

[研究論文]      **Rating problem-solving ability of Japanese families with children developmental disorders : scale development and application**

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**Abstract**

**Aim:** This study aimed to develop a scale for rating the problem-solving ability of families with young children with developmental disorders, based on the family systems theory, as well as to test the reliability and validity of this scale.

**Methods:** A total of 270 families were recruited from the Association of Families with Children with a Developmental Disorder in the Kinki region of Japan and were administered a scale for rating the problem-solving ability of families with young children with developmental disorders. Item design, item refinement, and reliability and validity testing were used in scale development.

**Results:** Responses were obtained from 128 families. Of these, 114 were valid responses (response rate, 42.2%). The final scale consists of 26 items in four subscales (cooperative relationship between spouses, sense of self-control regarding parenting, ability to use social resources, and belief regarding the roles of spouses). Cronbach's alpha was adequate for each sub-scale ( $\alpha = 0.84-0.71$ ). Examination of the construct validity and stability suggests that the scale has good reliability and promising validity.

**Conclusions:** The reliability and validity of this new scale were for the most part confirmed. This new scale is a useful tool for measuring the problem-solving ability of families with young children with developmental disorders and has practical implications for nursing practice.

**Keywords:** children, developmental disorders, family systems theory, parenting, problem-solving ability, rating scale

**Introduction**

Children with developmental disorders such as autism, Asperger syndrome, learning disabilities, and attention-deficit hyperactivity disorder often exhibit socially maladjusted behaviors, including a lack of social or emotional reciprocity, repetitive behavior patterns, hyperactivity, impulsive behavior, and a lack of imagination (Miyamoto, 2007). These behaviors often trigger tantrums in the child, create problematic behavior in siblings, and cause parental stress. Consequently, the family's quality of life (QOL) and relationships among members of the child's family are greatly affected. Family is a unit nested in larger supra-systems (such as neighborhoods, organizations, or communities) composed of many subsystems that mutually influence each other (such as parent-child, spousal, and sibling subsystems) (Wright & Leahey, 2005). In Japan, many families are nuclear (consisting only of parents and their children), young, and not normally in receipt of outside support. This leads to a need to improve the family's own problem-solving ability. This is the ability to cope with problems arising from the child's disorder and to adapt while accomplishing various developmental tasks as families in the parenting stage (Friedman, 1986), i.e., the stage of child-rearing between birth and the child beginning school (Mochizuki, 2000).

Healthcare professionals should foster families' problem-solving abilities to help them deal with potential problems. Accordingly, healthcare professionals must comprehensively evaluate the family's abilities. Existing scales have focused on family functioning (instead of problem-solving ability) or aggregated all family members' abilities into a single average

score. In this study, we seek to advance the understanding of the problem-solving ability of individuals in families with a child with a developmental disorder by creating a new assessment scale.

### Literature Review

A review of studies conducted between 1997 and 2013 on the psychosocial problems of families with children with developmental disorders revealed 14 studies on family support (e.g., Nakayama & Saitou, 2007; Tsuda et al., 2012), 10 on stress and QOL, 15 on family function or family relationships, and 45 on family characteristics (e.g., Wakimizu et al., 2011; Markoulakis et al., 2012). Previous research has demonstrated that the most difficult period for parents is the time from when they first notice their child's disorder to the time when they receive an official diagnosis, which generally occurs when the child is between 1 and 3.4 years old (Nagai & Hayashi, 2004). This corresponds to the parenting stage of the family lifecycle where developmental tasks involve learning parental roles, readjusting role sharing between spouses, and adjusting relationships with relatives and societal resources (Friedman, 1986; Mochizuki, 2000). Therefore, families with children with developmental disorders often struggle most with their child's disorder while also attempting to develop as a family.

