



Published in final edited form as:

Dev Psychol. 2004 September ; 40(5): 790–804.

The Longitudinal Relations of Regulation and Emotionality to Quality of Indonesian Children's Socioemotional Functioning

Nancy Eisenberg and Jeffrey Liew

Arizona State University

Sri Untari Pidada

Padjadjaran University, Bandung, Indonesia

Abstract

Data regarding individual differences in children's regulation, emotionality, quality of socioemotional functioning, and shyness were obtained from teachers and peers for 112 Indonesian 6th graders. Similar data (plus parents' reports) also were collected when these children were in 3rd grade. For boys, regulation and low negative emotionality generally predicted positive socioemotional functioning (e.g., social skills, adjustment, prosocial tendencies and peer liking, sympathy) within and across time and across reporters, even at the follow-up when initial levels of regulation or negative emotionality were controlled. For girls, relations were obtained primarily for concurrent teacher reports, probably because girls tended to be fairly well regulated and socially competent and variability in their scores was relatively low. Shyness for both sexes tended to be associated with concurrent measures of low regulation, high negative emotionality, and low quality of social competence.

In recent years, there has been increasing evidence that individual differences in children's emotionality and regulatory capacities are associated with children's concurrent and long-term social competence and adjustment (Caspi, 2000; Eisenberg, Fabes, Guthrie, & Reiser, 2000; Pulkkinen & Hamalainen, 1995; Rothbart & Bates, 1998). However, most of the relevant research has been conducted in the United States or other Western, industrialized countries. Thus, it is difficult to know if the findings obtained in Western cultures generalize to other cultures. The primary purpose of the present study was to examine the concurrent and longitudinal relations of individual differences in children's regulation and negative emotionality with the quality of their social functioning in a non-Western culture, that of the Javanese in Indonesia. Java is a particularly interesting culture in which to study emotion-related regulation and its correlates because, as is discussed shortly, regulation appears to be more highly valued there than in the United States.

Although *emotion-related regulation* has been defined in a variety of ways, a representative definition is the process of initiating, maintaining, modulating, or changing the occurrence, intensity, or duration of internal feeling states and goals, emotion-related physiological processes, and the behavioral concomitants of emotion. The concomitants of emotion include facial and gestural reactions and other behaviors that stem from, or are associated with, internal emotion-related psychological or physiological states and goals (Eisenberg, Cumberland, et al., 2001). An important aspect of emotion-related regulation is *effortful control*, defined as "the ability to inhibit a dominant response to perform a subdominant response" (Rothbart &

Correspondence concerning this article should be addressed to Nancy Eisenberg, Department of Psychology, Arizona State University, Tempe, AZ 85287. E-mail: nancy.eisenberg@asu.edu.

Nancy Eisenberg and Jeffrey Liew, Department of Psychology, Arizona State University; Sri Untari Pidada, Department of Psychology, Padjadjaran University, Bandung, Indonesia.

Bates, 1998, p. 137). Effortful control includes attentional regulation (e.g., the ability to voluntarily focus attention as needed) as well as inhibitory and activational control (e.g., the abilities to inhibit or activate behavior as appropriate to specific contexts, especially when the individual does not desire to do so). As part of regulation, effortful control is believed to contribute to children's emerging social, psychological, and moral competence. Consistent with this view, effortful control (including attentional and behavioral elements) has been related to low levels of, or better modulated, negative emotionality (Derryberry & Rothbart, 1988; Kochanska, Coy, Tjebkes, & Husarek, 1998; Kochanska, Murray, & Coy, 1997); high levels of empathy/sympathy, prosocial behavior, and conscience (Eisenberg, Shepard, et al., 1998; Kochanska et al., 1997; Kochanska, Murray, Jacques, Koenig, & Vandegest, 1996; Rothbart, Ahadi, & Hershey, 1994); and social competence and low levels of externalizing problems (e.g., Calkins & Dedmon, 2000; Eisenberg, Fabes, Guthrie, et al., 1996; Rothbart et al., 1994; see Eisenberg et al., 2000, for a review). Moreover, low levels of attentional control sometimes have been linked to shyness and related internalizing problems (Eisenberg, Cumberland, et al., 2001; Eisenberg, Fabes, & Murphy, 1995).

In addition to regulation and effortful control, variations in the intensity and valence of dispositional emotionality have been associated with the quality of social functioning and adjustment. If people experience strong negative emotions and cannot sufficiently modulate their emotion and its expression, they are relatively likely to behave in inappropriate ways by externalizing their negative emotions (Calkins, Gill, Johnson, & Smith, 1999; Caspi, 2000; Eisenberg, Cumberland, et al., 2001; Lemery, Essex, & Smider, 2002; Lerner, Hertzog, Hooker, Hassibi, & Thomas, 1988). Furthermore, children who are moody and prone to negative emotions such as anger are less liked by peers than are less emotional children (Coie & Dodge, 1988; French, 1988; Newcomb, Bukowski, & Pattee, 1993; Stocker & Dunn, 1990). Intensity of emotional experience has been positively associated with dispositional tendencies to sympathize with others, but primarily when the individual is fairly well regulated (Eisenberg, Fabes, Murphy, et al., 1996; Eisenberg, Fabes, et al., 1998), whereas negative emotionality (probably especially anger) has been less related or negatively related to sympathy (see Eisenberg et al., 1994; Eisenberg, Fabes, Murphy, et al., 1996).

In addition, internalizing negative emotions (e.g., sadness, anxiety) have been associated with shyness in both children and adults (Asendorpf, 1987; Eisenberg, Shepard, et al., 1998; Izard, Libero, Putnam, & Haynes, 1993; Leary, 1986). In contrast, relations of externalizing emotions such as anger with shyness or social withdrawal have tended to be nonsignificant in the few relevant studies conducted with children (e.g., Eisenberg, Cumberland, et al., 2001; Eisenberg, Shepard, et al., 1998), although adults' reports of shyness have been positively related to their reports of anger, contempt, and disgust (Izard et al., 1993). Thus, although the relation between shyness and anger is unclear, shy individuals generally seem to be prone to experience negative emotions in social situations.

Emotion regulation often is viewed as a social process rather than solely an intraindividual process (Campos, Campos, & Barrett, 1989; Walden & Smith, 1997). Theorists (e.g., see Kerr, 2001; Lerner, 1984) have suggested that the effects of different temperamental characteristics, including dispositional differences in regulation and negative emotionality, on children's socioemotional functioning depend partly on the fit between children's dispositional characteristics (e.g., regulation, emotionality) and the social context in which they are embedded. Because of the role of culture in assigning and organizing meaning in societies (Super & Harkness, 1982; Whiting, 1980), what is considered competent behavior, or optimal regulation or emotional expressivity, is partly derived from cultural norms and values (Kitayama & Markus, 1994). Kerr (2001) argued that cultural values influence how people perceive and respond to dispositional characteristics (e.g., temperament), which in turn affect the stability of these characteristics and their developmental outcomes (adaptive vs.

maladaptive) in a given culture. Culturally laden institutions (e.g., family, school) may favor and promote or discourage temperamentally based characteristics.

Despite the potential importance of culture in assigning value to the expression of temperamentally based behaviors, it is reasonable to expect (on the basis of the assumption that people share aspects of commonality as a species) that some dispositional characteristics are valued by people in most, if not all, cultures. If regulation involving effortful control is flexible and adaptive to whichever context (including culture) individuals live in, it should be valued and associated with positive developmental outcomes in all cultures. People who are high in effortful control should be able to use it to act in ways that are consistent with the culture, including socially appropriate ways. Thus, it is reasonable to predict that relations of children's effortful regulation to the quality of their social functioning—as assessed by members of their own cultures—are similar across cultures. Similarly, because the expression of negative emotion tends to be problematic in most societies (albeit more so in some than in others), it is likely to be negatively related to others' perceptions of adjustment and social competence in most societies. Similarities in these ways likely are increased by mutual exposure, communication, or interaction among cultures through the Internet, the media, and commerce (e.g., globalization). An alternative possibility is that—consistent with Kerr's (2001) arguments—cultural differences in the valuing of dispositional regulation and the control of negative emotion might affect the direction, or even the existence, of their relations with adjustment and social competence in different cultures.

In the present study, we examined the relations of children's dispositional effortful regulation and emotionality (primarily negative emotionality, including anger) to their social functioning (i.e., social competence, adjustment, sympathy, prosocial behavior, and sociometric peer status) in Indonesia. Indonesian culture likely differs somewhat from the culture in the United States in regard to values and norms for appropriate social behavior. Osyerman, Coon, and Kimmelmeier (2002) found that Indonesia was more collectivistic than the United States, whereas the two countries did not differ in terms of individualism (however, these results were based on only two samples). Moreover, French et al. (2003) found that Indonesian eighth graders endorsed interdependent beliefs (an aspect of collectivism) more than did U.S. eighth graders, whereas U.S. adolescents were more likely to endorse an independent view of the self.

It has been argued that members of collectivist societies generally are concerned with the consequences of their behavior for other members of the group and tend to show greater willingness than people in less collectivistic societies to engage in prosocial behavior for the good of the group. Although the nature of collectivism undoubtedly varies somewhat across cultures (Triandis, 1995), maintaining personal relationships and interpersonal harmony with close others generally is a key value in collectivistic cultures (Markus & Kitiyama, 1991; Osyerman et al., 2002; Triandis, 1995). In addition, in collectivistic cultures, anger and other negative emotions often are viewed as disruptive to relationships and thus as harmful. Therefore, children would be expected to learn early to conform to group norms in terms of controlling the overt expression of negative emotion and emotionally driven negative behavior so that they behave in a manner that promotes group harmony and avoids interpersonal conflict.

