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INDIVIDUAL DIFFERENCES IN TODDLERS' EMOTION REGULATION :  
THE RELATIONSHIP BETWEEN CHILDREN'S PROBLEM-FOCUSED  
COPING STYLE AND MATERNAL RESPONSE STRATEGIES TO THEIR NEG-  
ATIVE EMOTIONS.

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Abstract

The relationship between children's problem-focused coping strategies observed in a problem solving task (the barrier situation) and four types of maternal daily response strategies to their children's negative emotions (restraint/punishment, attention-control, soothing, and reasoning) measured by the questionnaire was examined. Twenty-seven 18-month-toddlers were observed in the barrier situation. In this situation, the children were required to open the box where their desired toys were, which was beyond the capacity of the children of this age. We focused on help-seeking behaviors as the children's problem-focused coping strategies. The children were classified in four groups in terms of help-seeking from their mothers and from the experimenter. It was indicated that of four types of maternal response strategies, only restraint/punishment related to the children's help-seeking behaviors. However, maternal restraint/punishment did not relate to whether the children sought help or not, but related to whom they sought help for. The results were discussed in terms of children's perception of their mothers' availability and the development of children's independence.

**Key Words:** 18-month-toddler, barrier situation, problem-focused coping, maternal response strategies, individual difference.

Emotion regulation has been recognized as one of the key concepts in the study of socioemotional development (Kopp, 1989 ; Thompson, 1990). The acquisition of the skills to regulate one's own emotion is seen as a developmental task during infant-toddler period. Emotion regulation is defined as "the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals (Thompson, 1994,

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Pp. 27-28).” Many theorists as well as Thompson use the term emotion regulation to refer to both an individually based and a relational phenomenon. Caregivers play a significant role in helping their children to regulate their emotions, especially in the first few years of life. And then the agency of emotion regulation shifts from caregivers to children (Kopp, 1989). That is, an emotion is externally managed and increasingly self-regulated with development. It seems reasonable to assume that individual differences in emotion regulation are defined innately to some degree (Rothbart & Derryberry, 1981), but socialization factors also have some influences on children’s emotion regulation development. The purpose of this study was to examine the relation between children’s emotion-regulation styles and maternal response strategies to their children.

Coping theorists also deal with the same phenomena as emotion regulation, especially regulation of negative emotions. Lazarus & Folkman (1984) differentiated two modes of coping, problem-focused coping and emotion-focused coping. Problem-focused coping involves active efforts to modify the source of the problem, and emotion-focused coping involves efforts to reduce emotional distress.

Individual differences in emotion regulation in infancy have been referred to in the attachment studies. Attachment is defined as an affective bond between an infant and his or her caregiver that develops over the first year of life (Bowlby, 1969). Different attachment styles are thought to be associated with infants’ emotion regulation styles when they interact with their attachment figures (Thompson, 1990; Cassidy, 1994). Attachment style which is usually measured by the Strange Situation Procedure (Ainsworth, Blehar, Waters, & Wall, 1978). Would reflect infant’s emotion regulation style during the brief separation from the mother. Though not examined directly, the relations of infants’ emotion regulation styles and maternal characteristics have been suggested. Avoidantly attached infants, whose mothers are characterized as rejecting and unresponsive (Egeland & Farber, 1984), showed less distress and more self-oriented behaviors in the Strange Situation (Braungart & Stifter, 1991). On the other hand, ambivalently attached infants, whose mothers are characterized as unresponsive or inconsistently responsive (Isabella, Belsky, & von Eye, 1989; Isabella & Belsky, 1991), expressed high levels of distress and high levels of people orientation during separation (Braungart & Stifter, 1991).

