

The Relationship Between Emotional Intelligence of Mothers and Problem Behavior in Their Young Children: A Longitudinal Analysis

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Abstract: None available.

Full Text: Headnote ABSTRACT: We studied the relationship between the emotional intelligence of mothers and problem behavior in their young children. The study covered 65 mothers who answered questionnaires during all of the studied phases, i.e., when the child was a fetus, and when it was 2, 3, 4, and 5 years old. The emotional intelligence of the mothers was measured with Bar-On Emotional Quotient Inventory (EQ-i: Bar-On, 1997). The results showed a relationship between certain areas of emotional intelligence of the mothers and problem behavior in their children. The mother's emotional intelligence was related to the mother herself having been a victim of violence. KEY WORDS: emotional intelligence, problem behavior, attachment.

INTRODUCTION Even when they are infants who cannot speak, highly sensitive children acutely sense the tension and the problems in the life of their parents, and are affected by them. The younger the child, the greater is its dependence on the mother. Children are naturally affected most by their mothers because they are in close contact with their mothers for long periods of time. Children expand their interpersonal relationships in later life, based on the mother-child relationship of their infancy. Therefore, the mother's presence is crucial, and the quality of the mother-child relationship is important in the development of the child. In the present study, we evaluated the quality of the mother-child relationship from the emotional intelligence scores of the mothers, and demonstrated its relationship with problem behavior in young children. Emotional intelligence received much attention since the 1995 publication of D. Goleman's book, Emotional Intelligence. Emotional intelligence is the ability to skillfully manage one's emotions. This ability is not only important for individuals to lead a healthy life and be true to themselves, but also for developing and maintaining stable and constructive interpersonal relationships. Emotional intelligence also plays a significant role in adapting to fast-changing modern society and to actively contributing to society. The scientific study of emotional intelligence has its roots in studies of the Intelligence Quotient. More attention has been paid to the idea that various aspects of intelligence are related to emotions, based on the view that only focusing on intellectual ability can not properly evaluate intelligence, and that a more comprehensive and multi-faceted view was needed. Emotional intelligence includes not only social intelligence and the practical ability to understand other people's emotions and behavior, and to control them, but also the ability to sense one's own emotions and behavior and to regulate them skillfully. Therefore, enhancing emotional intelligence makes it possible to promote and maintain the soundness, and physical and mental health of individuals and groups (Ciarrochi, Forgas, & Mayer, 2001). The interplay of emotions relevant to emotional intelligence starts with the bilateral relationship that develops soon after the birth of a child. For the infant, the other party in the bilateral relationship is the person who raises him or her. This is normally the mother. The interaction between the mother and child at infancy is primarily controlled by the mother. If the mother possesses a great deal of sensitivity, a very natural emotional exchange with her child becomes possible. Such sensitivity in the mother comes not only from her latent potential but is also acquired through her past experiences, current situation, etc. A mother with a rich sensitivity develops a thoughtful relationship with her child. The infant's behavior will start to follow a pattern that is built up through its relationship with the mother. Children who grow up knowing that their mothers will respond to them have no problems in exploring new environments. Even when their mood is disturbed, these children seek their mothers immediately and regain composure. This is based on the emotional experiences the child has had with the mother. The relationship between mother and infant arises from the regularity of those interaction patterns. Exploring the

functions and objectives of these relationships beyond the interaction patterns can shed light on that relationship. In a report on the quality of family relationships in the early life of the mother, Main and Goldwyn (1984) claim that such relationships can predict the nurturing style of the mother and the characteristics of her relationship with her infant. The experiences of interpersonal relationships affect an individual's behavior, including subsequent social relationships. Thus, the problems in interpersonal relationships are rooted in early life experiences, which affect individuals in various ways. In particular, problem behavior in young children must be studied at the very beginning of the child's relationship with the mother, and the causes for such behavior need to be analyzed. Young children who have a limited vocabulary and have no means of expressing their feelings verbally often express their feelings through problem behavior (James, 1994). Young children often use their bodies to express their feelings. If the behavior of a young child is inappropriate for the child's age or the situation, it is necessary to focus on the internal workings of their mind. When the behavior of a young child reveals internal aspects that do not match their feelings, we should suspect major discord in the child's mind. Psychological discord in young children indicates problems in the interactive relationship of the mother and the child. A practical way of addressing such problems is to change the mother's overt interactive behavior (Sameroff & Emde, 1989). For this to occur, the mother must become aware of her own problems, and change her behavior to improve the quality of her relationship with her young child. With this in mind, we chose to examine the quality of the mother-child bilateral relationship by looking at the relationship between the mother's emotional intelligence and the child's problem behavior. We illuminated the following six relationships: 1) The relationship between the mother's emotional intelligence and her violent behavior toward her young child. 2) The relationship between the mother's emotional intelligence and violent behavior that the mother had experienced herself, earlier in life. 3) The relationship between the mother's emotional intelligence and problem behavior in her young child. 4) The relationship between the mother's attachment to her young child and problem behavior in the child. 5) The relationship between the problem behavior in a young child and the mother's anxiety level. 6) The relationship between the mother's emotional intelligence and her anxiety level.