Reports of anthropologists, sociologists, and others are consistent with these expectations. Traditional Indonesian society, as well as the two largest ethnic groups in Java, have been described as emphasizing cooperation, shared goals, and harmonious relationships (i.e., *rukun*; Koentjaraningrat, 1985; Mulder, 1996; Peacock, 1973), and the ideal virtues of helping, sharing, and empathizing with others (Williams, 1991). In addition, self-control and control of the expression of emotion, including emotional reserve and politeness (H. Geertz, 1961; Koentjaraningrat, 1985; Mulder, 1989; also see Magnis-Suseno, 1997), the denial of

frustration, and the mastery or suppression of negative emotions (Mulder, 1996; Van Beek, 1987), have been reported as valued in Indonesia.

Further, French et al. (2003) found that youths in the United States reported more conflict in their friendships, whereas Indonesian youths reported more help giving. Similarly, French, Setiono, and Eddy (1999) found that Indonesian children's aggression (which often involves negative emotion or low regulation) was related to low peer positive sociometric ratings and high negative sociometric ratings. In contrast, French, Jansen, and Pidada (2002) found no difference between U.S. and Indonesian children in peer-reported verbal or relational aggression. Moreover, Indonesian children reported more physical aggression, perhaps (as suggested by French et al.) because they were more sensitive to physical aggression than were the U.S. children.

Although regulation and the suppression of harmful negative emotion may be valued more in Indonesia than in the United States, initial findings from a previous assessment of the present sample (3 years earlier) are consistent with findings in the United States concerning the association of regulation and low levels of emotionality with social competence (Eisenberg, Pidada, & Liew, 2001). When the children in that study were in third grade, those who were unregulated and prone to intense emotions and anger were low in socially appropriate behavior and high in externalizing problem behavior as well as rejected by their peers. In addition, regulation was associated with higher sympathy (Eisenberg, Liew, & Pidada, 2001). Thus, adults and peers generally viewed unregulated Indonesian third graders, like unregulated North American children, negatively.

Another issue of interest is the relation of Indonesian children's social withdrawal or shyness to their regulation, negative emotionality, and quality of social functioning. In Western, industrialized cultures, socially withdrawn behavior often is viewed as reflecting fearfulness and a lack of self-confidence, and adults tend to view shy children as relatively socially incompetent and immature (Rubin & Asendorpf, 1993). Thus, it is not surprising that shyness with peers has been associated with peer rejection and isolation in countries such as the United States and Canada (see Rubin, Bukowski, & Parker, 1998). Nonetheless, shyness may be associated with few or no problems in cultures in which it is more acceptable or valued, such as Sweden (Kerr, 2001). Indeed, Chen and his colleagues have argued that shy/sensitive behavior indicates social maturity and understanding in China, and such behavior has been positively associated with Chinese children's peer acceptance, leadership, and teacher-assessed competence (e.g., Chen, Rubin, & Li, 1995; Chen, Rubin, Li, & Li, 1999). However, in other studies, socially withdrawn behavior has been linked to low peer acceptance or peer rejection (or victimization) in both China (Chang, 2003; Hart et al., 2000; Schwartz, Chang, & Farver, 2001) and Korea (Schwartz, Farver, Chang, & Lee-Shin, 2002). Such studies generally are focused on shyness with familiar peers rather than strangers. However, because older elementary school children's shyness with strangers (i.e., temperamental shyness) has correlated with adults' reports of these children's low peer popularity and low levels of social interaction with familiar peers when they were in preschool (Eisenberg, Shepard, et al., 1998; cf. Asendorpf, 1993, who found no negative effects of temperamental shyness in interactions with a familiar peer), it is possible that temperamental shyness with strangers, like shyness with familiar people, is linked to low social competence in Indonesian children.

The limited data from Indonesia suggest that Indonesian children's social withdrawal is associated with relatively low social competence, although perhaps less so than is the case in North America. French et al. (1999) found that positive peer sociometric ratings were negatively related to socially withdrawn behavior (likely primarily with known others) in the United States and to teachers' (but not peers' or parents') reports of social withdrawal in Indonesia; negative sociometric ratings were positively related to social withdrawal in the

United States and were unrelated to reports of social withdrawal in Indonesia. Thus, French et al. found only a weak association between social competence with peers and low levels of social withdrawal in Indonesia. When the children in the sample in the present study were in third grade, teacher-reported shyness (i.e., primarily tapping shyness in situations involving strangers) was negatively related to peer nominations of being liked and prosocial; however, shy children were infrequently rated by peers as disliked and aggressive. Moreover, adults' reports of these children's shyness were related to low adult-reported regulation or (to a lesser degree) low teacher-rated negative emotionality. Thus, the initial evidence suggests that shyness with familiar (French et al., 1999) or unfamiliar people may be associated with negative dispositional and social correlates in Indonesia. This association might become stronger with age, as it seems to in the United States (Rubin et al., 1998); alternatively, it could become weaker with age if shy behavior is valued in the culture.

In the present study, we examined the contemporaneous and longitudinal relations of regulation and negative emotionality to multiple aspects of Indonesian children's social functioning. Data collection was conducted when the children were in sixth grade; this assessment was a 3-year follow-up assessment (Eisenberg, Pidada, & Liew, 2001). A multireporter, multimethod approach was used to examine the relations of regulation and negative emotionality to the prediction of children's social competence, externalizing problem behavior, sympathy, and shyness as rated by adults or peers. In addition, prediction of temperamental shyness from individual differences in regulation and negative emotionality was examined, as was its relation to indexes of social competence. On the basis of the limited available reports, regulation was expected to be valued and adaptive in Java and, thus, related to high-quality social functioning (as viewed by adults and peers). In contrast, because the expression of negative emotion is discouraged and/or considered maladaptive, high negative emotionality was expected to be associated with low social competence and high levels of externalizing problem behavior. In addition, as in the United States (e.g., Eisenberg, Fabes, Murphy, et al., 1996; Murphy, Shepard, Eisenberg, Fabes, & Guthrie, 1999), children's sympathy was expected to relate to regulation and low negative emotionality. Further, we expected shy children to be low in social competence. These predictions are consistent not only with the emphasis on regulation and the suppression of emotion in Indonesia but also with the overall pattern of findings at the first assessment. Thus, despite the cultural differences between Indonesia and the United States, we predicted similarities in the two cultures in the relations of children's regulation, negative emotionality, and shyness with social functioning.

On the basis of findings in other samples (e.g., Murphy et al., 1999) and the notion that regulation and emotionality have a temperamental basis and, thus, are somewhat stable over time, we expected children's regulation, emotionality, and social functioning to be somewhat consistent over the 3 years between assessments. In addition, we hypothesized that despite any such stability over time, regulation and negative emotionality in sixth grade would predict the quality of concurrent social functioning when we controlled for level of social functioning in third grade. Such a pattern of findings would suggest that regulation and emotionality continue to influence the quality of social functioning in the second half of elementary school and that relations in sixth grade are not due solely to the consistency of relations from third grade to sixth grade.

Finally, when the children were in third grade, despite gender differences on a number of the constructs, there were few marked gender differences in the pattern of findings. Nonetheless, it seemed possible that gender differences in the relations of regulation and emotionality to quality of social functioning and shyness might increase with age. Given stereotypic gender roles prescribing more other-oriented and well-controlled behavior for girls than for boys, it is possible that the pressure to display such behavior is stronger for girls than for boys. Alternatively, Keeler (1987) argued that interpersonal politeness is more important for males

than females in Indonesia—that women are allowed more latitude in conforming to cultural expectations in and outside of the home. Thus, it is not clear if the demand for regulated or socially competent behavior is stronger for one sex than the other in Indonesia. However, if it is more important with age for males to be polite, individual differences in regulation may be better predictors of social functioning for boys than for girls. Moreover, one sex might be higher than the other in regulation or social competence, resulting in a ceiling effect, or the lack of variability in scores (if there is strong pressure for regulated, nonemotional behavior, which leads to relatively high levels of such behavior for most children) may result in reduced correlations. In brief, although we had no clear predictions regarding gender differences in the pattern of relations, such differences were examined.

Method

Participants

Participants were 112 Indonesian children (54 girls and 58 boys; mean age = 146.30 months, $SD = 4.14$ months, range = 131–157 months) in three sixth-grade classes from what is labeled a “private public school” in Bandung, Indonesia, a city of approximately 3,000,000 people in the general area about 180 kilometers from Jakarta on the island of Java. Because the school was a private, rather than a government, public school, families paid higher tuition than did families at the nonprivate public schools, and the sample was generally middle class. However, this school was considerably less expensive than the private, nonpublic schools where families with high incomes sent their children. Most of the children’s fathers had some college education; mothers’ educations generally ranged from high school to professional training. Typical occupations of fathers were engineers, doctors, teachers, lawyers, and bank officers. Many mothers also worked, with some holding professional positions.

The current sample participated in an assessment 3 years prior (labeled Time 1, or T1) to this assessment (labeled Time 2, or T2; see Eisenberg, Liew, & Pidada, 2001, and Eisenberg, Pidada, & Liew, 2001, for details on the T1 sample and procedures). At T1, there were 127 children (58 girls and 69 boys; mean age = 109.41 months, $SD = 4.75$ months, range = 94–132 months). Similar to in the initial assessment, in the current study, 96% of the children lived in two-parent households, 3% lived in one-parent households, and 1% lived within extended families. Consistent with the dominance of Muslims in Java, 96% were Muslim and 4% were Christian. Most of the children were Javanese, several were part Sundanese, and a few were from other islands (e.g., Sumatera [Sumatra] and Celebes). Given the ethnic and religious backgrounds of the students, this sample likely was typical of the urban, middle-class population on Java, the island where the majority of the Indonesian people (who are primarily Javanese and Islamic) live.