However, some questions remain to be explored in prior studies. First, despite considerable researches on individual differences in emotion regulation in the attachment studies, their concerns are limited to individual differences in emotion-focused coping, and individual differences in problem-focused coping have scarcely been examined. One of the reasons for this is that problem-focused coping has not yet emerged in the first few years when the Strange Situation Paradigm is applicable to. Second, in considering relations between the children’s emotion regulation styles and maternal characteristics researchers have focused on, only global constructs such as maternal sensitivity or maternal responsiveness irrespective of children’s emotion regulation. Therefore, which aspects of maternal responses to their children’s emotions relate to children’s emotion regulation behaviors is unclear. In a word, no study has been conducted to investigate the relations between children’s problem-focused coping

and maternal usual behaviors to their children's negative emotions.

To examine this issue, we focused on toddlers aged eighteen months because it has theoretically been claimed that problem-focused coping emerges in the middle of the second year (Kopp, 1989). We used a barrier situation (van Lieshout, 1975) as a problem-solving task to assess the toddlers' problem-focused coping. In this situation, children's efforts to remove the barrier by themselves and to seek help to get the desired object could be seen as problem-focused coping behaviors. In considering the relations of children's coping behaviors and maternal behaviors, we especially took note of help-seeking for the following reason.

Toddlerhood is characterized as the beginning of the separation-individuation process, or the emergence of autonomous self. Toddlers' increased intentionality would sometimes face the limitation of their ability or the restraints placed on by their caregivers inherent in increased socialization pressure. Therefore, toddlers have to deal with frustrations accompanied with these limitations (Mahler, Pine, & Bergman, 1964; Sroufe, 1996). Waters & Sroufe (1983) suggested that the central issue in this period is to be able to draw upon resources and to deal with opportunities and challenges in the environment. For example, in a problem-solving situation, movement toward autonomy is indicated by flexibility, resourcefulness, and ability to use adult assistance without being overtly dependent on it. Thus, seeking help from others in such a situation is thought to reflect a major aspect of children's competence of this age.

What kind of maternal behavior is expected to be associated with the children's problem-focused coping behaviors (help-seeking) then? It is not clear in fact, but some relations between children's social competence level and maternal socialization strategies concerning their children's negative emotions were reported in preschoolers. That is, maternal punitive attitudes to their children's negative emotions were negatively related to children's social competence, and maternal comforting responses were positively related to children's social competence (Eisenberg, Fabes, Carlo, & Karbon, 1992). Given the competence of this age, it is predicted that maternal punitive behaviors to toddlers' negative emotions relate to less help-seeking from others, and maternal empathic behaviors (e.g., soothing) relate to more help-seeking from others.

## Method

Subjects: 27 toddlers aged 18-month-old (18 boys, 9 girls) and their mothers participated in this study.

## Apparatus :

5 kinds of toys (kitchen utensils for playing house, some small cars, a toy piano, a ball made of cloth, and a stuffed animal) were prepared to play with.

A clear plastic box was employed as a container for the toys. The children could see the toys in the box from the outside. The box could be locked by the handles attached to the lid of the box. The children would know how to open the box, but it was difficult for them to take off the lid. The box was not so heavy and big that the children could carry it or push it across the floor.

**Procedures :***Measurement of children's problem-focused coping.*

Two female experimenters visited the subject's home and the experiment was conducted in a room of the house.

Barrier situation task consisted of two episodes. 1. The child and mother played together with the toys for 5 minutes (Episode 1). 2. Following a 5-min period of the interactive play, the experimenter interrupted their play and began to put away the toys in the box. When all the toys were put away and the lid was put on, the experimenter sat in front of the child and presented the box saying, "Here are the toys in the box. Can you open this box?" The experimenter prompted the child to open the box every 30 seconds. This episode lasted for 3 minutes (Episode 2). After 3 minutes, the experimenter said to the child, "You have tried hard. Let's open the box together.", and helped the child to open it. During the second episode, the mother was seated on the floor next to the child and was engaged in filling out the questionnaire. The mother was instructed not to help the child actively. When the child came to seek help from the experimenter, she encouraged the child to try by him/herself. All of the child's behaviors were videotaped.

