

The Socialization of Emotional Expression:
Relations with Prosocial Behavior and Competence in Five Samples

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Abstract

This paper reports on five studies that focused on the socialization of emotions and children's prosocial behavior and ego resilience in preschool. Parents reported their socialization practices using a 99-item version of Block's Child Rearing Practices Q-sort, and teachers assessed children's competence using Baumrind's Preschool Behavior Q-sort. Meta-analytic techniques were used to combine correlational results across samples (3 from Ontario and 2 from British Columbia). In all, 150 families participated; children's mean age = 4.2 years; 57% were girls. Nearly 79% of all comparisons replicated across samples, 18% with mean $r_s > .30$. Consistent with the cognitive-emotional processing model (Roberts & Strayer, 1987), (1) children's ego-resilient and prosocial behaviors were related to parents' tolerant, non-punitive responses to emotional distress; (2) partial correlations supported the contention that emotional socialization practices affect outcomes independently of other dimensions of parenting; and (3) longitudinal data (available for one sample) indicated that greater emphasis on emotional control was related to declines in boys' friendly, ego-resilient behaviors 2½ years later. However, consistent with emotion regulation models, parenting practices that emphasized the control of emotional expression were sometimes positively related to contemporary measures of competence.

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This paper is a report of a series of studies that investigated parents' responses to the emotional distress of their children (i.e., to their expressed anger, fear, and sadness) and assessed the relation of these responses to children's competence in preschool. A major goal was to replicate and extend findings reported in Roberts and Strayer (1987), especially vis-a-vis the model described there linking the socialization of emotional expression with basic aspects of children's competence, in particular, their resourcefulness (ego resilience) and cooperative, prosocial behavior with peers.

Competence.

Competence refers to the ability to meet the demands of a situation (Webster & McKechnie, 1978). Thus, like the related constructs of adaptation, ego mechanisms, self-efficacy, and intelligent behavior, competence refers simultaneously to the environment and to individual abilities (Masten et al., 1995). There is substantial agreement in the research literature that, for children in preschool settings, competence is manifested as goal-oriented, planful behavior (Baumrind, 1971; Block & Block, 1980). Competent children are active because they set goals for themselves, and because they are resourceful and persistent in pursuing these goals. In social situations,

competence includes the skills to initiate and sustain positive, cooperative social interactions, both in dyads and groups (Ainsworth & Bell, 1974; Baumrind, 1971; Lamb, Easterbrooks, & Holden, 1980; Waters, Wippman, & Sroufe, 1979). Although social and task-oriented activities are distinct in theory, in practice task-oriented activities frequently involve social components (Matas, Arend, & Sroufe, 1978).

Meeting "the demands of a situation" entails, among other things, that children correctly read and respond to others' emotions as well as modulate their own emotional behavior. These abilities have been the focus of much of the recent research on emotional socialization (e.g., Eisenberg & Fabes, 1992; Fox, 1994; Saarni, 1990). However, following Roberts and Stayer (1987), it will be argued below that the socialization of emotional expression has consequences for basic aspects of children's competence, as well as for adequate responding in emotionally laden contexts.

In the studies reported here, competence was assessed by teacher ratings, using the Preschool Behavior Q-sort (Baumrind, 1968), an instrument that assesses prosocial and social behaviors, as well as children's active, resourceful participation in preschool activities. Teacher perceptions are an important "real life" measure, while at the same time, the forced distribution characteristic of Q-sorts is thought to minimize social desirability in responses.

Negative affect and the socialization of emotional expression.

Diverse points of view suggest that how parents respond to emotional distress will have specific and general consequences for children's competence (Eisenberg & Fabes, 1992; Kopp, 1989; Roberts & Strayer, 1987). For example, positive affect and moderate levels of negative affect are thought to be important for the development of cognitive and social competencies (Piaget & Inhelder, 1969; Sroufe, 1979; Thompson, 1994). In contrast, high levels of emotional distress are thought to have disruptive effects in general process models of competence and cognition (Bowlby, 1982; Connolly & Bruner, 1974; Kopp, 1989; Roberts, 1984), in experimental paradigms of dysfunction such as learned helplessness (Dweck & Elliot, 1983; Dweck & Wortman, 1982; Maier & Seligman, 1976), and in research on stress and coping (e.g., Rutter, 1981). In all these approaches, high levels of negative affect are thought to have disruptive or disorganizing effects on concurrent behavior and to be partly responsible for long-term behavioural problems or difficulties.

Roberts and Strayer (1987) described cognitive and affective processes that could produce such results. In that cognitive-emotional processing model, the transition from disruptively high levels of negative affect to more functional levels is best accomplished when parents allow the expression of negative affect to run its course. In such a case, emotional components of the experience are dissipated, allowing cognitive components of the episode to be fully assimilated or integrated by the child. In contrast, control or suppression of negative affect

is thought to result in the storage of negative affect in memory (along with other aspects of the situation, including any maladaptive responses), with the result that cognitive components of the episode remain relatively unassimilated and distorted. Similar circumstances in the future then evoke the stored negative affect, the cognitive distortions, and the maladaptive response (cf. Dodge, 1991). As this behavioral pattern undergoes consolidation the affective components may become less apparent, while the behavioral components may become ritualized and rigid (cf. Bowlby's 1973 account of the separation-protest-despair sequence).

Freud described such a model over a century ago (Breuer & Freud, 1893/1959), and Piaget (1932/1983) gave a similar account when he described "affective schemas" in parenting. The idea is also current in humanistic clinical approaches, in which intense emotional expression (crying, etc.) is thought to be a critical component of the process restoring flexible, resourceful behavior, because such expression is thought to facilitate both cognitive restructuring and behavioral change (Somers, 1972). Bowlby (1982) also proposed that intense emotional expression is part of the process by which established cognitive models are restructured.