We compared the 112 children who participated at T2 and the 15 children who participated only at T1 on the demographic and major variables available at the initial assessment. According to chi-square analyses, there were no differences between the groups on sex, religion, or family structure. Separate multivariate analyses of variance (MANOVAs) computed for peer- and teacher-report variables, as well as for age, indicated that the two groups did not differ in age but differed on peer- and teacher-report measures, $F_s(3, 122)$ and $(4, 122) = 2.91$ and 2.90 , $ps < .04$ and $.03$, respectively. Children who attrited were rated as higher on anger and negative sociometrics and lower on positive sociometrics by peers, $F_s(1, 124) = 3.99, 5.07, \text{ and } 4.14$, $ps < .05, .03, \text{ and } .04$, respectively, and lower on regulation and social skills/low problem behavior and higher on negative emotionality by teachers, $F_s(1, 125) = 10.15, 9.75, \text{ and } 5.53$, $ps < .01, .01, \text{ and } .03$, respectively. The children who attrited had left the school or had been held back; no families had refused participation.

Procedure

At both T1 and T2 (3 years later), teachers completed measures of children's social functioning, regulation, and negative emotionality. Teachers were given instructions as a group to ensure that they understood the items and the scales, and then they completed questionnaires at home or after school. Children individually nominated and ranked the four classmates they liked most and the four they liked least from a list of names of children in the classroom. Each child also nominated and ranked four classmates for each of the following: those who were most likely to fight, to get angry a lot, and to be nice to others. At T1 only, a parent ($n = 109$ at T1 and 98 at T2) also rated each child on regulation, emotionality, and social functioning (see Eisenberg, Pidada, & Liew, 2001). Participants were told by trained psychology students that the study had nothing to do with children's school performance or evaluations from school of children's behavior; they were told that the study was research in psychology designed to examine aspects of children's development and, thus, that they should give the most accurate answers possible because there were no right or wrong answers.

At T1, three teachers rated each child: the child's main classroom teacher (one of three women), the female religion teacher, and the male physical education teacher. At T2, two teachers rated each child (the child's female classroom teacher and the child's male handicrafts teacher, the latter of whom had taught the children in fifth and sixth grades). To increase the reliability of the various indexes (Epstein, 1979) and to reduce the number of measures, we combined scores for teachers at T1 and at T2 (within each time period) for all scales (see below).

Measures

All measures were translated into Indonesian by Sri Untari Pidada and back-translated by an Indonesian graduate student studying in the United States (but not in psychology) who was a parent. In addition, a team of researchers in Indonesia examined the items. Nearly all items were used; small changes in the content of the items (e.g., watching television rather than movies) were made, and an item was dropped only if it did not apply in the Indonesian context (e.g., an item involving wearing a coat outside was dropped because Javanese weather is hot).

Children's Emotionality—Measures of children's emotionality consisted of teachers' ratings of children's emotionality at T1 and T2 and parents' reports at T1. In addition, children nominated peers who were "likely to get angry a lot" at T1 and T2.

Adults' reports of emotional intensity and anger: At T1 and T2, teachers rated children's emotional intensity (EI) with 12 items adapted from Larsen and Diener (1987) that pertained to intensity of negative emotion (e.g., "When my child [this child] gets nervous or distressed, he/she gets very nervous/upset") and emotion in general (e.g., "My child [this child] responds very emotionally to things around him/her"). Items were rated on a 7-point scale (1 = *never*; 7 = *always*). In addition, at T1 and T2, teachers rated (1 = *extremely untrue of your child*; 7 = *extremely true of your child*) children's anger/frustration using 11 items (e.g., "Gets angry when called in from play before he/she is ready to quit") from the Child Behavior Questionnaire (CBQ; Goldsmith & Rothbart, 1991; Rothbart, Ahadi, Hershey, & Fisher, 2001). For all CBQ items, slight changes were made to adapt the parent-report scales for teachers (e.g., some items were dropped or changed slightly to make them context or age appropriate). At T1 only, parents' reports of anger and negative emotionality also were available (12 and 13 items for EI and anger, respectively, see Eisenberg, Pidada, & Liew, 2001). Although CBQ items were originally designed for children ages 3 to 8, we have found that, with very minor changes in wording on a few items, they are valid for older school children (e.g., Eisenberg et al., 2003).

Alphas generally were acceptable, ranging from .59 to .93, for anger at both T1 and T2. Alphas for EI sometimes were lower (i.e., they ranged from .43 to .85). However, the anger and EI

scales were significantly related; r s ranged from .32 to .62 for the reporters at T1, and r s(110) = .48 and .55 for Teachers 1 and 2, respectively, at T2. Moreover, both scales pertained primarily to negative affect, and when the scales were combined, the alphas at T1 were .65, .88, .82, and .81 for Teachers 1, 2, and 3 and parents, respectively (mean item–scale correlations = .22, .45, .36, and .34, respectively), and the alphas at T2 were .81 and .84 for Teachers 1 and 2, respectively (mean item–scale correlations = .35 and .39). Thus, the items for these two scales (all rated on a 1–7 scale) were averaged for T1 and T2. Correlations (df s = 125) ranged from .27 to .32, p s < .01, among the three teachers at T1, and the correlation (df = 110) was .53, p < .01, between the two teachers at T2. Composites for teachers' reports were computed by standardizing and averaging the teachers' scores at T1 or T2 (separately). Although some items could tap into a variety of emotions, many tapped only negative emotion; thus, this measure is considered primarily an index of *negative emotionality* (especially externalizing negative emotions) and henceforth is labeled as such.

Peer reports of anger: At T1 and T2, children were asked to select four peers (one after another) who were “most likely to get angry.” Similar to the methods used in the past (e.g., Eisenberg, Fabes, Karbon, et al., 1996; Hartup, Glazer, & Charlesworth, 1967), first choices were weighted (multiplied) by 4, second choices by 3, third choices by 2, and fourth choices by 1, separately for same-sex and for other-sex nominations. The four weighted scores were summed and then standardized within classroom to compute separate scores for same-sex and other-sex nominations of anger. A composite score was computed by averaging these standardized scores.

Children's Regulation—Measures of children's regulation consisted of adults' reports of children's attentional shifting and focusing and inhibitory control at T1 and teachers' reports of these constructs at T2.

Attentional control: Teachers and parents rated children's attentional shifting and focusing on a 7-point scale with items from the CBQ (Goldsmith & Rothbart, 1991). Adults rated 10 items for attention shifting (e.g., “Can easily shift from one activity to another”; α s = .70, .72, .82, and .75 (mean item–scale correlations = .36, .38, .51, and .41) for Teachers 1, 2, and 3 and the parent, respectively, at T1, and α s = .76 and .78 (mean item–scale correlations = .41 and .42) for Teachers 1 and 2, respectively, at T2. Two additional items were dropped at both T1 and T2 because of low item–scale correlations. Teachers and parents rated children's attentional focusing using 7 items (e.g., “Has difficulty leaving a project he/she has begun”; α s = .61, .78, .83, and .52 for Teachers 1, 2, and 3 and the parent, respectively, at T1 (mean item–scale r s = .32, .51, .58, and .25), and α s = .74 and .71 for Teachers 1 and 2 at T2 (mean item–scale correlations = .46 and .41). Two additional items were dropped because of low item–scale correlations.

Inhibitory control: Teachers and parents (the latter at T1 only) also rated children on the CBQ Inhibitory Control subscale (e.g., “Can wait before entering into new activities if he/she is asked to”; 13 items); α s = .84, .89, .85, and .70 (mean item–scale r s = .52, .59, .54, and .32) for Teachers 1, 2, and 3 and parents, respectively, at T1, and α s = .80 and .78 (mean item–scale r s = .45 and .46) for Teachers 1 and 2, respectively, at T2.

Data reduction for adults' reports on regulation: Teachers' (and parents' at T1) reports of regulation included scores for attention shifting, attention focusing, and inhibitory control. Principal-components factor analyses with varimax rotations were conducted for teachers' reports at T1 and T2, separately for each teacher. For both T1 and T2, factor analyses with varimax rotations yielded one factor for each teacher, with all three scales loading at .80 or higher for each teacher. Similarly, at T1, the three scales loaded on the same factor for parents.

Thus, for each reporter, these scales were standardized (with z scores across the entire sample) and averaged.

The correlations among teachers for their composite regulation scores ranged from .35 to .58 at T1, and the correlation between the two teachers at T2 was .49. Thus, the scores were standardized (within the entire sample) and averaged for the three teachers at T1 and the two teachers at T2. A high score indicated high regulation.

Children's Quality of Social Functioning—Teachers (at T1 and T2) and parents (only at T1) reported on children's social skills (socially appropriate behavior), externalizing problem behavior, shyness, and sympathy. Peers reported on sociometric status, fighting, and prosocial behavior at T1 and T2.

