

Association between Mothers' Concern about Child Rearing and Their Parenting Stress

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Many studies have indicated that parenting stress is an important factor causing child abuse. The purpose of the present study was to reveal the association between mothers' concern about child rearing and the stress they suffer from in the practice. The study subjects were 222 mothers with children of two kindergartens aged 3-6 years, and the study was conducted from October to November 2004. We analyzed the responses from 152 mothers, who were aged from 23 to 43 years with the mean (standard deviation) of 33.9 (4.0) years. The mothers were asked in a self-administered questionnaire their attributes, and whether they suffer from child-rearing stress. Those who responded "yes" were asked to write about their anxieties and worries in child rearing freely in the specified space of the questionnaire. Furthermore, the Japanese version of the Parenting Stress Index (PSI) was used to investigate parenting stress. Approximately half of the valid responses (75/152) provided descriptions of worries/anxieties regarding child rearing, and we classified their description using KJ method. The PSI score was significantly higher in those who wrote "Difficult to control myself" than in those who did not ($p=0.02$) and was significantly higher in those who wrote "Don't feel confident with child rearing" than in those who did not ($p=0.03$). In the present study, among 75 mothers who wrote about worries and anxieties in child rearing, approximately half of them wrote about worries and anxieties regarding parents themselves, which were significantly associated with some of the PSI subscales. Notably, the mothers whose writings were classified as "Don't feel confident with child rearing" felt depressed, had insufficient social support, and had low self-evaluation for their parental capability. In conclusion, the present study suggested the importance of screening based on surveys about depression, social support and stress management.

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Introduction

Results of many studies have indicated that parenting stress is one of the important factors contributing to child abuse.¹⁻⁴ Cases of child abuse have been steadily increasing in Japan and 34,652 cases consulted with children's counseling offices in 2004. More cases of child abuse are expected to be discovered in the future since the general public has become aware of child abuse. Regarding the support for mothers rearing child, the government and local governments have been taking various measures for preventing and detecting early the child abuse; however, to date, no sufficient effects have been observed.

While having and rearing children bring feelings of satisfaction

and happiness to parents' lives, mothers must deal with anxieties and worries regarding their children. In the survey on parenting stress administered to mothers with kindergarteners,⁵ 52.9% responded to have anxieties regarding child rearing. Since child rearing is a daily activity, the stress resulting from child rearing may accumulate various aggravations.⁶ Mothers' anxieties and worries about child rearing are probably reflect various stresses they are suffered from in the practice.

The purpose of the present study was to analyze worries and anxieties in child rearing described by mothers and determine their association with Parenting Stress Index (PSI) scores. A strong association between the two will suggest the possibility to provide effective child-rearing support by predicting latent stress based upon

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listening to worries and stress that mothers recognize in child rearing instead of using PSI.

Subjects and Methods

The study subjects were 222 mothers with children of two kindergartens aged 3-6 years, and the study was conducted from October to November 2004. The study purpose was explained to the principals of the respective kindergartens both orally and in writing, and written consent was obtained. Kindergarten teachers distributed to each mother a self-administered questionnaire enclosed in envelope with a document describing the purpose of the study and the privacy protection. A total of 157 (70.7%) mothers responded. In the analysis, we excluded one with many incomplete items, one without age and three who were not birth mothers, remaining 152 mothers. The age of these mothers ranged from 23 to 43 years with the mean (standard deviation) of 33.9 (4.0) years. The study was approved by the Ethical Committee of Nagasaki University Graduate School of Biomedical Sciences.

The mothers were asked in the questionnaire their attributes, and whether they suffer from child-rearing stress. Those who responded "yes" were asked to write about their anxieties and worries in child rearing freely in the specified space of the questionnaire. Furthermore, the Japanese version⁷ of the Parenting Stress Index (PSI) developed by Abidin⁸ was used to evaluate parenting stress. The validity and reliability of the Japanese version was verified by Narama et al.⁷ The PSI includes 78 items, which are classified into 7 subscales

for the stress regarding parents and 8 subscales for the stress regarding children (Table 1). The Cronbach's alpha was 0.90, 0.92 for subscales regarding children and parents, respectively and was 0.94 as a whole.⁷

The worries and anxieties mothers wrote freely were first classified into those regarding children and parents, and then the worries and anxieties regarding child and parents were furthermore classified separately. Such work was performed using KJ method⁹ by the first author (HH) and a nurse with 20-year experience of clinical nursing and 2-year experience of nursing at kindergarten; they discussed to reach agreement about classification.