Although the cognitive-emotional processing model indicates that emotional distress will have long-term negative consequences for competent behavior if expression is suppressed, it is also necessary for children to learn

how to manage or control emotional expression to meet short-term goals in situations which demand prompt action or in which cultural display rules indicate that expression is inappropriate (Brody, 1985; Eisenberg & Fabes, 1992; Kopp, 1989; Saarni, 1979, 1990; Thompson, 1994). From the point of view of regulation models, a major goal of emotional socialization is to help children learn how to modulate disorganizing or disruptive levels of emotional distress so that they can respond to the requirements of the situation, whether in the classroom, during a medical or dental procedure, or when faced with frustration or conflict. The direct implication is that, contrary to the cognitive-emotional processing model, parental practices which encourage the control of emotional expression will be associated with competent behavior.

Encouraging or tolerating emotional expression on the one hand or emphasizing control and regulation on the other, do not exhaust the variety of ways in which parents and children interact when children are upset. For example, some parental strategies may tacitly ignore children's emotional expression as such. One important strategy of this type is the tendency of parents to respond to children's emotional distress in practical, problem-solving ways. This is no doubt the modal strategy during infancy and toddlerhood, when crying elicits adult approach and care-taking activities. Roberts and Strayer (1987) presented evidence that it continues to be important during the preschool period, and that it is positively linked with

children's competence, perhaps in part because it reduces distress and models effective practical action at a time when such behavior is salient for the child. Kopp (1989) has emphasized the importance of problem-solving responses for toddlers' and preschoolers' increasing ability to regulate their emotions, and she has argued for the crucial role of parental support in children's acquisition of such responses. Thus both cognitive-emotional processing and emotional regulation models predict positive associations between parents' problem-solving responses and children's competence, although the underlying processes are thought to differ.

A related parental strategy involves ignoring children's emotional distress, a strategy that home observational data indicate is not uncommon during parent-child conflict (Roberts & Strayer, 1987). The cognitive-emotional processing model suggests that this strategy should be negatively related to children's competence. Although ostensibly permitting emotional expression to run its course, ignoring makes implicit demands for emotional control because access to parents is being denied at a time when children's approach tendencies are high (cf. Bowlby's 1982 discussion of conditions eliciting attachment behavior, i.e., proximity seeking, in toddlers and preschoolers). In addition to interfering with emotional expression, ignoring may make cognitive distortions more likely because the parent is not available to clarify contingencies and confusions. In contrast to these expectations, regulation

models would predict variable outcomes. As long as the experienced distress was not overwhelming, parental neglect would provide an opportunity for the child to acquire self-regulating techniques. From this point of view, then, ignoring low- or moderate-level distress might actually enhance emotional regulation and thus (indirectly) children's competence.

A third possibility is that parental socialization practices may include deliberately manipulating or eliciting negative affect, rather than seeking to moderate or lessen it. Baumrind (1973), for example, identified deliberately frightening children as a control technique used by authoritarian and punitive parents (the associations with child competence were generally negative, but the emotional socialization technique was necessarily confounded with other parental factors in Baumrind's typological approach). Again, the point of physical punishment is to arouse fear and distress and so effectively inhibit unwanted behavior. Consistent with the cognitive-emotional processing model, the research literature on physical punishment indicates that it is most effective when steps are taken to help children process information in the presence of negative affect, e.g., by explicitly stating the (broken) rule and its justification, by specifying alternative, acceptable behaviors, and by comforting following the administration of punishment (Baumrind, 1973; Martin, 1975).

Emotional socialization and other aspects of parenting.

Children's competence has been linked to basic dimensions of parenting

such as warmth and control (Baumrind, 1971; Roberts, 1986) as well as to emotional socialization practices. To what extent, then, does the socialization of emotional expression constitute a functionally distinct aspect of parenting, as the cognitive-emotional processing model suggests? Roberts and Strayer (1987) presented evidence that fathers' responsiveness to emotional distress was related to children's competence independently of paternal warmth. In the current set of studies, I examined this issue by partialling measures of authoritative and authoritarian parenting (Kochanska, Kuczynski, & Radke-Yarrow, 1989), as well as measures of parental satisfaction and parent-child conflict (Block, 1965), and then looking for links between competence and emotional socialization practices that replicated across samples at moderately large levels.

Longitudinal trends

The cognitive-emotional processing model is clear in predicting that the maladaptive effects of suppressive parental strategies should accumulate and intensify over time. Such a prediction is qualified by the amount of upset experienced by the child, and the presence or absence of countervailing factors (such as parental responsiveness in other areas) which are thought to contribute to children's flexible, resourceful, or prosocial behaviors. Regulatory models, in contrast, predict that parental emphasis of control of expression should be positively related to later social competence, including the ability to

carry on positive, cooperative relationships with peers. These differential predictions are examined here using longitudinal data available for one sample in which children were assessed a second time, when they were nearly seven years old.

The current paper

The current paper, which reports on efforts to replicate in four new samples some of the findings reported in Roberts and Strayer (1987), provides information relevant to all these aspects of emotional socialization. As will be seen below, patterns consistent with both cognitive-emotional processing and regulation models emerged across the five samples examined. Other strategies that do not focus on emotions per se (problem-solving responses, ignoring, and frightening as a technique of control) also were related to children's competence in preschool. Mothers and fathers were examined separately to assess their differential associations with children's competence, differences that were expected for both theoretical and empirical reasons.

Results for boys and girls were also examined separately because girls and boys are thought to experience somewhat different emotional socialization practices, at least by middle childhood (Brody, 1985). Such differences would be congruent with children's tendencies to interpret and display their emotional experiences in gender-stereotypic ways (e.g., Strayer & Roberts, 1997; Underwood, Hurley, Johanson, & Mosley, 1998). Moreover, it has been

suggested that even in the absence of mean differences, girls and boys may differ in functional relations between emotional factors and behavior (Radke-Yarrow, Zahn-Waxler, & Chapman, 1983). Although empirical differences have been found (e.g., Pulkkinen, 1995; Roberts & Strayer, 1996), it remains the case that functional gender differences have been largely ignored in the theoretical literature. In all the work reviewed above, proposed basic processes have been thought to apply equally to boys and girls, so that observed gender differences (e.g., in expression) have been thought to arise from mean differences (e.g., boys are thought to experience more pressure to control crying and fear, girls, to control anger). Parent differences have been conceptualized in a similar way; because basic processes are the same, mother-father differences can only arise from mean differences (e.g., mothers may be more tolerant of children's distress). As will be seen below, a number of functional differences were found for girls and boys, fathers and mothers, and these emerged even though mean differences were negligible.