METHODS Participants The subjects were 65 mothers who filled out the questionnaire at all of the stages of the study (i.e., during pregnancy or the fetal stage of child, and when the child was 2, 3, 4, and 5 years old). Study Period The study period was from April to June 1998 for the fetal stage (Phase 1), in June 2000 for the 2-year-old stage (Phase 2), in April 2001 for the 3-year-old stage (Phase 3), in October 2002 for the 4-year-old stage (Phase 4), and in October 2003 for the 5-year-old stage (Phase 5). Investigation Scales Phase 1. (1) State-Trait Anxiety Inventory (STAI: Spielberger, Gorsuch, & Lushene., 1970). This study focused on trait anxiety. Phase 2. (1) Maternal Attachment Inventory-II (MAI-II). This was a partially revised MAI (Muller, 1994). Phase 3. (1) Maternal Attachment Inventory-III (MAI-III). Eighteen items from the MAI-II were adopted and adapted for 3-year-old children. Phase 4. (1) Maternal Attachment Inventory-IV (MAI-IV). This was a partially revised MAI-III (2) Eyberg Child Behavior Inventory (ECBI: Eyberg, 1992). (3) Mother's experience of violent behavior and the persons who subjected her to such behavior. (4) Frequency of violent behavior by the mother toward her child. Phase 5. (1) Bar-On Emotional Quotient Inventory (EQ-i; BarOn & Parker, 2000).

RESULTS Attributes of the Children Thirty-five (53.8%) of the children in the study were males and 30 (46.2%) were females. Thirty (46.2%) were the first child, 19 (29.2%) were the second child, 5 (7.7%) were the third child, and 1 (1.5%) was the fifth child, of their mothers. The mean age of the fetus was 38.5 weeks (SD 1.1) during Phase 1, and mean ages of the children were 1.9 (SD 0.14), 2.7 (SD 0.14), 4.2 (SD 0.16) and 5.5 (SD 0.17) years, respectively, for Phases 2 to 5. Attributes of the Mothers The mean age of the mothers when the children were 5 years old was 36.4 (SD 3.6) years. The educational levels of the mothers were as follows: 2 (3.1%) had studied up to middle school, 16 (24.6%) had studied up to high school, 22 (33.8%) had junior college diplomas, and 17 (26.2%) were college graduates. Eight (12.3%) of the subjects did not disclose their educational level. Thirty-five (53.8%) of the mothers were homemakers and 30 (46.2%) had outside jobs. The Mean (SD) and Median Level, and Range of Each Scale and Subscale Table 1 shows the mean (SD), median, and range of the score for each scale and

subscale. The trait anxiety (STAI) inventory consisted of 20 items with four choices each. The score ranged from 20 to 80. The MAI-II had 26 items with four choices, and a score range of 26-104. MAI-III had 18 items with four choices, and a score range of 18-72. MAI-IV had 26 items with four choices, and a score range of 26-104. ECBI consisted of 36 items with five choices, and a score range of 36-180. EQ-i had 133 items with five choices. The EQ-i had five composite scales: "Intrapersonal: INTRA," "Interpersonal: INTER," "Adaptation: ADAPT," "Stress management: STRESS," and "Good mood: MOOD." These composite scales had a total of 17 subscales (Table 1) and the scores of each subscale were tallied. In this study, the subscales are expressed as "areas."