Social skills: Children's social skills were assessed using three items adapted from Harter's (1982) Perceived Competence Scale for Children (e.g., "This child is usually well-behaved" vs. "This child is not well-behaved"; Eisenberg et al., 2000). One additional item ("Compared to other children this child's age, this child has very good social skills" vs. "... does not have very good social skills") was dropped because its inclusion in the scale lowered the alpha considerably, especially at T1. Teachers rated items using Harter's 4-point response scale (i.e., they selected one of two statements and then indicated if the item was *really true* or *sort of true*); α s = .74, .59, and .75 (mean item-scale r s = .59, .46, and .59) for Teachers 1, 2, and 3, respectively, at T1, and α s = .65 and .49 (mean item-scale r s = .52 and .32) for Teachers 1 and 2, respectively, at T2. Teachers' scores were positively correlated at T1, r (116 to 125) ranged from .29 to .40, p s < .01, and at T2, r (110) = .42, p < .01, and were standardized within the sample and averaged across teachers within T1 and within T2. The same social skills measures were collected from parents at T1 (4 items, α = .54). Although alphas on this measure sometimes were low because of the small number of items, they are not unreasonable for 3-item scales (e.g., the intercorrelations among items averaged .23 for the parent measure and generally were higher for the teacher scales; Nunally, 1976). More important, these scales were combined with another very internally consistent scale to form a composite (see below).

Sociometrics: Children consecutively selected four peers whom they liked the most and four whom they liked the least. Sociometric data were calculated as continuous variables and as categorical variables. When sociometrics were calculated as continuous scores, nominations were weighted and summed in the same manner as described for the ratings of anger in order to construct separate scores for being "liked most" (or "liked least"). With regard to discrete sociometric status groups, five (i.e., popular, unpopular, average, controversial, and neglected) groups were formed using criteria similar to those outlined by Dodge, Coie, Pettit, and Price (1990). The total numbers of ratings for being "liked most" and being "liked least" by all peers (unweighted) were standardized within classroom. The total score for being nominated "liked most" was subtracted from the total score for being nominated "liked least" and then standardized, to compute a "social preference" score. A "social impact" score was calculated by summing the total score for liked most and liked least (each measure standardized within the classroom). Similar to the procedure followed in the study by Dodge et al. (1990), we used an SD of 0.8 rather than 1.0 as a cutoff in the classification. Specifically, children with a standardized social preference score greater than 0.8, a "liked most" score greater than 0, and a "liked least" score less than 0 were classified as popular (n s = 19 and 20 at T1 and T2, respectively). Children with a score less than -0.8 on social preference who scored less than 0 for "liked most" and greater than 0 for "liked least" were classified as rejected (n s = 18 and 16 at T1 and T2, respectively). Neglected status (n s = 26 and 25 at T1 and T2, respectively) was assigned to children with standardized social impact scores less than -0.8 and scores of less than 0 for being liked most and liked least. Controversial status (n s = 10 and 6 at T1 and T2, respectively) was assigned to children with social impact scores greater than 0 and scores

for being liked most and liked least that were greater than 0.8. Children who scored between 0.8 above and below the mean on standardized social preference and social impact were classified as having average status ($n_s = 53$ and 45 at T1 and T2, respectively).

Prosocial behaviors: Children were asked to select four classmates, one after another, who “are really nice to others.” Composite scores were calculated in the same manner as for anger.

Externalizing behaviors: Children were rated on externalizing behaviors by teachers and parents (the latter at T1 only) using the Lochman and Conduct Problems Prevention Research Group (1995) Child Problem Behavior Checklist. Twenty-three items were included (e.g., “teases other children,” “breaks things on purpose,” “defiant toward adults”); one item pertaining to setting fires was excluded. Teachers rated items on a 4-point scale from 1 (*never*) to 4 (*often*). Alphas were .93, .90, .94, and .83 (mean item-scale $r_s = .58, .50, .68,$ and $.37$) for Teachers 1, 2, and 3 and parents, respectively, at T1, and alphas were .95 and .95 (mean item-scale $r_s = .67$ and $.69$) for Teachers 1 and 2, respectively, at T2. Scores were positively related among teachers at T1, $r_s(123$ to $125) = .41$ to $.48, p < .01$, and between teachers at T2, $r(110) = .72, p < .01$, and were standardized (within the entire sample) and averaged at both T1 and at T2.

In addition, children selected four classmates, one after another, who “fight a lot.” Nominations were aggregated in the same manner as described for the ratings of anger.

Adults’ reports of children’s sympathy: Teachers and parents (at T1 only) rated children’s sympathy with five scale items (e.g., “This child often feels sorry for others who are less fortunate” vs. “This child does not feel sorry for others who are less fortunate”; Eisenberg, Fabes, Murphy, et al., 1996; Eisenberg, Fabes, et al., 1998). Alphas were .87, .64, .69, and .77 (mean item-scale $r_s = .71, .40, .45,$ and $.55$) for Teachers 1, 2, and 3 and parents, respectively, at T1, and .81 and .66 (mean item-scale $r_s = .62$ and $.44$) for Teachers 1 and 2, respectively, at T2. Ratings of children’s sympathy were positively related among teachers at T1, $r_s(117$ to $125) = .10$ to $.19, p < .04$ to $p = .27$, and between teachers at T2, $r(110) = .36, p < .01$, and were standardized and averaged at T1 and T2.

Data reduction for teachers’ reports on social functioning data: The composite measures of teachers’ reports on social skills and externalizing behaviors were negatively related at T1 and T2, $r_s(125$ and $110) = -.74$ and $-.60, p < .01$, respectively; a similar relation was found for parents’ reports of social skills and externalizing behaviors at T1, $r(103) = -.35, p < .01$. Thus, for each reporter, scores were standardized (after reversing externalizing behaviors) and averaged to form a composite score for social skills/low externalizing behaviors. These composites then were standardized and averaged across the three teachers at T1 and the two teachers at T2.

Data reduction for peer assessments: Principal-components factor analyses with a varimax rotation were computed on the mean scores for peer ratings of prosocial behavior, fighting, being liked, and being disliked. Prosocial behavior (loadings = .88 at T1 and .93 at T2) and being liked (.92 at T1 and .95 at T2) loaded on the one factor, whereas fighting (.89 at T1 and .91 at T2) and being disliked (.87 at T1 and .87 at T2) loaded on another factor. On the basis of these factors, measures on the first factor were standardized (within the entire sample) and averaged to construct a *positive sociometric composite* for T1 and T2. The two indices were correlated, $r_s(123$ and $110) = .63$ and $.79, p < .01, \alpha_s = .78$ and $.88$ for the two items, for T1 and T2, respectively. The measures on the second factor were correlated and combined in a similar manner to construct a *negative sociometric composite*, $r_s(125$ and $110) = .55$ and $.61, p < .01, \alpha_s = .71$ and $.75$ for the two items, for T1 and T2, respectively.

Shyness: Teachers and parents (the latter at T1 only) rated children on shyness using 13 items (e.g., “Acts shy around new people”) adapted from the CBQ (Rothbart et al., 2001) on a 7-point scale. Alphas were .79, .91, .79, and .88 (item–scale r s = .44, .63, .44, and .59) for Teachers 1, 2, and 3 and the parent, respectively, at T1, and .88 and .72 (mean item–scale r s = .56 and .34) for Teachers 1 and 2 at T2. Scores among teachers were positively correlated at T1, r s(123 to 125) ranged from .38 to .43, p s < .001, and were also correlated at T2, r (110) = .40, p < .01, and were standardized (within the sample) and averaged within T1 and T2.¹

Data Transformation to Adjust for Skewed Composites

Depending on the severity of skewness, the appropriate transformation was conducted on skewed composites. Composite scores for peers’ reports on children’s anger, the positive sociometric composite, and the negative sociometric composite were positively skewed, whereas teachers’ reports of children’s sympathy and social skills/low externalizing behaviors were negatively skewed. The only skew that was fairly severe, according to the criterion of a skew of 2 and a kurtosis of 6 or more (Curran, West, & Finch, 1996; L. Aiken, personal communication, October 2003), was for peer negative evaluations (skew = 2.9, kurtosis = 9.07); nonetheless, we transformed skews that were milder according to a more conservative (and empirically undemonstrated) criterion (Tabachnik & Fidell, 1996). A log 10 transformation was conducted on all of the aforementioned composites except for teachers’ reports of sympathy (which required a square root transformation) and peers’ negative sociometrics (which required an inverse transformation). Transformed scores were used in the analyses, although the patterns of relations within and across time were quite similar using transformed scores and nontransformed scores. Only the across-time correlations among girls’ peer ratings (i.e., T1 anger or negative sociometrics with T2 anger or negative sociometrics) were slightly stronger (up to .08 higher on a correlation) when the transformed variables were used. Nontransformed values are presented for interpretability in Table 1.

Results

Descriptive Analyses

Outlier analyses (using the SPSS regression program) indicated only one extreme outlier for peers’ reports of liking at T1; it was excluded from analyses for that variable. Although there were several outlier scores at T2, they were kept because dropping them had little effect on the analyses.

Relations of the Major Variables With Age and Sex at T2

Findings for age and gender differences in the variables at T1 are presented in Eisenberg, Pidada, and Liew (2001). At T2, age of the child was not significantly related to any of the major variables.

Multivariate analyses were conducted to examine gender differences in measures of children’s emotionality, regulation, and social functioning at T2. Separate MANOVAs were computed for measures from teachers (ratings of negative emotionality, regulation, social skills/low problem behavior, shyness, and sympathy) and peers (ratings of anger, positive sociometrics, negative sociometrics). The multivariate F s were significant for both teachers’, $F(5, 106) = 3.63$, $p < .01$, and peers’ ratings, $F(3, 108) = 5.14$, $p < .01$. Univariate tests indicated that girls

¹Separate measurement models were computed for all teacher- and parent-report scales at T1 and T2 using Mplus (a structural equation modeling program). In all cases, reasonable fits were obtained. Comparative fit indexes ranged from .929 to 1.00, whereas root mean square errors of approximation (RMSEAs) ranged from .00 to .077. In most cases, all, or nearly all, items loaded significantly or almost significantly on the scale. In a few cases, several items did not load significantly, but the model still fit. The teacher negative emotionality scales contained the most items that did not load significantly, but these models still fit fairly well.

scored higher than boys on teachers' ratings of T2 regulation, social skills/low externalizing behaviors, and sympathy, $F_s(1, 110) = 13.64, 10.46, \text{ and } 5.07, p_s < .01, .01, \text{ and } .03$, respectively, whereas boys scored higher on teachers' ratings of negative emotionality, $F(1, 110) = 10.12, p < .01$. Boys scored higher than girls on peers' negative sociometrics, $F(1, 110) = 9.97, p < .01$ (see Table 1).