*Classification of the children in terms of help-seeking.*

The following behaviors were regarded as help-seeking from others.: Carrying or pushing the box to the mother or the experimenter, Taking the mother or the experimenter by the hand, Saying "Open it." to the mother or to the experimenter.

The occurrence of these behaviors was checked. The children were divided into 4 groups in terms of help-seeking from others, that is, the children who sought help from both the mother and the experimenter (group 1, n=5), those who sought help only from the mother (group 2, n=7), those who sought help only from the experimenter (group 3, n=9), and those who sought help from neither the mother nor the experimenter (group 4, n=6). Percent interraters agreement for the children's classification was 96.3%.

*Measurement of maternal responses to their children's negative emotions.*

Maternal response strategies to their children's negative emotions were assessed by Maternal Response Style Scale developed by the author (Sakagami, in preparation). Mothers were presented 7 typical situations in which children are likely to experience distress and negative emotions. For each situation, mothers were asked to rate how likely they would be to react in each of 4 fashions by means of five-point-scale (1: never-5: very often). Four types of strategies included restraint/punishment (e.g., command the child to be quiet, put restraints on the child's behavior.  $\alpha = .86$ ), attention-control (e.g., shift the child's attention by showing toys etc.  $\alpha = .89$ ), soothing (e.g., hold the child, give empathic words to the child.  $\alpha = .88$ ), and reasoning (e.g., explain the causes of their distress, explain why the child has to comply with the mother's request.  $\alpha = .86$ ) (Alpha coefficients are in parentheses). Each type of strategies consisted of two to four items. The mean score across seven situations was used as a score for each strategy type. Seven situations could be divided into two different kinds

by confirmative factor analysis, one concerning children's physiological changes and environmental changes (four situations), another concerning discipline (three situations). The mean score for each strategy type to each of the two was also calculated. Alpha coefficients for all maternal variables to each kind of situation were above .77

## Results

One way analyses of variance with one between-subjects factor (child's help-seeking) were performed for the scores of four maternal strategy types across all situations. The analyses of variance showed a significant group effect on maternal restraint/punishment ( $F(3, 23) = 3.99, p = .02$ ). Differences between separate means were tested by Scheffe's test. Contrasting separate means revealed a significant difference between group 2 and group 3 ( $Mse = 0.16, p < .05$ ), suggesting that the mothers of the children who sought help only from the experimenter used restraint/punishment more frequently than those of the children who sought help only from the mother. No significant differences were found for attention-control, soothing, and reasoning (Table 1). (The raw score of maternal restraint/punishment was not normally distributed. Therefore Kruskal-Wallis test was used to confirm the difference shown by the ANOVA. This analysis also indicated significant difference between groups ( $H = 8.11, p < .05$ ).

Next, as the significant group effect was shown on maternal restraint/punishment by the ANOVA, further analysis was conducted on this variable. Two way analysis of variance with one between-subjects factor (child's help seeking) and one within-subjects factor (situation) was conducted. A significant group effect was found, ( $F(3, 23) = 4.01, p = .02$ ). A significant group  $\times$  situation interaction effect was also found ( $F(3, 23) = 3.93, p = .02$ ) (Fig. 1).

Table 1. Maternal response strategies to their children's negative emotions.

	Group 1		Group 2		Group 3		Group 4	
	M	SD	M	SD	M	SD	M	SD
Restraint/Punishment	1.60	(0.46)	1.48	(0.35)	2.12	(0.36)	1.89	(0.46)
Attention-Control	2.02	(0.25)	2.30	(0.86)	2.64	(0.46)	2.31	(0.29)
Soothing	3.21	(0.56)	3.31	(0.63)	3.29	(0.40)	3.09	(0.60)
Reasoning	3.23	(0.68)	3.01	(0.94)	3.40	(0.32)	2.97	(0.60)

## Discussion

Individual differences in toddlers' problem-focused coping behaviors in terms of help-seeking from others and their relations to maternal response strategies to their children's negative emotions were examined in this article.