Statistical analysis

For the respective worries and anxieties classified as mentioned above, we compared the scores of PSI and PSI subscales between those who did and did not write their worries and anxieties by Wilcoxon rank-sum test. NPAR1WAY and UNIVARIATE in the SAS[®] system¹⁰ were used for the calculations.

Results

A total of 75 (49.3%) of the 152 mothers analyzed wrote about their worries and anxieties in child rearing; 34 (45.3%) of them wrote about worries and anxieties regarding children, 37 (49.3%) wrote about worries and anxieties regarding parents themselves, and 4 (5.3%) of them wrote about others (Table 2). The worries and anxie-

Table 1. Subscales of the Parenting Stress Index (PSI)

Subscales	Number of items	Range of score
Regarding children		
C-1: The child provides few responses that make the parents happy.	8	8-40
C-2: The child is in a bad mood.	7	7-35
C-3: The child is not the way I expected.	5	5-25
C-4: The child cannot concentrate/is hyperactive.	5	5-25
C-5: The child follows the parents/has a hard time getting used to others	5	5-25
C-6: I think that the child is problematic.	4	4-20
C-7: The child is sensitive to stimulation/has a hard time getting used to things	4	4-20
Regarding parents		
P-1: Restrictions due to parental roles	7	7-35
P-2: Social isolation	7	7-35
P-3: The relationship with the spouse	5	5-25
P-4: Parental capability	7	7-35
P-5: Depression/ sense of guilt	4	4-20
P-6: Feelings after being discharged from the hospital	4	4-20
P-7: I can hardly feel affection for my child.	3	3-15
P-8: Health status	3	3-15

ties regarding children were classified into the following three: "anxieties about the future and learning ability of the child," "difficult child," and "problems regarding development and health of the child," while those regarding parents themselves were classified into the following three: "Difficult to control myself," "Don't feel confident with child rearing," and "Have conflicts between my work and child rearing." See Table 2 for the details. The PSI scores in the 152 mothers varied from 120 to 279 with the median of 186; the scores of PSI subscales regarding children varied from 45 to 134 with the median of 83; and the scores of PSI subscales regarding parents varied from 59 to 148 with the median of 101.

Table 3 compares the scores of PSI and PSI subscales between those who did and did not write 3 types of worries and anxieties regarding children. In all types of the worries and anxieties, no significant difference was observed in the PSI scores between subjects who did and did not write about respective worries and anxieties. However, the total score of PSI subscales regarding child was significantly higher in mothers who wrote "Difficult child" than in those who did not. In the PSI subscales regarding child, the scores of C-4 and C-6 were significantly ($p < 0.01$) higher in mothers who wrote "Difficult child" than in those who did not, and in those regarding parents, the scores of P-5 and P-7 were significantly higher ($p = 0.04$ and $p = 0.02$, respectively) in mothers who wrote "Difficult child" than in those who did not.

Table 4 compares the scores of PSI and PSI subscales between those who did and did not write 3 types of worries and anxieties regarding parents. The PSI score was significantly higher in those who wrote "Difficult to control myself" than in those who did not ($p = 0.02$) and was significantly higher in those who wrote "Don't feel confident with child rearing" than in those who did not ($p = 0.03$). However, no significant difference in the PSI score was observed between those who did and did not write "Have conflicts between my work and child rearing." In the PSI subscales regarding child, the scores of C-1, C-6 and C-7 were significantly higher ($p = 0.01$, $p = 0.02$ and $p = 0.004$, respectively) in those who wrote "Difficult to control myself" than in those who did not. The scores of C-2, C-3 and C-5 as well as C-7 were significantly higher in those who wrote "Don't feel confident with child rearing" than in those who did not ($p = 0.05$, $p = 0.02$, $p < 0.01$ and $p < 0.01$, respectively). However, no significant difference was observed in the score of any PSI subscale regarding child between those who did and who did not write "Have conflicts between my work and child rearing." In the subscales regarding parents, only the score of P-4 was significantly higher in those who wrote "Difficult to control myself" than in those who did not ($p = 0.02$). The scores of P-2, P-5 and P-8 as well as P-4 were significantly higher in those who wrote "Don't feel confident with child rearing" than in those who did not ($p = 0.01$, $p < 0.01$, $p = 0.04$ and $p < 0.01$, respectively). The score of P-6 was significantly higher in those who did not write "Have conflicts between my work and child rearing" than in those who did ($p = 0.04$).