Using Levene's test for equality of variances, we also tested whether variances differed between the sexes for variables at T1 and T2. Variances were at least marginally different for boys and girls for negative peer sociometrics at T1, $F(1, 110) = 15.85, p < .01$, and for teacher-reported social skills/low problem behavior, teacher-rated emotionality, peer-reported anger, peer positive sociometrics, and peer negative sociometrics at T2, $F_s(1, 110) = 11.48, 3.10, 4.73, 2.90, \text{ and } 16.58, p_s < .01, .10, .05, .10, \text{ and } .01$, respectively. In all instances, scores were more variable for boys than for girls. Because of the gender differences in the means and variances and the substantial gender differences in the pattern of findings, findings are presented separately by sex.

Interrelations of Teachers' and Peers' Measures of Similar Constructs at T2—

As discussed previously, reports of the various indices generally were significantly correlated between the two T2 teachers. In addition, there generally was agreement between teachers' and peers' reports on children's quality of social functioning for boys, but not for girls. Peers' ratings of positive sociometrics were positively related to, whereas peers' ratings of negative sociometrics were substantially negatively related to, teachers' ratings of social skills/low problem behavior for boys but not girls (see Table 2). (In contrast, girls' positive sociometrics and teachers' ratings of social skills/low problem behavior were marginally negatively correlated.) For boys only, positive sociometrics also were negatively related to teacher-rated shyness and positively related to teacher-rated sympathy; negative sociometrics were negatively correlated with teacher-rated sympathy. In addition, peer-reported anger was positively related to teachers' reports of negative emotionality for boys, but not for girls.

Consistency of Measures Across Time

Boys', but not girls', regulation, negative emotionality, and social functioning tended to be consistent across time. For boys, T1 teacher-reported regulation and negative emotionality, as well as T1 parent-reported regulation (but not negative emotionality), were substantially correlated in the predicted directions with T2 teacher-reported regulation and negative emotionality (recall there were no T2 parent measures; see Table 3). Boys' T1 and T2 peer-reported anger also were substantially positively correlated. In contrast, the only significant correlation between analogous T1 and T2 measures of emotionality and regulation for girls was for peer-reported anger.

Similarly, measures of social functioning generally were significantly correlated across the 3 years, especially for boys. For girls, peers' positive or negative sociometrics at T1 and T2 were at least marginally correlated over time whereas the same correlations were quite substantial for boys. Both teacher-reported socially appropriate behavior and sympathy were also related across time for boys, but not girls. In contrast, teacher-rated shyness was significantly related across time for both sexes, although T1 parent-reported shyness was positively related to T2 teacher-related shyness only for boys (see Table 3 for sex differences in correlations).

Relations of Emotionality and Regulation With Social Competence, Shyness, and Sympathy

T2 Concurrent Correlations—Relations of T2 measures of children's emotionality and regulation with their social functioning are reported separately for girls and boys in Table 2. There were many more significant correlations than would be expected by chance, especially for boys. Composite scores for teachers' reports of children's regulation and emotionality were

significantly associated with all measures of children's social functioning for boys. Generally, boys who were regulated and low in negative emotionality tended to be rated as relatively socially competent and sympathetic by their teachers and as better liked and socially appropriate by peers (i.e., higher in positive sociometrics and lower in negative sociometrics). Teacher-reported regulation and low negative emotionality were also related to teacher-rated social skills/low problem behavior for girls, but not to teacher-rated sympathy or peer evaluations. Peers' ratings of girls' anger were not related to their liking of girls, although they were associated with negative peer sociometrics. For both girls and boys (especially the former), teacher-reported shyness was associated with relatively low regulation and high negative emotionality. Girls (but not boys) rated as shy by teachers also were viewed as low in anger by peers.

Across-Time Correlations of Regulation and Emotionality With Social Functioning

—The pattern of correlations between T1 regulation and negative emotionality and T2 measures of quality of social functioning also differed considerably for boys and girls (see Table 3). For boys, T1 teacher- and parent-rated regulation, as well as teacher-rated negative emotionality, correlated marginally or better in the expected directions with T2 teacher-reported socially appropriate behavior and sympathy as well as positive and negative peer sociometric scores (the one exception was for teacher-rated negative emotionality and sympathy). In contrast, parents' reports of boys' negative emotionality at T1 were not correlated with T2 social functioning. Moreover, T1 peer-reported anger correlated negatively with T2 teacher-reported socially appropriate behavior and positively with T2 negative (but not positive) peer sociometric ratings. For girls, the T1 parent- or teacher-report measures of regulation or negative emotionality were unrelated with measures of T2 social functioning, although T1 teacher-reported regulation was marginally correlated with the two T2 peer sociometric measures and with teacher-reported shyness in the expected directions.

Because of the unexpected gender differences in the findings, we also conducted two sets of supplemental correlational analyses to test possible causes of these differences. First, we examined whether the findings were due to the fact that the second teacher at T2 (the crafts teacher) did not know the children well enough to provide valid ratings or rated the children differently because he was a man (and the other T2 teacher was a woman). The overall pattern of findings (within and across time) did not change when we used only the T2 classroom teachers' (i.e., Teacher 1's) ratings in the analyses. In addition, because the different homeroom teachers might have rated the children differently, we standardized teachers' ratings within classroom and recomputed the correlations. Again, there was little change in the pattern of findings; overall, the pattern for boys, but not girls, was stronger. Thus, the gender differences were not due to Teacher 2's inability to accurately rate the children or to differences in the teachers' ratings across homerooms.

Differences in T2 Sociometric Group—The concurrent relations of teachers' reports of children's emotionality and regulation, as well as peers' reports of children's anger, to children's sociometric group status were examined with two 2 (gender) \times 5 (status: rejected, neglected, average, controversial, and popular) MANOVAs. Although no differences were found among sociometric groups on teachers' reports of children's regulation and emotionality, there were significant differences among sociometric groups for peers' reports of children's anger, $F(4, 107) = 4.71, p < .01$ (which was not qualified by sex). According to post hoc Newman-Keuls tests ($p < .05$), rejected and controversial groups ($M_s = .31$ and $.37$) were rated as more angry by peers than were popular and neglected groups ($M_s = .12$ and $.14$; the mean for average children was $.24$).

In contrast, there were differences among T2 sociometric groups on teachers' reports of emotionality and regulation from 3 years earlier (T1), $F(8, 204) = 2.08, p < .04$ (which did not

interact with sex). The univariate effect of sociometric status was significant for regulation and marginally significant for emotionality, $F_s(4, 102) = 3.02$ and 2.07 , $ps < .03$ and $.09$, respectively. Both of these effects were significant at $p = .05$ or better when sex was not a factor in the MANOVA, $F_s(4, 107) = 3.22$ and 3.10 , $ps < .02$, for regulation and negative emotionality, respectively. Post hoc Newman–Keuls tests ($p < .05$) indicated that popular and average groups were rated as more regulated by teachers 3 years prior ($M_s = .27$ and $.21$, respectively) than were rejected children ($M = -.54$; $M_s = .06$ and $.12$ for neglected and controversial children, respectively). No significant differences among groups were found for teachers' reports of emotionality using the Newman–Keuls test, although on the basis of Duncan's test, rejected children were higher in negative emotion ($M = .36$) than were neglected children ($M = -.24$; means for popular, average, and controversial children = $-.15$, $-.03$, and $.02$, respectively). No differences among T2 sociometric groups were found for peers' reports of anger from 3 years prior.²

Unique Prediction by Regulation or Emotionality at T2 While Controlling for T1 Levels of the Predictor—

The relations of children's T2 regulation (or emotionality) to their concurrent social functioning were examined while controlling for regulation (or emotionality) 3 years prior (at T1). In a series of 15 hierarchical regression analyses predicting T2 teacher-reported social functioning, teacher-reported shyness, teacher-reported sympathy, peer positive sociometrics, or peer negative sociometrics (each predicted separately by teacher-reported regulation, teacher-reported emotionality, or peer-reported anger), teachers' report of regulation or emotionality or peers' reports of anger from T1 were entered in the first step, and report of the same variable at T2 was entered on the second step. Given the dearth of across-time correlations for girls or across-reporter relations at T2, these analyses were computed only for boys (see Table 4).