Table 1
Mean (SD) and Median Level and Range of Each Scale and Subscale

	<i>Mean (SD)</i>	<i>Median</i>	<i>Range</i>
Trait Anxiety	40.4 (10.5)	39.0	24–68
MAI-II	92.6 (9.7)	94.0	57–104
MAI-III	64.7 (6.7)	66.0	44–72
MAI-IV	92.7 (10.8)	97.0	51–104
ECBI	84.7 (14.2)	84.0	55–116
EQ-i			
<Intrapersonal: INTRA>			
(1) Emotional self-awareness	24.7 (4.4)	25.0	15–32
(2) Assertiveness	22.7 (4.7)	22.0	13–33
(3) Self-regard	28.5 (6.4)	28.0	13–41
(4) Self-actualization	34.8 (5.0)	35.0	19–43
(5) Independence	22.4 (4.4)	22.0	13–31
<Interpersonal: INTER>			
(6) Empathy	28.7 (2.7)	29.0	23–35
(7) Interpersonal relationship	38.7 (4.8)	39.0	26–49
(8) Social responsibility	36.2 (3.6)	36.0	29–45
<Adaptation: ADAPT>			
(9) Problem solving	28.7 (4.5)	29.0	16–39
(10) Reality testing	33.9 (4.3)	34.0	22–47
(11) Flexibility	26.3 (4.2)	26.0	16–36
<Stress management: STRESS>			
(12) Stress tolerance	27.8 (5.6)	28.0	10–43
(13) Impulse control	30.5 (5.6)	32.0	18–45
<Good mood: MOOD>			
(14) Happiness	33.6 (5.8)	35.0	19–44
(15) Optimism	26.2 (4.9)	26.0	12–37
(16) Positive impression	19.3 (4.8)	19.0	8–32
(17) Negative impression	15.7 (4.6)	15.0	7–32

Table 2
Frequency of Maternal Violence to Her Child

<i>Frequency</i>	<i>Number</i>	<i>%</i>
Every day	1	2.9
13/1 month	1	2.9
9/1 month	4	11.8
6/1 month	7	20.6
4/1 month	1	2.9
3/1 month	3	8.8
2/1 month	8	23.5
1/1 month	9	26.5
Total	34	100

The Relationship Between the Violent Behavior of the Mother Toward her Young Child and the Child's Problem Behavior (ECBI) Table 2 shows the frequency of violent behavior by the mothers toward their young children and the number of mothers showing such behavior. In this study, we considered that the mother was positive for

violent behavior if she showed violence toward her child at least once in a month. We used the t-Test to study the relationship between violence by the mother toward her young child and problem behavior in the child. There was a significant difference in problem behavior, depending on whether their mothers behaved violently toward them or not (Table 3). The children who had been subjected to violence by their mothers showed a significantly higher level of problem behavior. The Relationship Between the Mother's Violent Behavior Toward her Young Child and her Emotional Intelligence Quotient (EQ-i) We performed t-tests for the 17 areas of the EQ-i to study their relationship to violent behavior by the mother toward her young child. Five areas, including problem solving, stress tolerance, and impulse control, showed a significant difference between mothers who showed violent behavior and those who did not. Flexibility also tended to show a significant difference (Table 3). Mothers who showed violent behavior toward their child had lower scores in areas that had, or tended to have, significant differences. The six areas that showed or tended to show significant differences included ADAPT, STRESS, and MOOD. There was no significant difference in the INTRA and INTER scores.

Table 3
t-Test for Significant Differences in Points ECBI and EQ-i
between the Children of Violent Mothers and Those of
Nonviolent Mothers

	<i>Average Score (SD)</i>		<i>t value</i>	<i>df</i>	<i>p value</i>
	<i>Violent group</i>	<i>Nonviolent group</i>			
ECBI	88.6 (14.1)	80.4 (13.3)	2.402	63	*
Problem solving	27.7 (4.4)	29.8 (4.3)	-1.995	63	*
Flexibility	25.4 (4.7)	27.3 (3.4)	-1.888	63	†
Stress tolerance	26.7 (5.6)	29.1 (5.5)	-1.861	63	*
Impulse control	29.3 (6.4)	31.8 (4.4)	-1.855	63	*
Optimism	25.2 (5.0)	27.4 (4.5)	-1.826	63	*
Positive impression	18.3 (4.4)	20.3 (5.0)	-1.743	63	*