Table 2. Classification of writings by 75 mothers about worries/anxieties in child rearing

Worries/anxieties regarding children (34)

Anxieties about the future and learning ability (4)

Is the child able to keep up with others after entering elementary school? (2)

Issues in the future (2)

Difficult child (13)

The child is selfish and has no self-reflection (1)

The child does not listen to me (2)

The child does not listen to me even when I reprimand him/her (2)

The child cries easily (2)

The child is violent (3)

The child does bad things that older children do (1)

The child's personality is complicated (1)

The child is too sensitive and becomes fretful (1)

Problems regarding development and health of children (17)

The child has delayed speech (5)

The child has a small appetite (3)

The child has problems of phimosis/teeth alignment (1)

The child cannot play well with friends (4)

The child is hurt by bullying (2)

The child is sensitive to sound (1)

The child sometimes is reluctant to go to kindergarten (1)

Worries/anxieties regarding parents themselves (37)

Difficult to control myself (10)

I easily yell at children (3)

I cannot help treating a younger child with more affection than older ones (1)

I turn my emotions upon the child not to discipline him/her but to release my stress (2)

I reprimand the child more than necessary, verbally hurt him/her, and then regret that (2)

I cannot help resorting to physical force (1)

I do things according to the sense of time of adults (1)

Don't feel confident with child rearing (21)

I wonder if I did correct child rearing (6)

The way to reprimand (6)

How many lessons should the child take? (2)

I wonder if the child will quit bed-wetting (2)

I do not know how to deal with fighting among siblings (2)

Because I spoiled the child, he/she does not have a kind heart (1)

I wonder how long the child will throw things and talk back (2)

Have conflicts between work and child rearing (6)

Does the child have enough love? (1)

Do I understand the child? (1)

I cannot enough care (1)

I tend to tell the child "hurry up" always (1)

I have a conflict between "I want to have my own life and "I should do child rearing properly" (1)

I can no longer do things perfectly as a mother. (1)

Others (4)

Various things from minute issues to serious ones (2)

I won't be able to stop once I start writing about my worries/anxieties (2)

Parenthetic entries refer to the number of respondents.

Table 3. The distribution of PSI scores by writings about worries/anxieties regarding children and PSI subscales

PSI subscales C=regarding children P=regarding parents	Writings about worries/anxieties classified as								
	Anxieties about the future and learning ability			Difficult child			Problems regarding the development and health		
	Yes (N=4)	No (N=148) ^a	<i>p</i> -value ^b	Yes (N=13)	No (N=139) ^a	<i>p</i> -value	Yes (N=17)	No (N=135) ^a	<i>p</i> -value
C-1	10 (9-16) ^c	12 (8-24)	0.46	10 (8-21)	12 (8-24)	0.68	11 (8-18)	12 (8-24)	0.5
C-2	13 (9-19)	17 (7-33)	0.09	19 (14-30)	17 (7-33)	0.17	19 (12-30)	17 (7-33)	0.65
C-3	11 (9-19)	10 (5-21)	0.93	12 (5-17)	10 (5-21)	0.08	11.5 (5-18)	10 (5-21)	0.65
C-4	16 (10-21)	15 (5-25)	0.58	18 (14-22)	15 (5-25)	<0.01	15 (8-21)	15 (5-25)	0.98
C-5	9 (7-12)	12 (5-25)	0.09	14 (7-25)	11 (5-24)	0.12	14 (5-18)	11 (5-25)	0.13
C-6	7.5 (6-9)	9 (4-19)	0.27	11 (8-17)	8 (4-17)	<0.01	10 (4-15)	8 (4-19)	0.18
C-7	7.5 (6-10)	8 (4-17)	0.74	8 (5-16)	8 (4-17)	0.89	8 (4-13)	8 (4-17)	0.98
Total from C-1 to C-7	73.5 (68-87)	83.5 (45-134)	0.18	93 (66-134)	83 (45-133)	0.03	89 (55-112)	83 (45-134)	0.63
P-1	12 (9-27)	20 (7-34)	0.13	20 (11-34)	19 (7-33)	0.26	22 (11-27)	19.5 (7-34)	0.87
P-2	11 (8-19)	16 (7-29)	0.15	17 (8-28)	16 (7-29)	0.44	17 (9-26)	15.5 (7-29)	0.51
P-3	12 (9-14)	11 (5-25)	0.68	11 (5-25)	11 (5-22)	0.88	10.5 (5-20)	11 (5-25)	0.73
P-4	20 (13-21)	21 (8-31)	0.09	21 (18-25)	21 (8-31)	0.97	22.5 (8-26)	21 (13-31)	0.59
P-5	10.5 (8-14)	10 (4-20)	0.83	12 (9-19)	10 (4-20)	0.04	10.5 (4-15)	10 (4-20)	0.75
P-6	5.5 (4-9)	8 (4-19)	0.11	8 (5-14)	8 (4-19)	0.74	9 (6-17)	8 (4-19)	0.16
P-7	8 (3-9)	7 (3-15)	0.93	9 (5-15)	7 (3-13)	0.02	9 (5-11)	7 (3-15)	0.11
P-8	9.5 (6-11)	6 (3-15)	0.10	6 (4-14)	6 (3-15)	0.24	7 (4-10)	6 (3-15)	0.88
Total from P-1 to P-8	82.5 (76-120)	101 (59-148)	0.19	100 (67-146)	101 (59-148)	0.83	107 (77-129)	100 (59-148)	0.42
Total score	160 (144-199)	186 (120-279)	0.19	189 (133-252)	186 (120-279)	0.59	193 (132-218)	185 (120-279)	0.34