It became apparent that of four maternal response strategy types, only restraint/punishment was significantly related to the children's help-seeking behaviors. Contrary to our prediction, however, maternal restraint/punishment did not relate to whether the children sought help or not, but did relate to whom the children sought help from. That is, mothers of those who used only their mothers as a helper had the lowest restraint/punishment score, and mothers of those who used only the experimenter as a

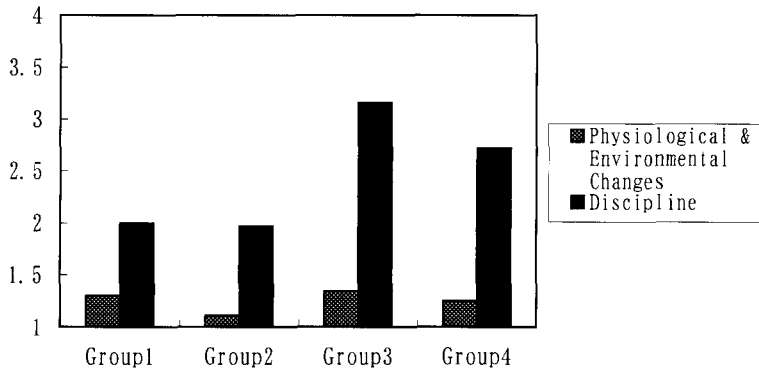


Figure 1. Group-differences of maternal restraint/punishment in each situation.

helper had the highest restrain/punishment score of the four groups. Especially in the score of restraint/punishment to the situations concerning discipline (not to the situations concerning children's physiological changes and environmental changes), a major difference was found between these two groups.

Two interpretations are possible about this result.

The first interpretation concerns the general maternal availability perceived by the children. It is assumed that the children classified in the group 3 usually received restraints on their behaviors in their daily lives, so they might have perceived their mothers less available for getting the objects they wanted in the experimental situation. Therefore they might have sought help from the experimenter at hand. On the contrary, the children who received less restraints in their daily lives might have estimated maternal availability highly and sought help from their mothers in the experimental situation.

The second explanation concerns the development of children's independence. Perhaps all the children would know who hid the toys in the box and asked them to open that box (=experimenter). Moreover, the experimenter was located closer to the child during the barrier situation. Therefore, restricted to that situation, seeking help from the experimenter would be the most natural way of solving the problem.

Maternal restraint/punishment seems to reflect the strictness of socialization and maternal expectation for their children's independence (self-control), especially in the context of discipline. It is expected that moderate maternal restraint/punishment facilitates the children's independence. Note that the maternal restraint/punishment score of group 3 children was not extremely high, although it was relatively high compared to that of the other groups. So the children of group 3 are assumed to have developed the ability of coping with problems without relying on their mothers or the ability of relying on others except their mothers when their mothers are not available. Therefore, they could easily use the experimenter as a helper though they were not acquainted with her before. On the other hand, the children of group 2 would not have fully developed such ability and seemed to be unable to use the experimenter as a helper.

We have to refer to the children of group 4, who sought help from neither their mothers nor the experimenter. It is possible that different kinds of children were

compounded in this group, that is, those who could well regulate their emotions by effectively using emotion-focused coping strategies (e. g., active distraction), and those who haven't developed the mature coping strategies such as help seeking or effective emotion-focused coping strategies. Further examinations will be needed about the children of this group.

Our hypothesis about the relation of the children's problem-focused coping and maternal empathic attitudes (e. g., soothing) was not supported. These two constructs may not be related in fact, but other explanations are also possible. One is that although they have some relations potentially, they were not observed in our study. Another is that maternal empathic attitudes may not relate to children's problem-focused coping strategies, but relate to emotion-focused coping strategies, which we did not examine.

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