This paper presents results for preschoolers, a particularly interesting age group because parental goals for emotional socialization are becoming more salient at this period (Kopp, 1989) and because preschool marks a time of growing self-regulation in emotional expression (Kopp, 1992). By presenting patterns *that replicated across independent samples* (an important strength of the approach taken here), the current paper extends in important ways our

knowledge of the consequences of the socialization of emotional expression, and suggests ways in which theories of emotional socialization need to be elaborated.

Method

Participants.

Participants, recruited by letters distributed through day care centres and preschools, came from five separate studies: three from Toronto, Ontario; one from Kamloops, a town in the interior of British Columbia (pop. = 65,000); and one from Vancouver, BC. Only data from the last sample have been published before, in different form (see Roberts & Strayer, 1987). In all, 150 families participated. These were largely English Canadian, although the Toronto samples contain a variety of ethnic backgrounds, chiefly Greek, Italian, and Indian. Children's mean age was 4.2 years; 57% were girls. Sample characteristics are given in Table 1.

Insert Table 1 about here

Sample heterogeneity was examined using univariate F tests with post hoc comparisons as appropriate. These tests indicated that the samples differed in a variety of ways (see Table 1). While these demographic differences work against replication, their possible moderating influences were not very

evident: 79% of all comparisons replicated across samples (see below). Group differences, including possible cohort effects, will not be discussed, because the focus of this paper is on similarities across groups.

Procedures

Responses to emotional distress. In all studies, mothers and fathers independently described their parenting practices using the Child Rearing Practices Q-sort (Block, 1965). For the four samples from Toronto and Kamloops, the original 91 items were supplemented by 8 additional items assessing reactions to anger, sadness, fear, and non-specific negative affect in various contexts: parent-child vs. peer, and agonistic vs. non-agonistic (see Appendix). New items also assessed practical, problem-solving approaches to emotional distress. Parents distributed these 99 items equally across 9 categories, using procedures described in Block (1965).

In keeping with the original design strategy of the CRP-Q sort (Block, 1965), new items were not intended to group into scales. Rather, they were intended to sample emotional socialization practices in a variety of social and emotional contexts. It was anticipated, therefore, that analyses would be carried out on an item-by-item basis, as the Blocks themselves have done (e.g., Block, Block, & Gjerde, 1986; Block, Block, & Morrison, 1981). Although such an approach increases complexity, it permits sampling a broader range of potentially interesting parental responses.

Factor analyses of the 13 emotional socialization items indicated that parents, too, viewed them as diverse and distinct. In order to obtain the recommended minimum ratio of four subjects per variable (Rummel, 1970), two samples were formed, comparable in age of child and number of siblings. Sample A, $N= 65$, comprised families from Kamloops and Toronto 3; Sample B, $N= 55$, comprised families from Toronto 1 and 2. For each sample, a principle components analysis was followed by oblique rotation with direct quartimin, as recommended by Dixon (1992) in order to maximize the likelihood of simple factor structures. Within samples, separate analyses were conducted for mothers and fathers. In sample A, six factors with eigenvalues greater than one were extracted for both mothers and fathers; in sample B, five factors were extracted for each parent. Factors did not replicate across samples for either parent, i.e., items that defined a factor in one sample did not do so in the other. Thus empirical considerations as well as theoretical ones indicated the appropriateness (indeed, the necessity) of conducting item-based, rather than scale-based, analyses.

A secondary goal for the new emotional socialization items was to use a more neutral phraseology, so that ceiling and floor effects commonly found for emotional socialization items in the original Q-sort could be avoided. (For example, "I feel a child should be given comfort and understanding when s/he is scared or upset." and "I believe that children must learn early not to cry"

tend to be placed near the extremes, as indicated by their means in the Appendix, and this results in a restricted range, i.e., a small standard deviation). This effort was successful: when standard deviations were averaged across samples (52 comparisons: 13 items x 2 parents x 2 genders), only one of the new items fell into the first quartile, suggesting that, as a group, they had adequate variability.

Competence in preschool. In each study, daycare or preschool teachers completed the Preschool Behavior Q-sort (Baumrind, 1968), in which 72 items are distributed equally across 9 categories. Two variables were derived from this measure. The first, adapted from Baumrind (1971), assessed prosocial behavior with peers. Friendly (vs. hostile to peers) contained seven items, such as "nurturant or sympathetic toward other children", "altruistic, shares", and "bullies other children" (loads negatively); mean Cronbach α across five samples = .80. Children's resourceful, active engagement with their social and non-social environment was assessed by a 12-item scale called Ego Strength (mean Cronbach α = .74), developed by Waters, Wippman, & Sroufe (1979). Scale items reflect persistence and engagement, e.g., "Gives his best to work and play" and "Lacking in curiosity" (loads negatively). According to Waters et al., (1979), Ego Strength scores are strongly correlated ($r = .81$) with measures of ego resilience, indicating that it is tapping a dimension of resourcefulness and flexibility (Block & Block, 1980).

Across samples, there was a small but consistent relation between Friendly and Ego Strength (mean $r = .23$; all variation across samples could be attributed to sampling error).¹ Thus children who were resourceful tended to be friendly as well, although the effect was small by conventional standards.

Longitudinal data. Two-and-a-half years after the original Vancouver assessment, teachers completed either the Preschool Q-sort (for those in kindergarten) or the Primary School Q-sort (Baumrind, 1972), for those in elementary school. Children's mean age at Time 2 was 6.9 years; 24 of 30 families participated, with teacher data obtained for a final sample of 21 (8 boys and 13 girls). No differences were found between the retrieved and original samples on Time 1 variables. Cronbach α s for the Primary School version of the preschool scales were .84 and .89 for Ego Strength and Friendly, respectively.