Boys who were seen by their peers as likely to get angry at T2 were rated high on negative peer sociometrics, low on positive peer sociometrics, and low on teacher-reported social competence at T2 (and were rated marginally lower on sympathy) even when their levels of peer-reported anger from 3 years earlier were controlled. Boys who were seen by their teachers as well regulated at T2 were rated low on negative sociometrics and shyness and high on teacher-reported social competence and sympathy at T2 (and marginally lower on positive peer sociometrics) even when their levels of T1 regulation were controlled. When T1 negative emotionality was accounted for, boys rated by their teachers as high on negative emotionality at T2 were also rated as high on negative peer sociometrics and teacher-rated shyness and low on positive peer sociometrics and teacher-reported social competence.³

In most of these analyses, it appeared that the effects of T1 regulation (or negative emotionality) on T2 social functioning often were indirect through their relation to T2 regulation (or negative emotionality). We tested whether the aforementioned relations for boys were consistent with mediated effects by using both the joint significance test outlined in MacKinnon, Lockwood, Hoffman, West, and Sheets (2002) and the Sobel test with the conservative normal z -score test of significance (rather than MacKinnon and Dwyer's, 1993, less conservative test; see

²In additional MANOVAs, there were Sex \times Group interactions for teacher-rated social skills/adjustment and sympathy (but not shyness), $F_s(4, 102) = 3.22$ and 2.83 , $ps < .02$ and $.03$, respectively; multivariate $F(12, 306) = 1.58$, $p < .10$. These variables differed across groups for boys, multivariate $F(8, 106) = 2.16$, $p < .04$, univariate $F_s(4, 53) = 4.46$ and 3.55 , $ps < .01$, respectively, but not girls. According to Newman–Keuls tests ($p < .05$), popular and controversial boys ($M_s = -.32$ and $-.31$) were rated higher on social functioning than were rejected boys ($M = -.52$; means for average and neglected boys were $-.38$ and $-.41$, respectively; scores are corrected for skew). In addition, popular boys ($M = -1.24$) were rated higher on sympathy than were rejected boys ($M = -1.46$; means for average, controversial, and neglected boys were -1.35 , -1.28 , and -1.36 , respectively). T1 teacher-rated social skills/adjustment (but not sympathy or shyness) also predicted T2 status (and there was no interaction by sex), $F_s(4, 102) = 4.24$, $ps < .02$. According to Duncan's (but not Newman–Keuls's) post hoc tests, children who were popular at T2 ($M = .28$) were higher than rejected ($M = -.46$) and controversial ($M = -.34$) children in social skills/adjustment at T1; and rejected children also were lower than average (.20) and neglected (.15) children in these skills.

MacKinnon et al., 2002). With the joint test of significance, mediation is supported if the following two requirements are met: The predictor (e.g., T1 regulation) significantly predicts the mediator (e.g., T2 regulation) and the mediator significantly predicts the criterion (e.g., T2 social competence) when both the mediator and the independent variables jointly predict the criterion. Thus, we first tested whether the three predictors (i.e., T1 peer-reported anger, T1 teacher-reported regulation, and T1 teacher-reported negative emotionality) each significantly predicted the same variable at T2 (for boys only). T1 and T2 equivalent measures were significantly related for boys' peer-reported anger, teacher-reported emotionality, and teacher-reported regulation, R^2 changes = .34, .17, and .23, $F_s(1, 56) = 28.98, 11.73, \text{ and } 16.34, p_s < .01$, unstandardized betas = .16, .59, and .49, respectively. In addition, as is already shown in Table 4, the mediator was a significant predictor of the criterion (when the independent variable was also a predictor) in 11 of the 15 analyses (and was a marginal predictor in 2 more cases). Finally, when indirect effects were tested using the aforementioned formula, they were significant for 10 of the 15 analyses and marginal for 3 more (see the z s in the note to Table 4). Thus, in most cases, T2 peer-reported anger, teacher-reported emotionality, or teacher-reported regulation may have mediated the relations of T1 levels of the same variable on the various indices of children's social functioning.

Discussion

This study presented a unique opportunity to examine the concurrent and longitudinal associations of emotionality and regulation with social competence and adjustment in a culture quite different from that in North America. Consistent with research findings in North America, Indonesian children who were well regulated and low in emotionality were perceived by adults and peers as socially competent and well adjusted. This pattern held for both sexes when concurrent teacher ratings were examined but held primarily for boys in across-time or across-reporter relations. Although Western and Indonesian cultures likely differ in their values and norms regarding appropriate social behavior, our findings illustrate that they also display similarities. For example, regulation and low emotionality (including low anger) appear to be valued in Java, Indonesia, as well as in Western societies—regulated children, who also tended to express relatively low levels of negative emotion, were viewed as socially competent and low in problem behaviors by adults and were generally liked by peers (the latter was true primarily for boys). In Indonesia and in the United States, socializers likely endorse and promote the ability to suppress disruptive emotions and behaviors.

For boys, quality of social functioning (as reported by peers and teachers) in sixth grade was predicted by parents' and teachers' reports of regulation and teachers' reports of low negative emotionality in the third grade (there were only a couple of marginal relations for girls). Thus, although it is impossible to determine causal relations, as in the United States (e.g., Eisenberg et al., 2000, 2003), children's regulation and negative emotionality tended to predict their social competence and adjustment over time, especially for boys.

³Interactions between T2 teachers' reports of regulation and emotionality were used to predict teachers' and peers' reports of children's quality of social functioning. Because of the high correlation between regulation and emotionality, one would expect limited moderation. Children's emotionality moderated the relation of regulation with both T2 social skills/low problem behavior and peer negative sociometrics (after sex and the main effects were entered in regressions); R^2 changes for the final step with the multiplicative term = .03 and .07, $F_s(1, 107) = 7.12 \text{ and } 10.74, p_s < .01, \beta_s = .19 \text{ and } -.29$, respectively. The associations between regulation and these measures were strongest for children who were high or moderate, rather than low, in negative emotionality: For social skills/low problem behavior, slopes = .10, .07, and .04, $t(107) = 3.15, p < .01, t(107) = 2.55, p < .01, \text{ and } t(107) = 1.32, ns$, for high, moderate, and low negative emotionality, respectively; for negative sociometrics, slopes = -.18, -.11, and -.04, $t(107) = -3.27, p < .01, t(107) = -2.42, p < .01, \text{ and } t(107) = -.92, ns$, for high, moderate, and low negative emotionality, respectively (see Aiken & West, 1991). Children low in negative emotionality tended to be high in social competence regardless of their regulation, and those low in negative emotionality were low in negative sociometrics regardless of their regulation.

Especially for boys, there was considerable stability in their regulation, negative emotionality (including anger), and social functioning over 3 years (only peer-reported anger was consistent across time for girls). Despite the consistency in boys' regulation and emotionality, each provided unique prediction of social functioning even after we accounted for consistency in the same variable over 3 years. These findings suggest that the associations of emotionality or regulation with social functioning in sixth grade were not simply due to the consistency of analogous relations at a younger age. Moreover, although not proving causality, the fact that regulation (or negative emotionality) predicted social functioning at T2 when initial levels of regulation (or negative emotionality) were controlled supports the view that regulation may have played a causal role in boys' developing social competence. The earlier levels of emotionality or regulation (i.e., in third grade) likely were indirectly linked to concurrent social functioning in sixth grade through their association with the level of emotionality or regulation at the older age.

In general, there was agreement between teachers and peers on their assessments of negative emotionality (or anger) and social competence for boys but not for girls; moreover, as already noted, the aforementioned findings were stronger for boys, especially for across-time or across-reporter analyses. In contrast, marked gender differences were not found at T1. Recall that T2 teachers saw girls as more regulated, less emotional, more sympathetic, and more socially competent and adjusted than boys. One possible explanation for the sex difference is that many girls may have attained the minimum level of regulation and emotional control that others considered necessary for them to be viewed as socially competent—that is, there could be some kind of ceiling effect for girls, or most girls may have been above the cutoff level at which variation in these characteristics predicts outcomes. However, there was no evidence that children increased in their regulation and decreased in negative emotionality over time; thus, given that there tended to be relations between regulation/emotionality and social functioning at T1, this does not seem to be the sole explanation.

It appears that teachers' and peers' perceptions of girls' levels of regulation, negative emotionality, and social functioning may have become relatively uniform by sixth grade—more uniform than in third grade—which may have precluded many significant correlations. Recall that there was less variability in girls' than boys' scores on T2 positive and negative peer sociometrics and anger, as well as teacher-reported social skills/low problem behavior and teacher-rated emotionality. At T1, the variability of scores generally did not differ significantly across boys and girls (there was only one significant difference for peer negative sociometrics). This change in variability probably was not due to attrition because only 4 girls did not participate at the T2 assessment. Compared with boys, girls were perceived as fairly well regulated and socially competent; thus, most girls may have attained a sufficient level of regulation and emotionality to be seen by others as socially competent. Auxiliary analyses indicated that children's regulation, negative emotionality, and social competence did not improve over the 3 years (indeed, negative emotionality increased, according to the ratings of one T2 teacher); perhaps teachers had age-appropriate standards to which they compared children's behavior. Thus, although girls were not rated higher on these characteristics than they were rated 3 years before, they still might have been perceived as above a threshold of functioning so that most were judged to be socially regulated and socially competent.

Another possible explanation draws on Mulder's (1989) assertion that the cultural norm of politeness toward others is more strongly applied to males than females in Indonesia. If this is true, teachers and peers might differentiate more among boys in terms of characteristics related to politeness, such as being controlled, suppressing displays of disruptive emotion, and being adjusted, prosocial, and sympathetic. Moreover, because boys were less regulated and socially appropriate in their behavior, teachers and peers might more readily recognize and agree on

behaviors indicative of anger, emotionality, regulation, and social competence for boys than for girls.

Despite the unexpected gender differences, even for girls there was some evidence in the concurrent teacher ratings that regulation and negative emotionality were associated with quality of social functioning. Children who exhibit poor regulation and high emotionality are likely to violate social norms that emphasize interpersonal cooperation and harmony and to behave in a manner aversive to other people. Thus, such children are especially at risk for being perceived as socially unskilled and maladjusted and for being disliked or rejected by peers.