Based on family systems theory (Broderick, 1993), the difficulties of families with young children with developmental disorders can be viewed as a process during which problems arise between the parent(s) and child based on the child's disability and subsequently influence the spousal relationship. This, in turn, influences the parent-child relationship and relationships with the community. For instance, a mother who feels distressed over the maladjusted behavior of her child may become anxious and isolated because of her husband's lack of understanding and cooperation; these feelings, in turn, may keep her from being receptive to her child. Simultaneously, the husband feels dissatisfied because of his work commitments and because his involvement with the child is less than that of his wife. He may become resentful of her behavior as she becomes increasingly devoted to the child. These circumstances can lead to a cycle in which the wife and husband, who have lost confidence in their parenting abilities, also lose the ability to build good relationships with their relatives, neighbors, and community, causing the family's QOL to deteriorate further. Proper support can help the family accept the child's disability and improve problem-solving abilities so that the parents can independently handle issues such as caring for the child, family role-sharing, managing the household environment, and taking advantage of societal resources (Friedman, 1986; Mochizuki, 2000). It is necessary to examine changes in the family system caused by the child's disorder, but also to evaluate multiple aspects of these changes. The domains of family functioning (perception, feelings, and behavior) with respect to individuals and families must also be included in this evaluation (Wright & Leahey, 2005).

For healthcare professionals to foster the problem-solving abilities of families with young children with developmental disorders, they must be able to measure the family's ability objectively. For this purpose, previous studies have explored the use of a family functioning rating scale designed for families with preschool children (Nakamura, 2005; Hohashi, 2008) and examined issues in families with children with a chronic disease or disability (Byles et al., 1998; Kendall & Shelton, 2003; Kendall et al., 2005; Conlon et al., 2008; Murata & Uchi, 2008). Although these studies contain important theoretical and practical information, none covers all of the major issues identified by Friedman (1986) and Mochizuki (2000), that is, accepting the child's disability, caring for the child, managing family role-sharing, managing the household environment, and taking advantage of societal resources. Existing family functioning rating scales include the Family APGAR (Adaptability, Partnership, Growth, Affection, and Resolve) (Smilkstein, 1978; Smilkstein et al., 1982), the Japanese version of the Family Assessment Device (FAD-J) (Saeki et al., 1997), the Family Adaptability and Cohesion Evaluation Scales at Kwansei Gakuin Version 4 (FACESKGIV) (Yokoyama et al., 1977), and the Japanese Version I of the Feetham Family Functioning Survey (FFFS) (Hohashi, 2008). The Family APGAR measures family functioning but not problem-solving ability. The subscales of the FAD-J do include problem-solving ability, but do not enable easy identification of the impact of the subsystems of a family (i.e., spousal relationship, parent-child relationship). Moreover, the FAD averages scores across family members, so extreme scores are reduced because of variation within the family. This means that characteristics of the family system level, which are crucial for a proper family intervention, may not be clearly understood. Following family systems theory, differences in individual family members' beliefs can be used to inform interventions. The FACESKGIV, a family functioning scale created with consideration for Japanese culture based on the circumplex model of family systems (Olson et al., 1979), assesses the constructs of cohesion and adaptability. However, as with the two previously mentioned surveys, it is difficult to obtain information on the family problem-solving

abilities about which individual family members are aware (Wright and Leahey, 2005), i.e., problem-solving abilities which one or more individual possesses, and of which others are aware. This would overcome the problems of evaluating either at the level of individual family members, with the inherent instability depending on who is evaluated, or at the level of the family as a whole, which can mask problems of individuals within the family.

Finally, the FFFS measures family functioning through the performance of role behavior among family members in three systems: relationships between the family and family members; the family and other relatives, acquaintances, and friends; and the family and school/workplace. However, the FFFS does not include cognitive, emotional, or behavioral measures of families regarding the parent–child, spousal, or family–community relationships, which can make it more difficult to set strategies for building the family’s problem-solving ability.

### **Study Aim**

The aim of this study was to develop and test a rating scale (FPAYCDD) that assesses problem-solving ability of families with young children with developmental disorders of which individual family members are aware. The new scale was developed using the framework of family systems theory and the developmental tasks undertaken by families in the parenting stage.

### **Methods**

#### **Participants and setting**

A cross-sectional questionnaire was administered to members of the Association of Families with Children with a Developmental Disorder living in medium-sized cities (population 100,000–500,000) in the Kinki region of central Japan. A total of 270 families with preschool children with developmental disorders were recruited. The person in each family responsible for the majority of the parenting was asked to complete the questionnaire.