^aIncludes 77 mothers who wrote nothing about their anxieties and worries in child rearing.

^bBased on Wilcoxon rank-sum test.

^cMedian (minimum-maximum).

Table 4. The distribution of PSI scores by writings about worries/anxieties regarding parents themselves and PSI subscales

PSI subscales C=regarding children P=regarding parents	Writings about worries/anxieties classified as								
	Difficult to control myself			Don't feel confident with child rearing			Have conflicts between my work and child rearing		
	Yes (N=10)	No (N=142) ^a	<i>p</i> -value ^b	Yes (N=21)	No (N=131) ^a	<i>p</i> -value	Yes (N=6)	No (N=146) ^a	<i>p</i> -value
C-1	16 (10-20) ^c	11 (8-24)	0.01	12 (9-20)	11 (8-24)	0.22	10.5 (9-17)	12 (8-24)	0.67
C-2	17.5 (11-33)	17 (7-31)	0.38	19 (12-30)	17 (7-33)	0.05	20 (9-33)	17 (7-31)	0.46
C-3	12 (7-18)	10 (5-21)	0.1	12 (7-21)	10 (5-18)	0.02	10.5 (7-14)	10 (5-21)	0.99
C-4	12.5 (5-18)	15 (8-25)	0.08	15 (10-21)	15 (5-25)	0.17	14.5 (8-21)	15 (5-25)	0.77
C-5	13 (8-24)	11 (5-25)	0.34	15 (6-25)	11 (5-24)	<0.01	14 (7-24)	11 (5-25)	0.39
C-6	11 (7-16)	8 (4-19)	0.02	9 (4-19)	8 (4-16)	0.09	8.5 (5-12)	9 (4-19)	0.88
C-7	9 (8-14)	8 (4-17)	0.04	9 (4-17)	8 (4-15)	<0.01	9 (6-14)	8 (4-17)	0.31
Total from C-1 to C-7	95 (68-113)	83 (45-134)	0.04	95 (56-134)	82 (45-120)	0.01	90 (68-113)	83 (45-134)	0.64
P-1	22 (9-30)	19 (7-34)	0.28	22 (11-33)	19 (7-34)	0.08	20 (9-26)	20 (7-34)	0.89
P-2	18.5 (10-22)	16 (7-29)	0.32	18 (10-24)	15 (7-29)	0.01	12 (8-28)	16 (7-29)	0.31
P-3	12.5 (6-17)	11 (5-25)	0.29	11 (5-25)	11 (5-25)	0.32	12 (6-19)	11 (5-25)	0.39
P-4	25.5 (13-31)	21 (8-30)	0.02	24 (19-31)	21 (8-30)	<0.01	21 (19-27)	21 (8-31)	0.74
P-5	12.5 (6-19)	10 (4-20)	0.11	13 (7-20)	10 (4-19)	<0.01	12 (6-14)	10 (4-20)	0.91
P-6	10 (4-18)	8 (4-19)	0.43	10 (4-17)	8 (4-19)	0.11	5 (4-15)	8 (4-19)	0.04
P-7	9 (3-12)	7 (3-15)	0.4	8 (3-15)	7 (3-12)	0.12	6 (3-11)	7 (3-15)	0.19
P-8	8.5 (4-15)	6 (3-15)	0.17	8 (3-11)	6 (3-15)	0.04	7 (5-9)	6 (3-15)	0.98
Total from P-1 to P-8	112 (82-139)	100 (59-148)	0.06	107 (79-146)	99.5 (59-148)	0.05	91 (76-148)	101 (59-146)	0.59
Total score	209 (150-242)	185 (120-279)	0.02	196 (135-279)	185 (120-252)	0.03	195 (144-241)	186 (120-279)	0.64

^aIncludes 77 mothers who wrote nothing about their anxieties and worries in child rearing.

^bBased on Wilcoxon rank-sum test.