Meta-analytic procedures. In each sample, the 13 emotional socialization items in the extended Child Rearing Practices Q-sort (for Vancouver, 5 items) were correlated with the two preschool scales. Because of the possibility of functional gender differences in emotional socialization, this was done separately for boys and girls. Meta-analytic techniques were then used to integrate results across samples (Hunter & Schmidt, 1990).²

A comparison was considered to replicate when all variation across samples could be attributed to sampling error. Nearly 79% of 104 comparisons

(13 CRP-Q items x 2 preschool scales x 2 genders x 2 parents) replicated, 18% with mean correlations of .30 or greater (following Cohen, 1977, we will be concerned only with moderate or large relations).

As will be seen below, correlations frequently differed for girls and boys. (An analysis of standard deviations averaged across samples indicated that gender-different correlations were not associated with differences in item variability). No traditional tests of significance were applied to these differences because the meta-analysis implies that these replicated differences exist in the population. In such a case, traditional sample-based tests of significance are inappropriate (Cohen, 1994).

Although the number of samples examined in this paper is small, the nature of replication is such that Type I Error is effectively controlled. As an example, consider a finding that by traditional tests only reaches statistical significance at a level of .10 in a single sample (this is approximately the case for a correlation of .30 in a sample with N of 30). The probability of replicating such a finding in a second sample is, under the null hypothesis, $.10 \times .10$, or .01. The probability of replication across four samples is .0001. For the correlations below, which have been corrected for attenuation, the corresponding probability of replication is $< .01$ at the lower bound, and binomial tests indicate that the probability of observing 19 or more such cases is less than 1×10^{-17} . Thus even by the logic of traditional single-sample null

hypothesis testing, the results that I will argue are conceptually significant (.30 or greater) are statistically significant.

Some colleagues have suggested that these data should have been aggregated into a single large sample and traditional tests of significance applied. Such an approach disregards the way in which these data were collected across time and geographic location, with the demographic and economic differences that ensued. More seriously, it ignores the fact that replication is the best indication we have that relations actually exist in a population (e.g., Christensen, 1991; Cohen, 1994). Traditional, single-sample significance tests were devised for situations in which replication was not possible or practical. It is absurd to request such tests in preference to replication.

Results

This section begins by considering descriptive findings, including age-related changes in emotion socialization practices over the preschool period. Following this, the central issue of relations with competence will be considered in three stages, starting with relations that replicated across samples as indicated by meta-analytic procedures. The functional independence of emotional socialization will then be assessed by partialling other dimensions of parenting from measures of children's competence. Finally, longitudinal data are presented that indicate that early emotional socialization practices are

related to changes in children's behavior over the period from preschool to early elementary school.

Descriptive findings

As indicated by the means in the Appendix, parents in these samples described themselves as characteristically comforting (e.g., item 11, with a mean rank of 7.9 out of 9 possible) and as responding to children's emotional distress by taking practical, problem-solving action (item 94; mean= 7.4). At the same time, they were less willing to help in ways that might encourage dependence (item 96). Finally, although parents did not endorse demands for suppression of emotional expression (e.g., items 81, 82), they did describe themselves as making moderate demands for emotional control (e.g., items 92, 93).

Gender differences between parents were examined by a meta-analysis of matched- t tests. Reliable mean differences between mothers and fathers were frequent (10 of 13 comparisons) but small. The largest difference occurred for item 11, comforts when upset, with means of 8.1 and 7.7 for mothers and fathers, respectively, a difference that corresponds to an r of .28. Although differences were small, they were consistent with gender role stereotypes. Mothers described themselves as more comforting, and fathers described themselves as making greater demands on children for emotional control.

Contrary to expectation, a meta-analysis found few reliable mean

differences between parental practices for boys and girls, and these were not in expected directions. Thus whatever divergence occurs later, it appears that during the preschool period, parents of girls and boys describe their emotional socialization practices in similar ways.

Age-related changes in emotional socialization. A meta-analysis suggested that as preschoolers grow older, they may face increasing demands for practical autonomy in emotionally laden contexts. Mothers of older children described themselves as less likely to help a frustrated, upset child (item 96; mean r with child age = $-.42$) and fathers of older children described themselves as less likely to respond to emotional distress in practical, problem-solving ways (item 94; mean r = $-.32$). Fathers of older children also described themselves as less comforting (item 11; mean r = $-.34$). Alternatively, these cross-sectional data are consistent with the view that as children become older and more capable, providing assistance may become less salient as a parental response.

Emotional socialization practices and competence in preschool

Important associations between emotional socialization practices and children's competent behaviors emerged from the meta-analysis of the five samples.

Prosocial behaviors. Consistent with the cognitive-emotional processing model, mean correlations shown in Table 2 indicated that boys' friendly, non-

aggressive relations with peers were related to comforting (item 97) and non-punitive responses to conflict (items 81 and 98). However, consistent with emotion regulation models, boys' friendly behaviors with peers were also positively related to maternal pressure for control of emotional expression (items 92 and 93).

Insert Table 2 about here

No clear pattern emerged for girls, for whom relations between emotional socialization practices and prosocial behaviors were less frequent and generally smaller in magnitude than those for boys. These findings are consistent with other reports that girls and boys may differ in the factors associated with prosocial behaviors, with boys' prosocial behaviors more clearly and strongly linked with emotional factors such as empathy and emotional expressiveness (Roberts & Strayer, 1996).

Resourceful, ego resilient behavior in preschool. Consistent with the cognitive-emotional processing model, parents' comforting, non-punitive reactions to emotional distress, especially in agonistic contexts, were associated with boys' resourceful, active engagement in preschool (items 97, 81, and 95 in Table 3), and girls' ego strength was strongly associated with mothers' reluctance to use fear as a discipline technique (item 99). Paternal

problem-solving responses (item 94) were also positively associated with ego resilience for both girls and boys, as expected.

Findings consistent with emotion regulation models emerged for boys' ego strength, especially for paternal demands for control of crying (item 92), control of anger (item 31) and for coping (item 93). In contrast, regulatory practices were only weakly associated with girls' resourceful, active engagement in preschool.

Insert Table 3 about here

Is emotional socialization an independent dimension of parenting?