#### **Ethical considerations and data collection**

Three questionnaires were distributed to participants between November 2008 and February 2009 and were later returned by post. The three questionnaires were 1) the FPAYCDD rating scale; 2) the FFFS Japanese Version I to assess construct validity; and 3) a second administration of the FPAYCDD rating scale for the follow-up survey. The anonymity of participants was ensured through the use of a data management system using identification numbers. Participation in the study was voluntary, and the research request explained that the decision about whether to participate would not affect the family’s activities with the association and that they were not required to answer any questions. Families were also informed that measures would be taken to guarantee anonymity, that the data would be used only for research, and that the results of the study would be presented at academic meetings and in academic journals. Returning the completed questionnaire was considered to indicate consent. This study was approved by the Research Ethics Committee of Kobe City College of Nursing, Kobe, Japan. (approval number:2008-1-4) .

#### **Development of the scale**

##### **FPAYCDD rating scale**

Previous studies on QOL, functioning, and relationships among families with young children with developmental disorders have provided guidelines useful for determining the type of assistance required by families of young children with developmental disorders (Herring et al., 2006; Neely-Barnes et al., 2008; Gutstein, 2009; Luong et al., 2009; Hamazono, 2012). Studies have identified several issues for the parents. First, these parents feel distressed about their child’s disorder and find parenting extremely stressful (Tone, 2002; Nagai & Hayashi, 2004). Second, parents’ gender beliefs about domestic roles hamper smooth communication with their child, leading to poor verbal communication between parents (Nagai & Hayashi 2004; Ishizuka, 2007). Third, the parents feel anxious about parenting and the child’s future (Elder, 2001; Kugizaki & Haramaki, 2005). Fourth, parents do not receive adequate support from others to alleviate their worries (Kugizaki & Haramaki, 2005; Peters & Jackson, 2009). These studies have highlighted that the problems families need to address include dealing with the affected child, the parent–child relationship, the spousal

relationship, and the family's relationship with the community.

From previous research, the following four factors were identified as important in family problem-solving: handling parenting problems; division of spousal roles; spousal communication; and the use of societal resources. We created 45 items covering these points. A five-point rating scale was used for each item, ranging from 1 (strongly agree) to 5 (strongly disagree). Higher scores represent better problem-solving abilities.

Five experts—child care and family nursing researchers and specialized nurses—assessed the appropriateness of the drafted items in the rating scale using a 4-point scale: 4 (appropriate); 3 (needs minor revision); 2 (needs major revision); and 1 (inappropriate). The question content and wording and the number of questionnaire items created in step one above were determined using the content validity index (CVI) (Lynn 1986). Additionally, to confirm the face validity of the questionnaire items, a free response comment column was added to each questionnaire item. Five mothers with preschool children with developmental disorders were asked to complete the questionnaire. From the results, three inappropriate items were eliminated, and the remaining 42 were revised to form the FPAYCDD Rating Scale. The CVI of the 42 items ranged from 0.8 to 1.0, with a total CVI of 0.90.

### Data analysis

Using SPSS 21.0 (IBM Corp., Armonk, NY, USA), the following analyses were performed. The significance level was set at 5%. An investigation regarding ceiling and floor effects for the questionnaire items was conducted along with an I-T correlation analysis. Maximum likelihood estimation (i.e., exploratory factor analysis) was conducted on 32 items. The number of factors was determined based on initial characteristic values and cumulative contribution ratios. Promax rotation was performed, and the appropriate items were selected with consideration given to commonality and factor loading. To assess reliability, internal consistency and stability were measured. Cronbach's  $\alpha$  (hereafter, "alpha coefficient") was used to measure internal consistency overall and for each factor. Stability was assessed using a follow-up survey with the same subjects 2 weeks after the main survey.

### Validity testing

The internal consistency of the rating scale construction was assessed with the assistance of family nursing researchers and clinically-experienced ( $\geq 5$  years) nurses. Additionally, as the Clinical validity test, the mean values for FPAYCDD factor scores were examined for differences by family circumstance using a t-test and a one-way analysis of variance (Tukey's multiple comparison test).

