maltreated youths, in comparison to nonmaltreated youths, exhibited higher levels of age-inappropriate egocentric thinking and delays in differentiating and coordinating conflicting needs and points of view. The maltreated adolescents were more egocentric and used more impulsive, unilateral levels of perspective-taking coordination than their nonmaltreated peers. These differences were so pronounced that the overall level of perspective-taking ability attained by the maltreated adolescents was similar to that achieved by the nonmaltreated elementary schoolchildren. However, levels of perspective taking ranged considerably among the maltreated children and adolescents, as those...
who displayed fewer internalizing and externalizing behaviors were better able to adopt the appropriate perspective.

Despite opportunities for monitored peer interactions and daily contact with supportive adult models in therapeutic group home settings and in treatment programs, the maltreated children and adolescents exhibited weaker social perspective-taking abilities. However, one potentially positive finding was that low levels of externalizing and internalizing behaviors among the maltreated children were associated with better interpersonal negotiation strategies with an unfamiliar peer. This apparently important skill may help these children to build the inroads to new relationships that may, in turn, foster new opportunities and positive relationships. The realm of influence provided by these new relationships is potentially limitless with the opportunity for new peer groups and positive nonmaltreating environments. The direction of influence surrounding these skills with unfamiliar peers and positive behaviors is unclear, as positive behaviors may allow for more opportunities to rehearse perspective-taking skills, or perspective-taking skills may promote positive behaviors. Thus, these results indicate that the effects of maltreatment are not necessarily globally deleterious with respect to social perspective-taking skills.

The finding of lower level perspective-taking skills of maltreated children and adolescents suggests continuity in development and, more specifically, of a continuity of disadvantage for maltreated children in negotiating age-appropriate social–cognitive developmental tasks. The minimal parent–child reciprocity, diminished rates of verbal interaction, limited playful exchanges, and maladaptive social problem-solving strategies observed in the punitive interactions of maltreating parents and their children (Alessandri, 1991; Haskett & Kistner, 1991) may be associated with marked developmental delays in social perspective taking. Consequently, maltreated children and adolescents are at risk for social maladjustment and persistent problems in maintaining satisfying interpersonal relationships. However, the finding that certain maltreated children exhibit better skills in negotiating novel relationships is a hopeful sign that this trend may be reversed. Among the maltreated elementary schoolchildren, higher scores on egocentrism were related to higher levels of perceived social competence and self-worth. Because this group of maltreated children was generally described by their child-care workers and teachers as lacking social competence and positive self-esteem, the higher ratings likely indicate an overestimation of their actual competence. This is consistent with other evidence that young maltreated children rate themselves as more competent than their nonmaltreated peers and as more competent than they themselves appear to be (Vondra, Barnett, & Cicchetti, 1990). Thus, delays in social–cognitive processes, and specifically in perspective-taking abilities may partially explain the tendency among young maltreated children to report elevated self-concepts that may serve as protective mechanisms against depression (Kim & Cicchetti, 2003; Vondra et al., 1989).

Only the nonmaltreated elementary school group displayed an unexpected positive relationship between level of perspective-taking coordination and teachers’ reports of internalizing behaviors (i.e., depression, anxiety). This positive association may be related to the higher developmental level in social perspective-taking abilities achieved by this group. This is consistent with the notion that internalizers, in contrast to externalizers, are developmentally more mature (Glick, 1997; Glick & Zigler, 1986). The deficits in maltreated children’s and adolescents’ ability to differentiate and coordinate perspectives of self and other may contribute to their heightened aggressivity (Aber & Allen, 1987; Keltikangas-Jaervinen, 2002) and impair their ability to establish positive and effective relationships with significant others (Cicchetti & Lynch, 1991; Dean, Malik, Richards, & Stringer, 1986; Toth, Cicchetti, Macfie, & Emde, 1997). Concordantly, age-inappropriate egocentrism and lags in interpersonal understanding increase the likelihood that maltreated adolescents will exhibit future difficulties in maintaining intimate adult relationships and positive, empathetic relationships with their own children (Feshbach, 1989).

Limitations

The findings from this study need to be assessed in light of limitations common to research about the sequelae of child maltreatment. One problem is the limited generalizability of the findings to the general population of maltreated children. Children who have been severely maltreated often exhibit aggressive and antisocial behaviors (Alessandri, 1991; Haskett & Kistner, 1991; Stevenson, 1999). However, the relatively homogenous group of maltreated children and adolescents in this study may, nonetheless, underrepresent more resilient maltreated children who live at home and do not exhibit serious behavior problems. The generalizability of this research is also compromised because of the use of a referred sample of maltreated youths. The youths in this study were receiving services for behavioral and emotional problems that may indirectly influence perspective-taking abilities. Thus, they may not adequately represent a larger sample of maltreated youths who do not receive such services.