In addition, boys (but not girls) who were seen by their teachers as sympathetic enjoyed better peer relations (i.e., were rated high on positive peer sociometrics and low on negative peer sociometrics) and were viewed as regulated, low in negative emotionality, and socially skilled or well adjusted by their teachers. Given the traditional Indonesian virtues of helping, sharing, and empathizing with others, it is not surprising that sympathy was associated with positive peer relations for boys; moreover, similar findings have been obtained in the United States. What is surprising is that the same relation was not significant for girls. However, recall that girls were more sympathetic and lower on negative peer sociometrics than were boys. Peers and teachers might expect girls to be sympathetic but might especially appreciate boys' sympathetic behaviors. Thus, it is plausible that not only might sympathetic girls not be especially disliked by their peers but they also might not be especially liked by their peers (there was not a significant sex difference in the variability of scores for sympathy).

Sociometric group status at T2 was also related to children's regulation and negative emotionality. Rejected and controversial children were more likely to be rated as angry by their peers than were popular and neglected children. Although teachers' ratings of regulation and negative emotionality at T2 did not predict group status, T1 ratings did. Popular and average children were rated as more regulated by teachers 3 years prior than were rejected children, and there was a weak tendency for rejected children to be viewed as especially high in negative emotionality. These findings were not qualified by sex and indicate that regulation and emotionality (especially the former) were predictive of children's social standing 3 years later. This finding is consistent with other data, in this and other studies (see Eisenberg et al., 2000), that highlight the role of regulation in children's social status, although few investigators have examined the relations of regulation and negative emotionality to peer-rated social status over time. Further, popular sixth-grade boys were rated higher by their sixth-grade teachers on social skills/low problem behavior and sympathy (controversial boys were also high on the former; see Footnote 2). Thus, consistent with findings in North America (Rubin et al., 1998), children's social skills and adjustment predict their social status concurrently and over time.

Also consistent with findings from North America (often concerning shyness with familiar peers), both boys' and girls' shyness (primarily with strangers) was associated with teacher-reported poor regulation and high negative emotionality in Indonesia. These findings were especially strong and consistent for girls. In contrast to the teachers' reports, shy girls (but not boys) also were seen by their peers as less angry. Given that shy girls were seen as more negatively emotional by teachers but as less angry by peers, it is likely that shyness is associated more strongly with girls' internalizing emotions (e.g., sadness or anxiety) than with externalizing emotions such as anger. A stronger association between shyness and internalizing emotions than externalizing emotions has been found for similarly aged children in the United States (e.g., Eisenberg, Shepard, et al., 1998). Alternatively, shy girls may have inhibited their anger with peers but not adults. Shyness was one measure for which girls' scores were as variable (nonsignificantly more so) as boys, which may explain why many findings for shyness were especially strong for girls.

Of interest was that shy boys but not shy girls were rated as lower on peer liking/prosocial behavior. Perhaps Indonesian peers were more accepting of shyness in girls than in boys (although the correlations for the sexes were not significantly different) because of gender roles (i.e., the notion that boys are more assertive than girls) or social norms regarding the importance of males' engaging in polite social interaction (Mulder, 1989). In any case, our findings provide additional evidence that temperamental shyness (primarily with strangers), like social evaluative shyness with familiar others, is not associated with positive teacher and peer evaluations.

In summary, our findings confirm that individual differences in regulation and emotionality continue to be important predictors of quality of social functioning in Indonesian children as they enter early adolescence, especially for boys. Although our findings suggest commonality between Indonesian and Western children in how regulation and emotionality relate to social functioning and adjustment, the gender differences that were observed also suggest potentially interesting and meaningful cultural differences in the consistency of teachers' ratings of regulation and emotionality over time and in their relations to peers' evaluations. A strength of this study is that there are virtually no longitudinal data on Indonesian children's socioemotional development. Nonetheless, there are some limitations to the current study. The sample was relatively advantaged and came primarily from two ethnic groups in Java; the findings may not generalize to Indonesian children from poor families or to other ethnic groups. Moreover, the findings are correlational and cannot prove causal relations. Additional longitudinal research beginning early in life is needed to better delineate the emergence of relations among Indonesian children's regulation, negative emotionality, and social functioning and possible causal pathways.

Acknowledgements

This research was supported by grants from the National Institute of Mental Health to Nancy Eisenberg. We thank the participants and teachers in our longitudinal sample, who provided the data.

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Table 1

Means and Standard Deviations for the Major Variables

Variable	Boys and girls						Boys						Girls					
	Time 1		Time 2		Time 1		Time 2		Time 1		Time 2		Time 1		Time 2			
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD		
Social skills/low problem behavior	3.15 (2.43–3.90)	0.30	3.27 (1.76–3.97)	0.41	3.10 (2.46–3.90)	0.32	3.14 (1.76–3.97)	0.49	3.23 (2.43–3.76)	0.27	3.55 (2.75–3.84)	0.26	3.41 (2.82–3.93)	0.24				
Teachers' report	3.34 (2.43–3.84)	0.34	–0.01 (–1.02–3.43)	0.78	–0.08 (–0.89–2.56)	0.65	0.08 (–1.02–3.43)	0.90	0.03 (–0.84–2.40)	0.70	0.03 (–0.84–2.40)	0.70	–0.09 (–0.93–2.07)	0.63				
Positive peer sociometrics	–0.03 (–0.96–2.56)	0.68	–0.01 (–0.62–3.81)	0.82	0.19 (–0.69–3.38)	0.90	0.24 (–0.62–3.81)	1.05	–0.23 (–0.72–2.83)	0.61	–0.23 (–0.72–2.83)	0.61	–0.26 (–0.62–0.93)	0.30				
Negative peer sociometrics	–0.02 (–0.72–3.38)	0.81	–0.01 (–0.62–3.81)	0.69	3.73 (2.66–5.17)	0.49	3.40 (1.82–4.57)	0.66	3.64 (2.61–4.68)	0.52	3.64 (2.61–4.68)	0.52	3.46 (1.71–5.00)	0.73				
Teacher-reported shyness	3.70 (2.61–5.17)	0.50	3.43 (1.71–5.00)	0.69	3.73 (2.66–5.17)	0.49	3.40 (1.82–4.57)	0.66	3.64 (2.61–4.68)	0.52	3.64 (2.61–4.68)	0.52	3.46 (1.71–5.00)	0.73				
Sympathy																		
Parents' report	3.37 (2.60–4.00)	0.42	3.17 (1.70–3.90)	0.40	3.24 (2.60–4.00)	0.40	3.08 (1.70–3.90)	0.43	3.52 (2.80–4.00)	0.40	3.06 (2.40–3.70)	0.27	3.26 (2.30–3.80)	0.35				
Teachers' report	2.97 (2.00–3.70)	0.29	3.17 (1.70–3.90)	0.40	2.89 (2.00–3.40)	0.28	3.08 (1.70–3.90)	0.43	3.06 (2.40–3.70)	0.27	3.06 (2.40–3.70)	0.27	3.26 (2.30–3.80)	0.35				
Regulation																		
Parents' report	4.57 (2.64–6.02)	0.65	4.60 (3.12–6.06)	0.69	4.57 (2.64–5.94)	0.68	4.39 (2.98–5.11)	0.71	4.65 (3.40–6.02)	0.60	4.73 (3.66–5.44)	0.40	4.82 (3.90–6.06)	0.58				
Teachers' report	4.51 (2.98–5.44)	0.46	4.60 (3.12–6.06)	0.69	4.39 (2.98–5.11)	0.44	4.39 (2.98–5.11)	0.71	4.73 (3.66–5.44)	0.40	4.73 (3.66–5.44)	0.40	4.82 (3.90–6.06)	0.58				
Negative emotionality																		
Parents' report	4.16 (2.48–6.08)	0.62	4.35 (2.87–6.13)	0.72	4.22 (3.08–5.36)	0.58	4.56 (3.00–6.13)	0.77	4.04 (2.48–6.08)	0.64	4.11 (3.52–5.12)	0.34	4.13 (2.87–5.30)	0.60				
Teachers' report	4.24 (3.52–5.41)	0.36	4.35 (2.87–6.13)	0.72	4.39 (2.98–5.11)	0.44	4.56 (3.00–6.13)	0.77	4.11 (3.52–5.12)	0.34	4.11 (3.52–5.12)	0.34	4.13 (2.87–5.30)	0.60				
Peer-report anger	–0.04 (–0.88–2.94)	0.76	–0.01 (–0.80–3.23)	0.88	0.10 (–0.88–2.94)	0.72	0.14 (–0.80–2.97)	1.00	0.03 (–0.88–1.69)	0.81	0.03 (–0.88–1.69)	0.81	–0.15 (–0.80–3.23)	0.73				
Parent expressivity																		
Positive	6.38 (1.43–9.00)	1.23	6.18 (1.43–8.43)	1.22	6.18 (1.43–8.43)	1.22	6.18 (1.43–8.43)	1.22	6.61 (4.29–9.00)	1.21	6.61 (4.29–9.00)	1.21	6.61 (4.29–9.00)	1.21				
Negative-dominant	3.12 (1.33–5.60)	0.90	3.21 (1.90–5.60)	0.93	3.21 (1.90–5.60)	0.93	3.21 (1.90–5.60)	0.93	3.01 (1.33–5.30)	0.86	3.01 (1.33–5.30)	0.86	3.01 (1.33–5.30)	0.86				
Negative-submissive	5.35 (3.40–8.60)	1.02	5.39 (3.40–7.70)	1.06	5.39 (3.40–7.70)	1.06	5.39 (3.40–7.70)	1.06	5.31 (3.50–8.60)	0.98	5.31 (3.50–8.60)	0.98	5.31 (3.50–8.60)	0.98				

Note. Means are presented before any standardizing or transforming of the data (see text) except for peers' reports. Ranges of scores are presented in parentheses.