## Results

### Questionnaire responses

Responses were obtained from 128 families (collection rate: 47.4%), with 114 valid responses (response rate: 42.2%), all from mothers. In the follow-up survey, 75 families returned their questionnaires (collection rate: 27.8%), with 74 valid responses (response rate: 27.4%).

### Family attributes

Table 1 shows the families' attributes. Fathers were classified into two groups according to their mean age: 24–38 ( $n = 55$ : 48.2%) and 39–59 ( $n = 59$ : 51.8%). Mothers were likewise classified into two age groups: 24–36 ( $n = 57$ : 50.0%) and 37–45 ( $n = 55$ : 48.2%). Two participants (1.8%) did not respond. Disabled children were classified into three age groups: 2–3 ( $n = 18$ : 15.8%), 4–5 ( $n = 82$ : 71.9%), and 6 years ( $n = 14$ : 12.3%). In total, 98 children (86.0%) had been diagnosed with a developmental disorder and 16 (14.0%) had not. The age of the child when the parents first became aware of the child's disorder was classified into five groups:  $< 1$  ( $n = 16$ : 14.0%), 1–2 ( $n = 49$ : 43.0%), 2–3 ( $n = 32$ : 28.1%), 3–4 ( $n = 13$ : 11.4%), and 4–5 years ( $n = 1$ : 0.9%). There were three (2.6%) non-respondents. Eleven mothers (9.6%) reported becoming aware of the disorder when the child was 0–1 year old, 88 (77.1%) reported age 2–3 years, 12 (10.5%) reported 4–6 years, and 3 (2.7%) gave no answer.

### Creating the FPAYCDD rating scale

#### Questionnaire item selection through item analysis

Of the 42 items in the draft FPAYCDD rating scale, 10 items demonstrated a ceiling or floor effect, and eight items had a correlation of  $r = 0.3$  or less (I-T correlation analysis). Conceptually necessary items were retained, and 10 items were omitted.

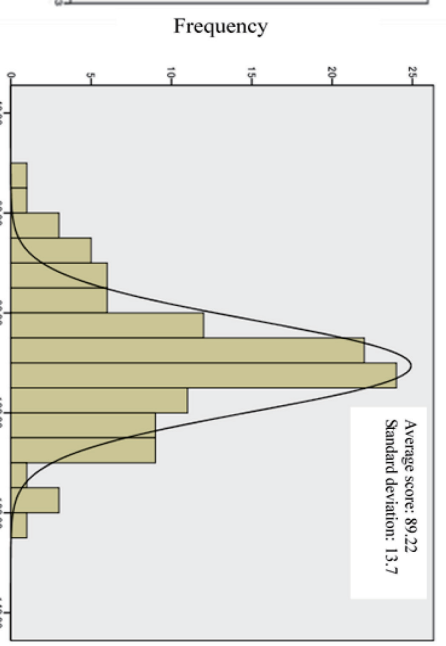
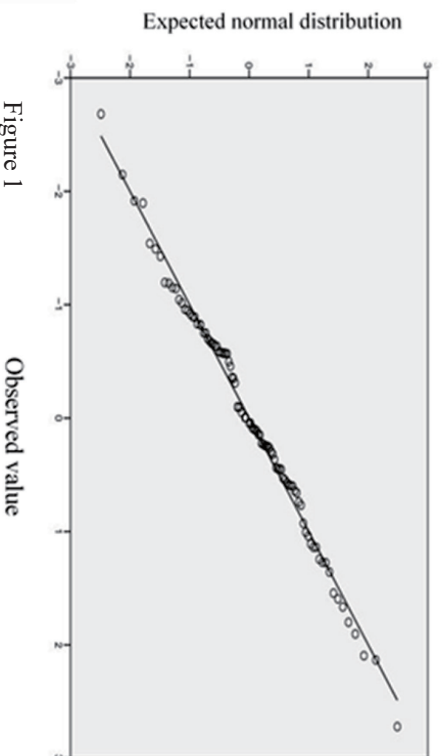
#### Exploratory factor analysis and interpretation of factors

Factor analysis was carried out for the remaining 32 items using maximum likelihood estimation. The number of factors was determined based on the items' initial characteristic values and cumulative contribution ratios. Four factors, responsible for 56.36% of the variance, were extracted. A factor analysis was then performed using maximum likelihood estimation with Promax rotation. Items with low commonality were eliminated. Items were selected based on the criterion of a factor loading of 0.35, and checks were performed to detect any changes in the factor construction as items were eliminated. Finally, four factors and 26 items were used; the correlation between the four factors was 0.03–0.25, confirming divergence for each factor. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.77. Table 2 presents the results of this factor analysis.