Emotional socialization practices, whether tolerant of expression or encouraging control, are correlated with other parental attitudes and practices (Roberts, 1988) and perhaps conditioned by them. Moreover, children's competence has demonstrated associations with basic dimensions of parenting such as warmth and control. The issue of emotional socialization as an independent dimension of parenting was examined by partialling CRP-Q measures of authoritative and authoritarian parenting (Baumrind, 1971; Kochanska et al., 1989), enjoyment of parental role, and negative affect expressed by the parent to the child (Block, 1965). Thus this test removed the effects of emotional components of parenting, as well as parental control and

warmth, from the relations between emotional socialization items and children's competence.

Paralleling procedures for the raw correlations, mothers and fathers, boys and girls, were analysed separately and their partial correlations averaged across samples using the techniques described above. The four parenting scales showed important relations with children's behavior in preschool. For friendly behavior, the mean multiple R^2 for boys was .40, for girls, .32. For ego resilience, mean multiple R^2 s were .37 and .20, respectively.

Despite the strength of the parenting scales, emotional socialization items continued to show moderate to strong relations with children's competence, supporting the contention that emotional socialization constitutes a separate and important dimension of parenting. As shown in Tables 2 and 3, 8 of 19 comparisons which had originally replicated with values of .30 or greater replicated with partialled values of .30 or greater. Eight other emotional socialization items which had originally fallen below the .30 cutoff increased after partialling to values of .30 or greater.

Taken together, these findings suggest that the emotional socialization practices of both parents are important for both boys and girls, independently of other basic dimensions of parenting. Specifically, demands for emotion regulation were linked to boys' friendly behavior with peers (Table 2, item 92) and flexible, resourceful behavior (Table 3, items 92, 93, and 55). Consistent

with the cognitive-emotional processing model, comforting and non-punitive responses during conflict were also important for these dimensions of boys' behavior (Table 2, items 98 and 95; Table 3, items 97 and 95), and mothers' reluctance to frighten for discipline purposes was especially important for girls' flexible, resourceful behavior (Table 3, item 99; see also item 82). In addition, fathers' problem-solving responses to distress were associated with greater flexible, resourceful behavior for both girls (Table 3, item 94) and boys (Table 3, item 96).

Evidence for the long-term importance of emotional socialization.

Longitudinal data from one sample provided evidence that emotional socialization practices at age four were related to changes in children's competence two-and-a-half years later. Following Cohen and Cohen (1983), change in competence was operationalized as the residuals of Time 2 measures after regression against their Time 1 counterparts. Time 1 emotional socialization items were then correlated with these residuals.

Of the 20 comparisons for boys shown in Table 4, 6 (30%) were significant at .05, and the omnibus null hypothesis that all correlations were zero was rejected, $\chi^2(20) = 39.82$, $p < .006$. All these correlations were consistent with the cognitive-emotional processing model. Boys who became more friendly with peers and who showed gains in resourceful, active engagement in school contexts had parents who were more comforting and

more tolerant of emotional distress at age four.

Insert Table 4 about here

In contrast to boys, girls showed fewer strong correlations over time (only 4 of 20 comparisons were significant at .10 or better) and the omnibus null hypothesis could not be rejected, $\chi^2(20) = 19.51, p > .48$. Thus in these longitudinal data, emotional socialization practices appear to be more important for boys than girls.

Discussion

Parents' responses to distress and children's competence.

The results presented here support and extend the findings reported by Roberts and Strayer (1987), and they provide important information about relations between parents' responses to emotional distress and children's competence. It is an important strength of this report that these relations replicated across samples.

Consistent with the cognitive-emotional processing model, associations were found between parental practices that permitted or tolerated the expression of emotional distress and children's resourceful and prosocial behaviors with peers. In particular, these data indicate the importance of parental responses during episodes of parent-child conflict and the importance

of fathers' (as well as mothers') comforting and tolerance of emotional distress. They also imply the importance of non-punitive responses to sibling conflict, suggesting that this may be an influential area in which anger and upset need to be acknowledged and resolved equitably (Dunn & Kendrick, 1982; Garner, Jones, & Miner, 1994). Partial correlations averaged over all samples supported the contention that emotional socialization practices have important associations with children's competence independently of other basic dimensions of parenting (Roberts & Strayer, 1987). For one sample, longitudinal data indicated that emotionally tolerant practices, especially during conflict, were associated with increases in boys' resourceful and prosocial behaviors over a two-and-a-half year period, as predicted by the cognitive-emotional processing model.

Present data also give some support to regulation models of emotional socialization. Demands for control of emotional expression (especially in the service of coping) were consistently associated with greater competence for boys, although such associations were less frequent than those reflecting tolerance of emotional expression. In contrast, demands for control and regulation showed only weak relations with contemporary measures of girls' competence. The prominence of emotional regulation items after partialling other parenting dimensions suggests that the consequences of demands for emotional control may be conditioned by more general aspects of parental

warmth and control.

Although emotional-cognitive processing and regulatory models have been presented in contrasting terms for the purposes of this paper, they are not in practice mutually exclusive strategies of action. Parents who make demands for control of emotional expression in one context often comfort their children and tolerate their upset in other contexts. Roberts and Strayer (1987) for example, presented evidence from home observations that parents were less likely to comfort crying children during episodes of parent-child conflict than during episodes of distress in non-agonistic contexts. Additional observational data are needed to help sort out the complexities of such patterns.

Longitudinal data would be very helpful in distinguishing between models. The cognitive-emotional processing model includes a feedback feature by which negative consequences of emotionally laden, unassimilated information are maintained and increased over time. Thus according to this model, the ability to control one's emotions, although necessary, is acquired at a cost that becomes more apparent over time. The implication is that although parenting practices that emphasize regulation and the control of expression may show concurrent relations with children's competence, these relations will not hold over the long term, and may even become negative, whereas relations for more tolerant parenting practices should strengthen over time.

Longitudinal data presented here were consistent with this point of view, at

least for boys. However, these results are based on a small sample and need to be replicated. Current results raise the possibility that here, as elsewhere, we may be faced with functional differences for boys and girls.