The participants in the study were chronically maltreated, and, thus, the findings may not extend to children with experiential histories of acute maltreatment. Similarly, because of the relatively small number of girls in this sample, gender differences in perspective-taking abilities could not be assessed, and the findings from this study may therefore not apply to maltreated girls.

The reliance on the local youth protective service agency for the designation of the subtypes of maltreatment experienced by the participants was problematic. The benefit was that the designations were consistent across participants, all of whom met the same criteria for maltreatment. However, the use of this unique, and not well explained, system limits the opportunity for a clearer delination of the subgrouping by type of maltreatment. More objective designations would allow for a clearer understanding of the associations between maltreatment type and social development, although this endeavor is inherently muddled by the common overlap of types of maltreatment.

Difficulties obtaining a large representative sample and detailed accounts of children’s maltreatment experiences prevented an examination of the possible differential effects of maltreatment experiences on perspective-taking development. The type of maltreatment experienced, chronicity, time of onset, severity, and the child’s relationship to the perpetrator (Barnett, Manly, & Cicchetti, 1993; Bolger & Patterson, 2001; Bolger et al., 1998; Manly, Kim, Rogosch, & Cicchetti, 2001) may have different consequences for the development of social–cognitive processes. For example, maltreated children who have experienced warm and nurturing caregiving in infancy may develop age-appropriate interpersonal un-
derstanding despite maltreatment experiences later in childhood. Furthermore, particular aspects of each child’s file that contained information regarding the number of placements, the amount and type of services that were received, and the degree of variation in the chronicity of maltreatment before and the amount of time elapsed since the removal from their biological parents were not made available for this study. These potential variations in case histories may also be associated with social–cognitive development. For example, a teenager who was removed from his or parents may have a longer history of appropriate social models and more practice with such skills than would a teenager who was removed at age 10.

A better understanding of the pathways and processes leading to the acquisition of age-appropriate perspective-taking skills may be achieved in future longitudinal studies with greater specificity and more fine-grained assessments of parent–child interactions and family dynamics. Similarly, studies of the interactive effects of different maltreatment experiences on perspective-taking development within the context of multiple risk and protective factors would be important (Banyard & LaPlant, 2002; Crittenden et al., 1994; Manly et al., 2001; Okun et al., 1994). In particular, the role of the development of social perspective taking in adaptive and maladaptive functioning would be clarified with the examination of various correlates of interpersonal understanding, including social status, friendship patterns, and positive interpersonal relationships, in maltreated and nonmaltreated children. These types of studies may reveal possible resilience-promoting factors and resources in the lives of maltreated youths that reduce the probability of delays in the development of social perspective and related aspects of social functioning.

References


Feshbach, N. D. (1989). The construct of empathy and the phenomenon of physical maltreatment of children. In D. Cicchetti & V. Carlson (Eds.), Child maltreatment: Theory and research on the causes and conse-
quences of child abuse (pp. 349–373). New York: Cambridge University Press.


Call for Papers:
Special Section on Sexual Orientation Across the Life Span

Developmental Psychology invites manuscripts for a special section on Sexual Orientation Across the Life Span, to be compiled by guest editors Charlotte J. Patterson and Ritch C. Savin-Williams, working together with journal Associate Editor Suniya S. Luthar. The goal of the special section is to highlight high-quality recent research on the role of sexual orientation in human development. Topics might include, but are not limited to, (a) development of sexual orientation; (b) sexual orientation and parenting; (c) sexual orientation in biological, social, and cultural contexts; and (d) the impact of sexual orientation on personal, social, familial, occupational, and other aspects of lives over time. Especially welcomed are papers that report the results of longitudinal research, studies that involve participants with multiple minority identities (e.g., minority ethnic, racial, or religious identities, as well as minority sexual identities), and research on understudied groups such as those with bisexual or transgendered identities. The submission of recently completed doctoral dissertations is also encouraged.

The submission deadline is September 1, 2006. The main text of each manuscript, exclusive of figures, tables, references, and/or appendices, should not exceed 20 double-spaced pages (approximately 5,000 words). Initial inquiries regarding the special section may be sent to Charlotte J. Patterson at cjp@virginia.edu or to Ritch C. Savin-Williams at rcs15@cornell.edu. Manuscripts must be submitted electronically through the Manuscript Submission Portal of Developmental Psychology at http://www.apa.org/journals/dev.html and a hard copy sent to Cynthia García Coll, Editor, Developmental Psychology, Center for the Study of Human Development, Brown University, Box 1831, Providence RI 02912. Please be sure to specify in the cover letter that your submission is intended for the special section. For instructions to authors and other detailed submission information, see the journal Web site at http://www.apa.org/journals/dev.html.