The first factor, “cooperative relationship between spouses”, was constructed from content related to the couple’s relationship. It included parenting and household tasks, interaction with neighbors and community activities, support for the spouse, and mutual understanding in using resources necessary for the child. The second factor, “sense of self-control regarding parenting”, included content related to the caregivers’ feelings and parenting behavior as they struggled to deal with behavioral problems such as tantrums, trouble with other children, and repetitive patterns of behavior. The third factor, “ability to use social resources”, included content related to parents’ ability to ask for outside help to deal with a wide range of parenting problems from people other than the spouse. The fourth factor, “belief with regard to the roles of the spouses”, comprised content related to spouses’ perceptions of their roles inside and outside the home.

#### Total score distribution and normality test

Figures 1 and 2 illustrate the total score distribution. The total scores for the four factors and 26 items were between 50 and 123 points, with a mean score of 89.22 (SD = 13.7). Using a normal Q-Q plot, test results revealed a close match between the total score distribution and the normal distribution.



#### Reliability testing

The alpha coefficient, which indicates internal consistency, was 0.87 for the rating scale overall and ranged from 0.86 to 0.87 when each questionnaire item was eliminated. The alpha coefficient was 0.84 for the first factor, 0.74 for the second, 0.72 for the third, and 0.71 for the fourth. Stability was assessed using the follow-up survey with the same; the Pearson correlation coefficients ( $r$ ) for test-retest between items were 0.43 and 0.76 ( $p < 0.01$ ). The correlation coefficient for the total scale was 0.82 ( $p < 0.01$ ). The stability and reliability were therefore found to be adequate.



### Validity testing

After examination by family nursing researchers and experienced clinical nurses, the items of the scale and the content and wording of the subscales were deemed appropriate.

Table 3 presents significant differences in FPAYCDD subscales by characteristics of the child and their family. Significant differences were observed for mother's age, mother's health, and the presence of siblings. Scores for the fourth factor were higher when the mother's age was higher ( $F [1,110] = 6.199, p < 0.05$ ). In terms of mother's health, a significant difference was observed in the second ( $F [4,109] = 4.351, p < 0.05$ ) and the third ( $F [4,109] = 3.100, p < 0.05$ ) factors. High scores were obtained in every case when the mother's health was "good, both mentally and physically," followed by "good mental health but bad physical health," "good physical health but bad mental health," and "bad health, both mentally and physically." The presence of siblings was significantly positively associated with the first ( $F [1,112] = 3.996, p < 0.05$ ) and fourth ( $F [1,112] = 5.332, p < 0.05$ ) factors. The presence or absence of regular visits to a health center showed a significant difference in the second factor ( $F [2,111] = 4.642, p < 0.05$ ), with a higher score when no visits were made. There was also a significant positive association between the age of the child when the parents became aware of the disorder and the first factor ( $F [1,109] = 10.595, p < 0.01$ ).

### Discussion

These findings demonstrate that the newly-developed FPAYCDD is reliable and valid. Additionally, the correlations identified between family circumstance factors and the FPAYCDD factor scores suggest this scale can be used to rate the functioning of families with young children with a developmental disorder under various circumstances.

#### The FPAYCDD rating scale and family systems theory

The FPAYCDD scale has family systems theory as its theoretical base and was designed to measure the family's abilities and developmental tasks. This makes it possible to assess the feelings and parenting behavior of family members toward a child with a disorder, the spousal relationship, perceptions of behavior regarding household roles, and ability to obtain help from outside sources.