*p < .05 †p < .1

The Relationship Between the Mother's Experience of Violence and her EQ-i We examined the relationship between the mother's experience of violence in her childhood and her EQ-i scores. Table 4 shows the number of mothers who were the victims of violent behavior and the offender's relationship to them. Eleven of the mothers had been subjected to violent behavior from their parents, their father, or their mother. This constituted 78.6% of the mothers who had experienced violence in their childhood. t-Tests were performed in 17 areas of the mothers' EQ-i, in relation to the experience of violence during their childhood, showed a significant difference in impulse control, and tended to have significant differences in four areas, including self-regard (Table 5). Mothers who experienced violence during their childhood had lower scores in the areas where they differed or tended to differ significantly from mothers who did not have such experiences.

Table 4
Numbers of Mothers who Were Victims of Acts of Violence

<i>Opponent</i>	<i>Numbers (%)</i>
Parents	2 (14.3)
Father	4 (28.6)
Mother	3 (21.4)
Mother & Peer	2 (14.3)
Family	1 (7.1)
Others	2 (14.3)
Total	14 (100)

The Relationship Between the ECBI of Young Children and their Mothers' EQ-i Based on their ECBI, the children were divided into a high score group (having the mean or higher score; 32 children) and a low score group (less than mean score; 33 children). t-Tests in the 17 areas of the mothers' EQ-i showed a significant difference between the two groups in eight areas, including self-actualization, and tended to be significantly different in two areas, including empathy (Table 6). The mothers of young children with high problem behavior scores had lower EQ-i scores in areas that showed or tended to show significant difference between the two groups.

Table 5
t-Test for Significant Difference in Points EQ-i between Mothers who Committed Acts Violence and Nonviolent Mothers

	<i>Average Score (SD)</i>		<i>t value</i>	<i>df</i>	<i>p value</i>
	<i>Violent group</i>	<i>Nonviolent group</i>			
Self-regard	25.9 (7.3)	29.2 (6.0)	-1.740	63	†
Reality testing	31.9 (5.1)	34.4 (3.9)	-1.948	63	†
Impulse control	27.1 (6.6)	31.6 (5.1)	-2.702	63	**
Positive impression	17.2 (5.4)	19.8 (4.5)	-1.851	63	†
Negative impression	17.5 (5.7)	15.2 (4.2)	1.695	63	†

**p < .01
†p < .1

Table 6
t-Test for Significant Difference in Points EQ-i and MAI between the High Group and the Low Group of ECBI

	<i>Average Score (SD)</i>		<i>t value</i>	<i>df</i>	<i>p value</i>
	<i>High group</i>	<i>Low group</i>			
Self-regard	26.6 (6.5)	30.3 (6.0)	-2.440	63	*
Self-actualization	32.8 (5.4)	36.9 (3.7)	-3.578	55.035	***
Empathy	27.8 (2.6)	29.5 (2.6)	-2.583	63	*
Social responsibility	35.4 (3.8)	37.0 (3.3)	-1.785	63	†
Reality testing	32.9 (4.0)	34.8 (4.4)	-1.802	63	†
Flexibility	25.1 (3.9)	27.4 (4.2)	-2.237	63	*
Impulse control	28.8 (5.3)	32.2 (5.4)	-2.587	63	*
Happiness	31.8 (5.9)	35.4 (5.1)	-2.609	63	*
Optimism	24.8 (5.0)	27.6 (4.5)	-2.357	63	*
Negative impression	16.7 (4.8)	14.6 (4.3)	1.839	63	*
MAI-II	90.5 (10.0)	94.6 (9.2)	1.742	63	†
MAI-III	62.9 (7.3)	66.3 (5.7)	2.090	63	*
MAI-IV	89.5 (10.7)	95.7 (10.7)	2.382	63	*

***p < .001
*p < .05
†p < .1

The Relationship Between the Young Child's ECBI and the Mother's Attachment to the Child The difference between the two ECBI score groups in the mother's attachment to the child was examined (in 2-, 3-, and 4-year-old children). The mother's attachment to the child tended to be significantly different between the high and low ECBI score groups. There was a significant difference between the two groups in 3- and 4-year-old children (Table 6). The mother's attachment to the child was low among young children with high scores of problem behavior.