Table 2

Intercorrelations Among Major Measures at Time 2

Measure of social functioning	1	2	3	4	5	6	7	8
Teachers' report								
1. Regulation	—							
2. Negative emotionality	-.88**	—						
3. Social skills/low problem behavior	.77*** ^a	-.76 ^a	—					
4. Shyness	-.27* ^a	.29*	-.16	—				
5. Sympathy	.42***	-.27*	.57***	.00	—			
Peers' report								
6. Anger	-.46*** ^a	.50*** ^a	-.46*** ^a	-.03 ^a	-.16	—		
7. Positive sociometrics	.41***	-.38*** ^a	.50*** ^a	-.32*	.39*** ^a	-.30*	-.10	
8. Negative sociometrics	-.51*** ^a	.51*** ^a	-.55*** ^a	-.03	-.31*	.64***	-.47***	—

Note. Girls' correlations are above the diagonal, and boys' correlations are below the diagonal.

^aThese correlations differed significantly ($p < .05$) between girls and boys.

[†] $p < .10$.

* $p < .05$.

** $p < .01$.

Table 3
Correlations Between Major Variables at Time 1 and Time 2

Time 1 measure	Time 2 measures									
	Teacher-reported regulation	Teacher-reported negative emotionality	Teacher-reported social functioning	Teacher-reported shyness	Teacher-reported sympathy	Peer-reported anger	Positive peer sociometrics	Negative peer sociometrics		
Parent-reported regulation										
Girls	-.10 ^a	.08 ^a	.02 ^a	-.03	.08	-.07	.13	-.19		
Boys	.48 ^{**}	-.42 ^{**}	.47 ^{**}	-.04	.38 ^{**}	-.19	.31 [*]	-.30 [*]		
Parent-reported negative emotionality										
Girls	-.01	.04	-.05	-.03	.10	.12	-.04	.02		
Boys	-.11	.19	-.11	-.03	.00	.05	-.09	.05		
Parent-reported social functioning										
Girls	-.22 ^a	.19 ^a	-.21 ^a	.20	-.04	-.11	.12	-.39 ^{**}		
Boys	.26 [†]	-.26 [†]	.25 [†]	.00	.02	-.04	-.03	-.07		
Parent-reported shyness										
Girls	-.06	.13	-.08	.14	.31 [*]	-.12	.05	-.10		
Boys	-.11	.03	-.13	.30 [*]	-.26 [†]	-.16	-.13	-.13		
Parent-reported sympathy										
Girls	.16	-.20	.09	-.13	.13	.12	.00	-.06		
Boys	.24	-.28 [†]	.24 [†]	-.30 [*]	.07	-.02	.12	.03		
Teacher-reported regulation										
Girls	.18	.08 ^a	-.04 ^a	-.25 [†]	.00	.01	.23 [†]	-.26 [†]		
Boys	.48 ^{**}	-.42 ^{**}	.42 ^{**}	-.07	.29 [*]	-.22 [†]	.48 ^{**}	-.35 ^{**}		
Teacher-reported negative emotionality										
Girls	-.13	.05 ^a	-.01	-.17	.20 ^a	.16	-.07	.09		
Boys	-.38 ^{**}	.42 ^{**}	-.32 [*]	-.02	-.21	.12	-.23 [†]	.33 [*]		
Teacher-reported social functioning										
Girls	.15	-.02 ^a	-.01 ^a	-.13	.03	.00	.16	-.32 [*]		
Boys	.44 ^{**}	-.44 ^{**}	.43 ^{**}	.02	.32 [*]	-.31 [*]	.45 ^{**}	-.48 ^{**}		
Teacher-reported shyness										
Girls	-.20	.10	-.04	.35 [*]	-.18	.04	-.15	.10		
Boys	.02	.01	.05	.32 [*]	.05	-.19	-.18	-.24 [†]		
Teacher-reported sympathy										
Girls	.00	.03	.01	-.29 [*]	.15	.06	.19	-.23 [†]		
Boys	.26 [*]	-.27 [*]	.29 [*]	-.23 [†]	.30 [*]	-.07	.27 [*]	-.15		
Peer-reported anger										
Girls	.06	-.15 ^a	.09 ^a	-.22	-.01	.27 ^{**}	-.05	.22		
Boys	-.21	.31 [*]	-.30 [*]	.03	.04	.58 ^{**}	-.13	.47 ^{**}		
Positive peer sociometrics										
Girls	-.04 ^a	.17 ^a	-.20 ^a	.06 ^a	-.06	-.17	.49 ^{**}	.30 [*]		
Boys	.48 ^{**}	-.46 ^{**}	.36 ^{**}	-.28 [*]	.17	-.17	.69 ^{**}	-.40 ^{**}		
Negative peer sociometrics										
Girls	.17 ^a	-.22 ^a	.04 ^a	-.17	.11	.26 [†]	.02	.25 [†]		
Boys	-.45 ^{**}	.49 ^{**}	-.52 ^{**}	-.03	-.23 [†]	.56 ^{**}	-.33 [*]	.72 ^{**}		

^aThese correlations differed significantly ($p < .05$) between girls and boys.

[†] $p < .10$.

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

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Table 4
 Prediction of Boys' Time 2 (T2) Social Functioning From Regulation or Negative Emotionality While Controlling for Time 1 (T1) Regulation or Negative Emotionality

Predictor, mediator, and dependent variable	F for R ² change ^a	β for first step	β for final step
Peer-reported anger at T1 → Peer-reported anger at T2 → Positive peer sociometrics (DV)	First step: 0.92 * Final step: 4.84 *	-.13 (Anger at T1)	.08 (Anger at T1) -.35 * (Anger at T2)
Peer-reported anger at T1 → Peer-reported anger at T2 → Negative peer sociometrics (DV)	First step: 15.65 *** Final step: 19.77 ***	.47 ** (Anger at T1)	.14 (Anger at T1) .56 ** (Anger at T2)
Peer-reported anger at T1 → Peer-reported anger at T2 → Social competence (DV)	First step: 5.68 * Final step: 8.16 **	-.30 * (Anger at T1)	-.06 (Anger at T1) -.42 ** (Anger at T2)
Peer-reported anger at T1 → Peer-reported anger at T2 → Shyness (DV)	First step: 0.04 Final step: 0.20	.03 (Anger at T1)	.07 (Anger at T1) -.08 (Anger at T2)
Peer-reported anger at T1 → Peer-reported anger at T2 → Sympathy (DV)	First step: 0.12 Final step: 3.20 †	.05 (Anger at T1)	.22 (Anger at T1) -.29 † (Anger at T2)
Regulation at T1 → Regulation at T2 → Positive peer sociometrics (DV)	First step: 17.09 *** Final step: 3.31 †	.48 ** (Reg. at T1)	.37 ** (Reg. at T1) .24 † (Reg. at T2)
Regulation at T1 → Regulation at T2 → Negative peer sociometrics (DV)	First step: 7.99 ** Final step: 11.62 **	-.35 ** (Reg. at T1)	-.14 (Reg. at T1) -.44 ** (Reg. at T2)
Regulation at T1 → Regulation at T2 → Social competence (DV)	First step: 11.94 *** Final step: 57.29 ***	.42 *** (Reg. at T1)	.07 (Reg. at T1) .74 ** (Reg. at T2)
Regulation at T1 → Regulation at T2 → Shyness (DV)	First step: 0.27 Final step: 4.48 *	-.07 (Reg. at T1)	.08 (Reg. at T1) -.31 * (Reg. at T2)
Regulation at T1 → Regulation at T2 → Sympathy (DV)	First step: 5.25 * Final step: 7.02 *	.29 * (Reg. at T1)	.12 (Reg. at T1) .37 * (Reg. at T2)
Neg. EI at T1 → Neg. EI at T2 → Positive peer sociometrics (DV)	First step: 3.10 † Final step: 6.34 *	-.23 † (Neg. EI at T1)	-.09 (Neg. EI at T1) -.34 * (Neg. EI at T2)
Neg. EI at T1 → Neg. EI at T2 → Negative peer sociometrics (DV)	First step: 6.66 ** Final step: 12.59 ***	.33 * (Neg. EI at T1)	.14 (Neg. EI at T1) .45 ** (Neg. EI at T2)
Neg. EI at T1 → Neg. EI at T2 → Social competence (DV)	First step: 6.17 * Final step: 62.51 ***	-.32 * (Neg. EI at T1)	.002 (Neg. EI at T1) -.76 *** (Neg. EI at T2)
Neg. EI at T1 → Neg. EI at T2 → Shyness (DV)	First step: 0.02 Final step: 6.83 *	-.02 (Neg. EI at T1)	-.17 (Neg. EI at T1) .37 * (Neg. EI at T2)
Neg. EI at T1 → Neg. EI at T2 → Sympathy (DV)	First step: 2.61 Final step: 2.42	-.21 (Neg. EI at T1)	-.12 (Neg. EI at T1) -.22 (Neg. EI at T2)

Note. For regressions, the predictor variable (from T1) was entered in the first step, and the mediating variable (from T2) was entered in the second step. Betas are the standardized coefficients from the final step. *Z* tests for mediation using the Sobel test and conventional *z* scores (see MacKinnon et al., 2002), in the order of the analyses above, were as follows: -2.04, 3.44, -2.53, -.45, -1.70, 1.65, -2.61, 3.56, 1.87, 2.21, -2.03, 2.45, -3.14, 2.07, -1.43 (*ps* < .05 if *z* > 1.96). DV = dependent variable; Reg. = regulation; Neg. EI = negative emotional intensity.

^aFor first step, *df* = 1, 56; for final step, *df* = 1, 55.

[†]*p* < .10.

* *p* < .05.

** *p* < .01.