In the final stage of the study, four factors were extracted: cooperative relationship between spouses; sense of self-control regarding parenting; ability to use social resources; and beliefs about spousal roles. Overall, the factor analysis generally showed that the original conceptual model accurately reflected the structure of this scale, but some slight changes were necessary. The factor analysis led us to omit many items originally included in "ability to use social resources," possibly because participants had little experience of using the welfare and education resources available for children with developmental disorders. The item concerning the roles of spouses was extracted as a fourth factor, indicating that spouses' perceptions of their roles are particularly important.

The factor with the most items (11) was a cooperative relationship between spouses (factor 1). This is logical, considering that 80% of families in this study had already received a developmental disorder diagnosis for their child and had joined a support group. This indicates the need for a strong bond between spouses to overcome the problems associated with the child's disorder.

#### Limitations and future issues

One limitation of this study is that the sample consisted of parents who were able to obtain support from the people around them. All participants visited the Association of Families with Children with a Developmental Disorder, most had participated in a seminar or lecture on developmental disorders, most children had already been diagnosed with a developmental disorder, and most regularly visited a health and rehabilitation center.

Future research should test the reliability and validity of the scale for families receiving less support, and for those who are not already aware of the child's disorder or who have yet to receive a medical diagnosis. Further, although the scale measured the "family's problem-solving ability" and the unit of analysis was "family members", the primary caregiver was the target of the research. Because all respondents were mothers, these results only represent mothers' perceptions of the "family's problem-solving ability".

## Conclusions

Family systems theory was used to create a rating scale to determine the problem-solving abilities of families with young children with a developmental disorder, and its reliability and validity were assessed. The final rating scale consisted of 26 items in four subscales. Reliability and validity were generally confirmed. This new scale will be useful for measuring the problem-solving abilities of families with young children with a developmental disorder.

In nursing practice, this scale opens possibilities for providing support in a systematic way. First, by evaluating the family's perceptions on gender and parenting roles, household chores, and other tasks, it is possible to adjust the role-sharing within the family to alleviate the mother's burden. Second, evaluating the family's negative perceptions of a child with a disorder can facilitate the family's acceptance of the disorder. Third, evaluating perceptions and behaviors related to family relationships encourages communication and constructive relationships in the family. Fourth, evaluating family perceptions and behaviors regarding societal resources can enhance the family's ability to cope with external problems related to the child's disorder.

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Table 1. Attributes of families with developmentally disabled children (N = 114)

	Item	%	Average ± SD
Parent age	Father		38.5 ± 5.4
	Mother		36.1 ± 3.9
Presence of family members	Father	100.0	
	Mother	100.0	
	Sibling(s)	59.6	
	Grandfather	1.8	
	Grandmother	8.8	
Father's health condition	"Good, both mentally and physically"	70.1	
	"Bad, both mentally and physically"	8.8	
	"Mental health was good, but physical health was bad"	15.8	
	"Physical health was good, but mental health was bad"	5.3	
Mother's health condition	"Good, both mentally and physically"	50.8	
	"Bad, both mentally and physically"	15.8	
	"Mental health was good, but physical health was bad"	13.2	
	"Physical health was good, but mental health was bad"	16.7	
	No response	3.5	
Participated in a seminar or lecture about developmental disorders	Yes	79.0	
	No	21.0	
Age of children with developmental disorders			4.4 ± 1.0
Age of child when parents became aware of the child's disorder			1.4 ± 0.9
Gender of children with developmental disorders	Male	80.0	
	Female	20.0	
Diagnosis of children with developmental disorders (n = 98)	Autism	41.0	
	Pervasive development disorder	22.0	
	Asperger syndrome	4.0	
	Mild developmental disorder	15.0	
	No response	18.0	
Screening for a Special Child Passbook <sup>†</sup>	Severe	6.1	
	Moderate	19.3	
	Mild	35.1	
	Did not have a passbook	38.6	
	No response	0.9	
Regular visits to a health and rehabilitation center for children with disabilities	Yes	78.9	
	No	16.7	
	No response	4.4	

<sup>†</sup> A Special Child Passbook is an official document that allows children wi

Table 2. Exploratory factor analysis (Maximum likelihood estimation with Promax rotation) (N = 114)