Problem-solving responses. Current results support contentions that problem-solving responses are an important component of parents' emotional socialization practices (Kopp, 1989; Roberts & Strayer, 1987). Mean values (given in the Appendix) indicated that problem-solving responses are salient for parents of preschoolers, and problem-solving, coping responses were important predictors of prosocial and resourceful behaviors.

Ignoring children's distress. Consistent with the cognitive-emotional processing model, parental reports of ignoring distress showed moderately strong negative associations with boys' resourceful, active engagement in preschool, both directly (Table 3) and independently of other dimensions of parenting. In contrast, maternal ignoring had weak positive associations with outcomes for girls. These findings might be integrated if we had information on intensity of distress. Observational data suggest that ignoring is frequently a response of parents who are themselves distressed and is therefore likely to occur when children's distress is high (and often intensifies that distress), whereas positive associations with competence are only expected by regulatory models when children's distress is moderate or low. Given these problems, its rate of occurrence, and differential associations with competence, parental

ignoring merits further investigation.

Enhancing distress as a method of control. The use of fear as a control technique was, as expected, negatively associated with resourceful, active engagement in preschool, but only for mothers and daughters. Contrary to the cognitive-emotional processing model, fathers' reports had weak positive associations with boys' friendly behavior (which became stronger after partialling other dimensions of parenting), suggesting that this strategy may be effective in eliciting compliant, cooperative behavior. More information is needed. The cognitive-emotional processing model suggests that longitudinal relations should be strongly negative for this strategy. Context and age may be important also. For example, Bowlby (1973) has suggested that threats of separation may be particularly frightening (and damaging) to young children. Similarly, love-withdrawal is known to elicit anxiety and compliance in young children (Maccoby & Martin, 1983).

Other dimensions

Warmth and control. The pattern seen here, in which children's competence is linked both to tolerance of distress and demands for its control, is similar to Baumrind's (1971) finding that competence was highest for those children whose parents were both warm and demanding across contexts-- the pattern she termed Authoritative. Although no attempt was made here to identify types of parents based on patterns of emotional socialization, an

obvious extension of the present work would involve investigating the alignment of authoritative parenting in emotionally laden and more general, emotionally neutral contexts. There should be important divergences, given the theoretical and observed independence of emotional socialization and other parenting practices, and the fact that emotional socialization practices were associated with child outcomes independently of general measures of warmth and control (Tables 2 and 3, replicating Roberts & Strayer, 1987). In addition, studying these alignments would be important because it is reasonable to expect general dimensions of warmth and control to interact with emotional socialization practices. Just as warmth and responsiveness condition the effects of parental control (Baumrind, 1971; Roberts, 1986), they may also condition the effects of parental demands for emotional regulation.

Because the current meta-analysis is based on five samples, further work will undoubtedly alter the findings presented here. In particular, additional samples would allow detecting relations that are obscured in the current analysis by moderating factors (in general, sampling error and low power make it more difficult to replicate across small samples; success in doing so suggests the robustness of the phenomena). Besides parental warmth and control, moderating factors may include the presence or absence of siblings and cultural differences in attitudes towards emotional expression. Other important factors may also be at work, and to these we now turn.

Family levels of distress. An important shortcoming of the present work is that it fails to consider the level of emotional distress in the family, or "family climate," as it has been called (Dix, 1991). We know that families vary a good deal along this dimension, both in terms of amount and type of child upset (Kopp, 1992; Roberts & Strayer, 1987) and amount and type of negative emotions expressed by parents (Amato & Keith, 1991; Dix, 1991; Katz & Gottman, 1991). These differences are thought to have important influences on a number of child outcomes, including the socialization of children's emotional expressiveness. While the partial correlations presented here indicated that emotional socialization practices were related to child outcomes independently of parents' own expression of negative affect, the inclusion of measures of frequency and intensity of parent as well as child distress would undoubtedly clarify some of the relations reported in the present paper.

Emotional reactivity. Another important limitation of the current work is lack of information on children's emotional reactivity (thought to influence parenting patterns; see, e.g., Calkins, 1994; Thompson, 1994) and their emotional competence (thought to influence both prosocial behavior and social competence with peers; see, e.g., Denham & Grout, 1993; Eisenberg et al., 1993; Saarni, 1990). For example, children who are temperamentally irritable or easily distressed may elicit (and benefit from) greater parental emphasis on emotional control. Children who tend to internalize distress and inhibit

emotional expression may elicit (and benefit from) more comforting. The concept of ego-control (Block & Block, 1980) is relevant to this issue of emotional reactivity. From the point of view of regulation models, a parents' task, and the developmental task of the child, is to organize emotional expressions so that they become situationally appropriate -- neither inhibited (ego over-control) nor disruptive (ego under-control). Some assessment of the child's contribution to family interactions and parenting practices is essential to understanding the processes underlying the correlational data presented here.

Gender. Although it is generally accepted that boys and girls are subject to different socialization pressures with regard to emotional expression and conform to different sets of display rules (Brody, 1985; Underwood et al., 1998), no consistent gender differences of this sort emerged from the current meta-analysis. Partly this may be due to the age of the children studied here. Preschoolers lead a rich emotional life, and regulating emotional expression may be an important task for both girls and boys at this developmental period (Kopp, 1989). Current findings suggest that socialization pressures at this age are very similar across gender (at least as far as parents are aware of them). Differential pressures may become more salient with increasing age, after the mastery of basic regulatory abilities. In addition, pressure to conform to gender-appropriate display rules no doubt comes from peers, teachers, and

media as well as parents (Brody, 1985), and the importance of these sources are no doubt greater for older children (Underwood et al., 1998).

Aside from mean differences, current findings suggest that important functional gender differences may exist. School-age boys and girls interpret their emotional experiences somewhat differently (e.g., Strayer & Roberts, 1997), and cognitive-emotional processes such as empathy have differential associations with their prosocial behavior (Roberts & Strayer, 1996). Current results suggest that differential links are present in the samples described here, as well. For example, both concurrent and longitudinal correlations indicated the importance of mothers' responses to sibling conflict for boys' friendly behavior. The same link was unimportant for girls. Thus these data support the contention that girls and boys may arrive at prosocial behavior via somewhat different routes, as Zahn-Waxler et al. (1983) proposed. However, faced with a lack of theory in this area and given our ignorance of underlying processes, progress in understanding these relations will no doubt be difficult. Nevertheless, it appears that further research efforts in possible differential consequences of emotional socialization are well merited, and that sibling relationships should be included in such research..