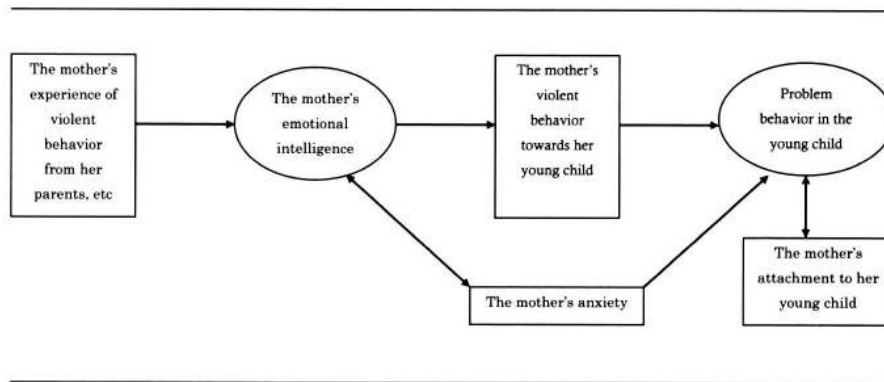
Table 7
t-test for Significant Difference in Points ECBI and EQ-i
between the High Group of Trait-anxiety and the Low Group
of Trait-anxiety

	<i>Average Score (SD)</i>		<i>t value</i>	<i>df</i>	<i>p value</i>
	<i>High group</i>	<i>Low Group</i>			
ECBI	91.7 (11.9)	81.6 (13.1)	2.985	55	**
Emotional self-awareness	22.1 (4.1)	26.6 (3.7)	-4.299	55	***
Assertiveness	20.7 (4.5)	24.0 (4.5)	-2.738	55	**
Self-regard	26.0 (6.1)	30.0 (6.6)	-2.331	55	*
Self-actualization	31.9 (5.6)	36.1 (3.8)	-3.174	37.664	**
Independence	20.1 (4.0)	24.2 (3.9)	-3.834	55	***
Empathy	27.4 (2.5)	29.7 (2.4)	-3.530	55	***
Interpersonal relationship	36.7 (4.8)	39.6 (4.6)	-2.359	55	*
Social responsibility	35.0 (3.2)	37.6 (3.0)	-3.232	55	**
Problem solving	27.1 (5.5)	29.4 (3.4)	-1.982	55	†
Flexibility	23.6 (3.5)	27.8 (4.1)	-3.997	55	***
Stress tolerance	24.1 (5.2)	30.0 (4.9)	-4.367	55	***
Impulse control	23.3 (5.6)	31.8 (5.6)	-2.382	55	*
Optimism	24.0 (5.9)	27.4 (3.9)	-2.648	55	*
Negative impression	17.3 (4.9)	14.8 (4.6)	1.976	55	†

***p < .001
 **p < .01
 *p < .05
 †p < .1

The Relationship Between the Mother's Anxiety (STAI) and the Young Child's ECBI, and Between STAI and the 17 Areas of the Mother's EQ-i The mothers were grouped into a high anxiety group (mean or higher score; 24 mothers) and a low anxiety group (less than the mean score; 33 mothers), according to their anxiety level (STAI), a personality trait. The ECBI scores of the children of mothers in the two anxiety groups were significantly different, as shown by the t-Test. The children of mothers with high levels of anxiety showed high ECBI scores. Similarly, t-Tests between the two anxiety group mothers in the 17 areas of EQ-i showed significant differences in 12 areas, including emotional self-awareness, and tended to show significant differences in two areas, including problem solving. Significant differences were seen in all eight areas of INTER and INTRA. The EQ-i scores were lower in the high anxiety group in areas that had or tended to have significant differences between the two groups.