^cMedian (minimum-maximum).

Discussion

In the present study, approximately half of the subjects (75/152) wrote one sentence about their worries and anxieties in child rearing, and the worries and anxieties written by 34 (45.3%) and 37 (49.3%) of them were about children and parents, respectively. On the other hand, a similar study by Araki et al.,¹¹ who surveyed 590 mothers with children aged 0-3 years, indicated that in descriptions by 199 who wrote about their stress, those regarding parents themselves were four times more than those regarding children. Furthermore, the descriptions in the study of Araki et al.¹¹ contrasted with those in the present study with respect to development and growth of children; five mothers in the latter study wrote about children's slow start in speaking, while none did in the former study. However, both studies share the results that parents do not know how to scold and discipline their children, suggesting the importance of teaching parents appropriate parenting skills.

The writings by 13 mothers about worries and anxieties regarding children were classified as "Difficult child." Since it has been reported that the mothers who recognize their children negatively provided less discipline to teach their children guiding reactions for their bad behaviors and tended to provide violent discipline or neglect them,¹² it is important to know how the mothers deal with such difficult children, although it is not included in the survey contents in the present study. Among the problems regarding the development of children, retardation of speech development is noticed in infancy and makes the mothers feel anxious.¹³ Although retardation of speech development in children may be caused by family environment or may simply be due to difference in the individual development, developmental impairments may underlie it, and therefore child-rearing support in the early stage is necessary.

The mothers whose writings were classified as "Don't feel confident with child rearing" in the worries/anxieties regarding parents themselves had experiences similar to those of mothers whose writings were classified as "Difficult child" in the worries/anxieties regarding children. Thus, the mothers who "Don't feel confident with child rearing" probably recognize the issue of "Difficult child" as a problem of parents themselves. Although the mothers whose writings were classified as "Don't feel confident with child rearing" or "Difficult child" were spending the longest time with their children, they probably found difficulty in dealing with their children sympathetically and in adjusting themselves according to the development of their children. The writings classified as "Difficult to control myself" in the worries/anxieties regarding parents suggested that the mothers with such writings should be classified into a high-risk group for committing physical and/or psychological abuse.

Among 3 categories of "Anxieties about the future and learning ability," "Difficult child" and "Problems regarding the development and health" in the worries/anxieties regarding children, only "Difficult child" showed a significant association with PSI score. The important observation is that the score of P-5 in the stress regarding parents was significantly higher in the mothers who wrote "Difficult child" than in those who did not ($p=0.04$). This may be

because the parents were unaware of depression due to the difficulties in dealing with their children and/or that they felt guilty for their excessive reprimanding.

Among 3 categories of "Difficult to control myself," "Don't feel confident with child rearing" and "Have conflicts between my work and child rearing" in the worries/anxieties regarding parents, the first two showed a significant association with PSI score, suggesting that the parents recognized parenting stress as their own problem.

The mothers whose writings were classified as "Difficult to control myself" and "Don't feel confident with child rearing" had significantly high scores in 3 and 4 subscales for the stress regarding children, respectively. Thus, parenting stress was involved in various stresses regarding children, although mothers described the worries/anxieties as their own problems. The mothers who wrote "Difficult to control myself" had a significantly higher score of P-4 (parental capability) in the stress scale regarding parents compared to those who did not ($p=0.02$); however, no significant difference was observed between the two groups regarding P-5 (depression/sense of guilt). The mothers who wrote "Don't feel confident with child rearing" had significantly higher scores of P-2 (social isolation), P-4, and P-5, suggesting a low level of social support and existence of some problems in their stress management.

The mothers' tendency to abuse their children is known to be associated with problem-solving ability for parenting stress, anger management and stress management.¹⁴ However, the present study could not clarify the relations among social support, stress management and abusive rearing attitudes.

In conclusion, among 75 mothers who wrote about worries and anxieties in child rearing in the present study, about a half (37 or 49.3%) wrote about worries and anxieties regarding parents themselves, which were significantly associated with some of the PSI subscales. Notably, the mothers whose writings were classified as "Don't feel confident with child rearing" felt depressed, had insufficient social support, and had low self-evaluation for their parental capability. The mothers who respond "Don't feel confident with child rearing" or "Difficult to control myself" should be in a group of those requiring child-rearing support. Regarding the prevention of child abuse, since some individuals may provide false responses to direct questions about their rearing attitude, screening based on surveys about depression, social support and stress management may be better for collecting more reliable information on conditions and environments mothers face in child rearing. The relationship of the tendency toward child abuse with stress, depression and social support should be investigated on a larger number of subjects.

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