Developmental trends

Few age-related trends emerged, although evidence suggested that as children became older, practical, problem-solving responses to distress became

less salient for parents. Unfortunately, current data cannot tell us of the relative importance of parental demands for autonomy vs. growing self reliance.

Several reasons can be suggested for the scarcity of developmental trends in these samples. First, age ranges are somewhat restricted within samples. More importantly, perhaps, self-report data, which reflect a cognitive process of weighing and summation of parenting practices over an indefinite time period, tend to obscure changes over time. Observational data are much more suited to identifying age-related changes in family interactions. Finally, age-related changes are best identified longitudinally. In the current cross-sectional studies, age-related changes may be swamped by individual variation across families.

Final considerations

Current findings suggest, but do not address, possible causal processes. As questionnaire data, results reflect associations between parents' beliefs and perceptions and reports of children's behavior in preschool. As such, they need to be supplemented and clarified by observational data, and by measures that more directly assess the processes that might underlie these associations. Such data, for example, might clarify how parents' responses to sibling conflict are linked to boys' friendly behavior with peers. The purpose of the present paper was not to directly test the cognitive-emotional processing model or the processes it describes, but rather to present evidence that they are worthy of

being tested.

Conclusions. Across the samples examined here, parental reports of their emotional socialization practices were associated with basic aspects of children's competence in preschool. As expected, most of these associations were consistent with the cognitive-emotional processing model described by Roberts and Strayer (1987), which emphasizes the importance of parents' non-punitive, tolerant responsiveness to children's emotional distress. Parental responses that appear to encourage emotional control and regulation of expression were sometimes associated with children's competent behaviors as well, particularly for boys. Overall, these results suggest that theories of emotional regulation need to consider not just how expression is controlled, but also how it is maintained and made appropriate. It remains unclear how these two strategies interact with each other and with other parent, child, and contextual factors. Thus current results point to the significance of emotional socialization for broad, basic aspects of children's behavior, and suggest that further research in this area is important in order to clarify our understanding of underlying processes and their immediate and long-term consequences.

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Appendix

Child Rearing Practices Q-Sort: Items assessing reactions to upset

A. Agonistic interactions: Parent-child

31. I do not allow my child to get angry with me. (anger not allowed; mean= 3.2; scores could range from 1 to 9)

98. If I have a dispute with my child and s/he starts to cry, I still stand firm. (firm during disputes; mean= 5.7)

99. It is sometimes necessary to frighten a child in order to have him/her obey. (necessary to frighten; mean= 3.0)

B. Agonistic interactions: Peers

81. I think jealousy and quarrelling between brothers and sisters should be punished. (punish sib quarrels; mean= 3.4)

97. If some other child frightens or hurts my child, I try to comfort him/her. (comforts when victim; mean= 6.9)

C. Non-agonistic interactions

11. I feel a child should be given comfort and understanding when s/he is scared or upset. (comforts when upset; mean= 7.9)

D. Encourage or suppress emotional expression

55. I teach my child to keep control of his/her feelings at all times. (control feelings; mean= 2.8)

82. I believe that children must learn early not to cry. (learn not to cry;

mean= 2.1)

92. If my child is upset over nothing, I encourage him/her not to cry.

(encourage not to cry; mean= 4.8)

E. Takes or encourages a pragmatic response

93. I believe that children cope better when they learn not to be so upset.

(cope better when not upset; mean= 5.0)

94. When my child is upset, I try to find out the problem and resolve it.

(resolves problem; mean= 7.4)

96. If my child is frustrated and upset because a task is too complicated or difficult, I do it for him/her. (helps when frustrated; mean= 4.4)

F. Ignores emotional distress

95. Sometimes when my child is upset or angry, I find that the best thing to do is to leave the room and ignore him/her. (best to ignore; mean= 4.5)

Notes. Item numbers less than 91 are from Block (1965). Items were sorted into equal groups ranging from 1 (= most uncharacteristic) to 9 (= most characteristic).

Footnotes

- 1.** For analyses that concerned only the Preschool Behavior Q-sort scales (Cronbach α s and scale correlations), the Kamloops sample was increased by 10 additional families who had incomplete parent data, making a total N of 160 across all samples.
- 2.** Are these techniques appropriate, given the small number of samples here? According to Hunter and Schmidt (1990, pp. 411-421), the problem in such a case is second-order sampling error, which primarily affects estimates of variance across samples. These estimates may be unstable because of the small number of samples on which they are based. In contrast, values for mean correlations are more stable, because they are averaged over the total number of subjects. Given the focus of this paper on replication, the impact of second-order sampling error is conservative, working against Type I Error. If sampling error is under-estimated, then not all variation that is due to sampling error will be recognized as such (in this case, the inclusion of additional samples would reveal additional replicating comparisons). If, on the other hand, sampling error is over-estimated, then relations that are moderated by other variables would be mistaken for simple replicating relations-- an error that is not serious for present purposes, because moderated or not, such relations replicate across samples. Thus meta-analytic techniques are appropriate and meaningful for integrating findings across these samples,

given our limited purposes, although the set of findings will undoubtedly be augmented and the mean values undergo some change as additional samples become available.

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Table 1

Demographic characteristics of the samples.

	Samples				
	Vancouver	Toronto 1	Toronto 2	Toronto 3	Kamloops
N	30	28	27	33	32
% boys	37	36	52	52	38
Siblings (mean)	.9	.6 ^f	1.1 ^g	1.2 ^g	.5 ^f
PPVT (mean)	112	116	–	111	107 ^a
Age (mean years)					
children	4.3 ^g	3.8 ^f	4.3 ^g	4.8 ^h	3.8 ^f
mothers	32 ^f	33	32 ^f	35 ^g	32 ^f
fathers	34	36	36	38	36
Education (mean years)					
mothers	14 ^f	16	14 ^f	16 ^g	14 ^f
fathers	16 ^f	17 ^f	15	16 ^f	14 ^g
Income (1000s)	45 ^f	57 ^g	55 ^g	58 ^g	44 ^f
Collected	1981-82	1987-88	1988-89	1988-90	1991-94

Notes. Samples ordered by date of data collection; income given in 1986 dollars. Within rows, variables that do not share the same superscript ^{f, g, h} differ significantly, $p < .01$ (except for Fathers' education and Mothers' age, $p < .05$).