Question item (R = reversal)	Factor 1	Factor 2	Factor 3	Factor 4
“Cooperative relationship between spouses” ( $\alpha = 0.84$ )				
I think I will be able to get along with my husband/wife in the future.	0.83	0.16	-0.03	-0.04
My husband/wife is considerate of my work, childcare, and housework.	0.82	0.16	-0.11	-0.18
My husband/wife takes care of our child.	0.82	-0.15	-0.05	0.11
I am satisfied with my spousal relationship.	0.82	0.27	-0.16	-0.13
My husband/wife socializes with relatives.	0.80	-0.15	0.12	-0.01
I always spend free time with my husband/wife.	0.77	0.00	0.09	-0.16
I feel connected to my husband/wife.	0.75	0.33	-0.19	-0.02
My husband/wife makes an effort to help arrange appointments with the physician and welfare specialists.	0.69	-0.23	0.16	0.20
My husband/wife does housework.	0.64	-0.20	-0.08	0.14
I feel that I take care of our child alone. (R)	0.61	0.04	0.14	0.09
My husband/wife makes an effort to participate in the residents' association.	0.55	-0.17	0.34	0.24
“Sense of self-control regarding parenting” ( $\alpha = 0.74$ )				
When my child causes an incident, I think that I deal with it well.	-0.10	0.62	0.24	0.08
Even if it is not a large issue, I scold my child. (R)	-0.04	0.56	0.04	0.18
I am the only one who is patient with my child.(R)	0.04	0.51	0.20	0.07
I feel connected to my child.	0.10	0.50	0.00	-0.07
I think I will be able to get along with my child in the future.	0.09	0.49	0.13	-0.03
I compare other children with my child in every way. (R)	-0.08	0.49	-0.03	0.18
“Ability to use social resources” ( $\alpha = 0.72$ )				
When we need help for our child's problem, we have friends we can call.	-0.04	0.27	0.62	-0.05
We can request support from experts (the physician and welfare specialists).	-0.02	0.19	0.58	-0.07
When we need help for our child's problem, we have relatives we can call.	0.11	-0.05	0.55	-0.19
We are involved with other families who also have a young child with a developmental disorder.	-0.01	0.02	0.52	-0.02
We understand what the medical care/welfare/education system can offer my child.	-0.01	0.17	0.37	-0.03
“Belief with regard to the roles of the spouses” ( $\alpha = 0.71$ )				
I think that the job of making arrangements with the physician and welfare specialists should be shared by the couple.	0.06	0.22	-0.15	0.80
I think that participation in local events with the neighborhood or residents' association should be shared by the couple.	-0.10	0.33	0.00	0.70
I think that housework should be shared by the couple.	-0.10	-0.03	-0.11	0.54
I do not expect my husband/wife to help me with my work/child care/housework. (R)	0.30	-0.10	-0.08	0.48
Contribution	6.72	3.10	1.81	1.01
Accumulation contribution (%)	25.83	37.76	44.70	48.57
Correlations	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1	1.00	0.25	0.03	0.23
Factor 2		1.00	0.31	-0.13
Factor 3			1.00	0.17
Factor 4				1.00

Kaiser-Meyer-Olkin = 0.77

Table 3. *t*-test and one-way ANOVA (Tukey's multiple comparisons test)

Family situation	Age of the mother	Mother's health condition	Presence of sibling(s)	Regular visits to a health and rehabilitation center for children with disabilities	Age of child when parents became aware of the child's disorder
FPAYCDD					
Cooperative relationship between the spouses			F [1,112] = 3.996*		F [1,109] = 10.595**
			Yes > No		2–4 years > 0–1 year
Sense of self-control regarding parenting		F [4,109] = 4.351*		F [2,111] = 4.642*	
		'Both good' > 'Mental health good' > 'Physical health good' > 'Both bad'		No > Yes	
Ability to use social resources		F [4,109] = 3.100*			
		'Both good' > 'Mental health good' > 'Physical health good' > 'Both bad'			
Belief with regard to the roles of the spouses	F [1,110] = 6.199*		F [1,112] = 5.332*		
	High > Low		Yes > No		

\*\*  $p < 0.01$ , \*  $p < 0.05$ 

Note: Only the items for which significant differences were observed are shown.