Figure 1
A Flow Diagram Starting With the Experience of Violence by a Mother and Ending With the Development of Problem Behavior in Her Young Child



A Flow Diagram Starting From the Experience of Violence by a Mother and Ending With the Development of Problem Behavior in her Young Child Figure 1 shows a flow diagram of events starting with the experience of violence by a mother and ending with the development of problem behavior in her young child. DISCUSSION AND CONCLUSIONS A major developmental goal in early childhood is to establish an emotionally comfortable bilateral relationship in which mother and child are satisfied with each other, act in concert with one another, and are sensitive to each other. This bilateral relationship between the mother and child is needed to create a regulated relationship that will be stable and transcend time. In this respect, the emotional state of the mother is very important. In the present study, we explored the relationship between the mother's emotional intelligence and problem behavior in her child. Violent behavior of the mother toward her child was quite common, as reported by the mothers in this study. Such violence is perceived as "outrageous" by the child and causes pain to both the body and mind of the child, even when the mother may have a rational explanation for the violence. In our study, violent behavior of the mother toward her young child was related to problem behavior in the child. The child's feelings of outrage and rejection manifested as problem behavior. We have previously reported on the details of mothers' violent behavior toward young children and problem behavior in the children (Tsuji, & Oyama-Higa, 2004). Violence by the mother toward her young child is not a reasoned act, but is due to emotional factors in the mother's life. Since birth, the mother's emotions have been nurtured by interactions with the people around her, including her parents. From infancy, such interactions can influence an individual's development, including their self-awareness, their ability to believe themselves worthy of love, their confidence, courage, and sense of capableness. The results of the present study suggest that mothers who engage in violent behavior toward their children are those who cannot control their emotions. In particular, they had, or tended to have, significantly lower scores in the areas belonging to INTER, STRESS, and MOOD, which are composite scales of the EQ-i. Violence by a mother toward her child is an inappropriate and stressful response to the situation. Indeed, such mothers are usually not in a positive mood. When a mother cannot verbally convey her feelings to her child in a suitable manner, she may express these feelings in an immature manner, depending on her mood. This comes out as violent behavior. What is the source of the immature emotional intelligence of the mother? It is generally agreed that people who use violence against others are often themselves victims of violence. In the present study, 14 (21.5%) of the mothers were the victims of violence from their parents or others. The experience of violence was significantly related to the impulse control EQ-i score. Thus, the experience of violence makes the mother incapable of controlling her emotions, particularly her impulsive behavior. This may be the result of being subjected to outrageous impulsive violence by parents and

others. There were, or tended to be, significant differences between mothers of children who scored high in problem behavior and those whose children scored low in many of the EQ-i subscale scores. In particular, the two groups differed significantly in self-actualization, which suggests that the mother's feeling of dissatisfaction about her life is reflected in her child's problem behavior. The mother is also a woman, apart from being a mother to her children, and paying attention to herself and taking charge of her own life might lead to healthy development in her children. Moreover, there was a relationship between the child's problem behavior and the mother's attachment to the child at ages two, three, and four. We measured the problem behavior of young children when they were 4 years old. It was possible to predict the results of this measurement from the mother's attachment to the child when the child was 2 or 3 years old. We could also predict the future behavior of the child and the child's relationship with people around him or her from the quality of the mother-child relationship (Tsujino, Oyama-Higa, & Inuihara, 2002). There was a significant relationship between the anxiety level of the mother and problem behavior in her young child. Mothers with high anxiety scores had children with high levels of problem behavior. This means that highly anxious mothers lacked mental stability, as reflected in their low emotional intelligence. The feeling of instability caused by the mother's high level of anxiety may have affected the young child's mind. In addition, it hinders the creation of a proper bilateral relationship between the mother and child, and this instability comes out as problem behavior in the young child. Anxious mothers also showed significant differences from mothers with low anxiety in all the areas of the intrapersonal, interpersonal, and stress management scales of EQ-i. Anxiety is related to the aforementioned 3 EQ-i composite scales. In addition, emotional intelligence is related to anxiety, and the two affect each other. The results of the present study have shown that a mother's experience of being subjected to violence is related to her emotional intelligence, and that her emotional intelligence affects how she nurtures and interacts with her child. It has been argued that congenital factors do not have a significant role in emotional intelligence and that such intelligence is acquired and improved through education and learning (Mayer & Salvoey, 1997; Goleman, 1995). In other words, if emotional intelligence is a technical skill needed to manage emotions, training can improve the skill. The relationship between the mother and child starts from the moment the mother becomes aware of her pregnancy. As the infant's happiness depends on the mother's emotional intelligence, it is desirable for mothers to acquire emotional intelligence as early as possible and to continue to improve it.

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