^a $N = 25$.

Table 2.

Mean correlations (and mean partialled correlations) between parents' responses to children's emotional distress and children's friendly behaviors to peers.

CRP-Q item	Fathers		Mothers	
	Girls	Boys	Girls	Boys
81. punish sib quarrels	-.11* (-.06*)	-.46* (-.44)	-.20* (-.16)	-.67* (-.42+)
92. encourage not to cry	-.33* (-.18*)	.17* (.12)	-.21* (-.31*)	.57* (.39*)
97. comforts when victim	-.09* (.14)	.35* (.17*)	-.25* (-.15*)	.43* (.25*)
95. best to ignore	-.02* (.10*)	-.38+ (-.09)	.22* (.14*)	-.07* (-.34*)
93. cope better when not upset	.15* (.38*)	-.13* (-.28)	-.04 (-.22)	.37* (.26)
98. firm during disputes	.28* (.12*)	-.30* (-.42*)	-.05* (.24*)	.12* (.14*)
94. resolves problem	.11* (.18)	.30+ (-.12*)	-.04 (-.09)	.12 (.04)

(table continues)

CRP-Q item	Fathers		Mothers	
	Girls	Boys	Girls	Boys
11. comforts when upset	.27 (.42)	.29* (.04)	-.25* (-.15*)	.09* (-.18*)
99. necessary to frighten	.11 (.29)	.24* (.40*)	-.08 (-.18)	.08* (.39*)
31. anger not allowed	.07* (-.04)	-.21* (-.54)	-.19* (-.09)	-.04* (-.08*)
82. learn not to cry	.19* (.02*)	-.21 (-.11)	.00* (-.45)	.07* (-.09)
55. control feelings	-.19 (-.27*)	-.10* (.19*)	.09* (-.01)	-.11* (-.25*)
96. helps when frustrated	-.17* (-.06*)	.13 (.23)	.18 (.16)	-.01* (-.08*)

Notes. All correlations corrected for attenuation due to reliability. Partialled correlations remove the effects of parental affect, control, and warmth – see text.

Replicating values $\geq .30$ in **bold**.

* All variability across samples could be attributed to sampling error.

+ Variability present, but 95%-confidence interval does not include zero.

Table 3.

Mean correlations (and mean partialled correlations) between parents' responses to children's emotional distress and children's resourceful, active, engagement in preschool.

CRP-Q item	Fathers		Mothers	
	Girls	Boys	Girls	Boys
92. encourage not to cry	.13 (.17)	.63* (.60*)	-.06* (-.25*)	.16* (.31)
99. necessary to frighten	.26* (-.08*)	-.04* (.11*)	-.58* (-.63*)	-.02 (.46)
95. best to ignore	-.03* (.02*)	-.38+ (.01*)	.09* (.10)	-.50* (-.55*)
81. punish sib quarrels	.10 (.03*)	-.43* (-.22*)	-.08* (.05)	-.30* (-.06)
94. resolves problem	.39* (.74+) ^a	.33* (.05*)	-.13* (-.17*)	.20* (-.19)
93. cope better when not upset	.09* (.05*)	.36* (.36*)	-.04* (-.24*)	.19* (.22*)
97. comforts when victim	.16 (.10)	.31* (.31*)	-.03* (-.18*)	.33* (.49+)

(table continues)

CRP-Q item	Fathers		Mothers	
	Girls	Boys	Girls	Boys
98. firm during disputes	-.32	-.06*	-.20*	-.03*

Socialization of Emotional Expression, page 55

	(-.44)	(-.26*)	(-.14)	(.05)
31. anger not allowed	.18*	.31*	.02	.09*
	(.19*)	(.09)	(-.05)	(-.07)
82. learn not to cry	.24	-.16*	-.20*	.06*
	(.24)	(-.11*)	(-.31*)	(-.41)
11. comforts when upset	-.02*	.12*	.18*	.02*
	(.10)	(.10*)	(.21*)	(.09*)
55. control feelings	-.17*	.10*	.08	.01*
	(-.22*)	(.40*)	(.11)	(.09)
96. helps when frustrated	-.11*	.08*	.01	-.05*
	(-.10*)	(.38*)	(-.02)	(-.08)

Notes. See notes for Table 2.

a. Lower bound of the 95% confidence interval is approximately .50

Table 4.

Correlations between emotional socialization practices at age four and changes in children's competence from ages four to seven.

Parent	CRP-Q item	Change in child competence			
		Boys ($N = 8$)		Girls ($N = 13$)	
		Friendly	Ego	Friendly	Ego
Mothers					
	55. control feelings	-.25	-.87**	-.12	.35
	31. anger not allowed	-.00	-.79*	.15	.46+
	81. punish sib quarrels	.31	-.76*	.22	.33
	11. comforts when upset	.54+	.68*	-.32	-.07
	82. learn not to cry	.26	-.19	-.45+	-.30
Fathers					
	55. control feelings	-.82**	-.24	.29	-.26
	31. anger not allowed	-.73*	-.32	.11	.48*
	82. learn not to cry	.20	-.34	-.23	.39+
	11. comforts when upset	-.02	.29	-.25	.34
	81. punish sib quarrels	.25	.16	-.23	-.06

Notes. Friendly= Friendly to peers; Ego= Ego Strength. For the omnibus null hypothesis for boys, $\chi^2(20) = 39.82$, $p < .006$; for girls, $\chi^2(20) = 19.51$, $p > .48$.

Correlations are not corrected for attenuation. Data for CRP-Q items 92 to 99 were not available in this sample (Vancouver).