Characteristics of Family Functioning in Patients with Endogenous Monopolar Depression

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ABSTRACT

The purpose of the study was to investigate dysfunctions in families with a member suffering from endogenous monopolar depression during the acute phase by means of a case-control study, and to consider the possibilities of psychiatric intervention for families with a patient in the course of monopolar depression. Twenty patients with monopolar depression during the acute phase and family members living in the same household (Depressive families) were compared with twenty-seven non-clinical college students and their family members (Control families) with regard to family functioning assessed by the Family Assessment Device (FAD). Depressive families reported significantly worse family functioning than Control families, especially in three areas: Problem Solving, Communication, and General Functioning. Members of Depressive families also perceived their family functioning to be significantly poorer than that of Control families, in the areas of Problem Solving, Communication, Roles, Affective Responsiveness, Affective Involvement and General Functioning, which yielded the same result as a comparison between depressive couples and control couples. The pattern of family dysfunction that was found in the present study, especially in the three areas of family functioning, Problem Solving, Communication, and General Functioning, emphasizes the importance of appropriate family intervention to improve the family's competence in problem solving and to promote better communication in the family during the acute phase of endogenous monopolar depression. Additionally such family dysfunction has been similarly observed in North American studies, indicating that diverse problems emerge beyond differences in the cultural background of families containing a patient with endogenous monopolar depression.

Key words: Depression, Family functioning, Acute phase

Previous review articles have shown that the onset or course of endogenous monopolar depression is likely to be influenced by various psychosocial factors, such as marital relationship and family situation[19,21,27,28]. The cumulative results of empirical studies using various methodologies and fairly diverse groups of patients have consistently shown, especially since the 1980s, that during an acute episode the families of patients with monopolar depression experience substantial difficulties in many areas of their family life[21]. Among other things, problems in communication within the family, particularly inappropriate self-disclosure by the patient, have been reported[15,20]. Moreover, the families of depressed patients as a whole appear to experience more difficulty in resolving problems than the families of patients with schizophrenia, bipolar illness, rheumatoid arthritis or heart diseases[6,30]. Based on the results of these studies, a wide variety of family intervention methods have been proposed for the families of patients with monopolar depression[4],

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and some evidence corroborating their effectiveness has been presented[2,11].

Meanwhile, in Japan, methods of family assessment have been no better than experiential description or classification of families, and we have had few objective and quantitative methodologies to assess family functioning. Consequently, there has been less empirical research that might provide useful information for family intervention in clinical settings[36]. Therefore, we have recently produced a Japanese version of the Family Assessment Device (FAD), originally developed in North America, and confirmed its reliability and validity[36, 38].

The purpose of this study was to compare family functioning in families with a member in the acute phase of endogenous monopolar depression with that in families of healthy controls, employing the Japanese version of the FAD by means of a case control study, and to identify the characteristics of family functioning in Japanese families containing a member with endogenous monopolar depression. Based on the results obtained, we also assessed issues that would be of value in psychosocial intervention for the family of a patient with endogenous monopolar depression.

The present study, as far as we have been able to determine, is the first report in Japan to assess the characteristics of family functioning of patients with endogenous monopolar depression by means of a statistically validated family assessment measure.

SUBJECTS AND METHODS

Subjects

1) Depressive families

Patients were recruited from a psychiatric outpatient clinic in one of the general hospitals in Tokyo affiliated to Hiroshima University School of Medicine. All married, non-psychotic, depressed outpatients who came to the clinic were approached consecutively for twelve months and invited to participate in the study. To be considered for inclusion, participants had to be aged between 20 and 65 years and currently living with a spouse, but they were excluded if they showed evidence of any organic brain impairment.

25 patients were initially recruited and documented informed consent was obtained. However, five patients declined to complete the set of self-report questionnaires and requested termination. Consequently 20 patients remained as the subjects of the study. There was no significant difference between the 20 subjects and 5 drop-outs according to gender, age, number of family members, socio-economic status[16], or severity of depression.

All 20 subjects were administered the Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (SCID)[40] to assure by clinical diagnosis that they were actually in the acute phase of monopolar major depression. The severity of depression was assessed by a 17-item version of the Hamilton Rating Scale for Depression (HRSD)[13]. Patients were included as subjects if they scored over 20 on the HRSD. Family functioning was assessed according to the Family Assessment Device (FAD)[9,29,36] for all 20 subjects and all members living in the same household.

2) Control families

The purpose of the study and their freedom to cooperate was explained orally to 250 students at a certain engineering university in Tokyo, and their replies to the questionnaire packet including FAD were collected. Replies were obtained from 80 students who lived with at least one other family member and from 172 family members living in the same household. Consequently, after excluding families that contained a member with a history of psychiatric care or families whose number of family members reported by the student did no match the number of questionnaire packets obtained, 27 students and 77 family members including their parents (27 families, 104 persons) were recruited as the control group in this study.

Measures

1) Structured Clinical Interview for DSM-III-R (SCID)

The SCID[40] is a semi-structured interview developed by Spitzer et al for the diagnosis of psychiatric disorders on the basis of the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (DSM-III-R)[1], which was drafted by the American Psychiatric Association in 1987 as a set of operational diagnostic criteria for research on psychiatric patients. It was subsequently widely used in Western countries and later, in the form of a Japanese version, in Japan as well. The SCID consists of a detailed interview procedure that requires about 60 minutes completion time per case to make a definitive diagnosis.

2) Hamilton Rating Scale for Depression (HRSD)

The HRSD[13] is an observer-rating scale for depression, composed of 17 items, that was developed by Hamilton in 1960. It is capable of chronicling the severity of depression in patients already diagnosed with the disease and is the most widely used scale for depression research in Western countries, and likewise in Japan. It was used in this study to measure severity during the initial examination of the subject.

3) Family Assessment Device (FAD)

The FAD[9,29] is a 60-item self-report questionnaire designed to assess the six dimensions of the McMaster Model of Family Functioning[8]: Problem Solving, Communication, Roles, Affective Responsiveness, Affective Involvement, Behavior Control, as well as overall level of family function-

ing. Problem Solving refers to the family's ability to resolve problems (issues which threaten the integrity and functional capacity of the family) at a level that maintains effective family functioning. Communication refers to the exchange of information among family members. The focus is on whether verbal messages are clear in content and direct in the sense that the person spoken to is the person for whom the message is intended. Roles focuses on whether the family has established patterns of behavior for handling a set of family functions which includes provision of resources, providing nurture and support, supporting personal development, maintaining and managing the family systems and providing adult sexual gratification. In addition, Roles reflects consideration of whether tasks are carried out responsibly by family members. Affective Responsiveness assesses the extent to which individual family members are able to experience appropriate affect over a range of stimuli. Both welfare and emergency emotions are considered. Affective Involvement is concerned with the extent to which family members are interested in and place value on each other's activities and concerns. The healthiest families have intermediate levels of involvement, neither too little nor too much. Behavior Control assesses the way in which a family expresses and maintains standards for the behavior of its members. Behavior in situations of different sorts (dangerous, psychological, and social) is assessed as are different patterns of control (flexible, rigid, laissez-faire and chaotic). General Functioning reflects the overall health/pathology of the family. Each of the seven subscales consists of between 6 and 11 items that are rated on a 4-point scale (strongly agree to strongly disagree). Low scores on the FAD reflect better family functioning. The psychometric properties of the FAD have been established in publications elsewhere. Briefly, published data suggest that the FAD subscales have: 1) adequate internal consistency (.72–.92)[9], 2) adequate test-retest reliability (.66–.76), and 3) low correlations with social desirability (.06–.19)[29]. The FAD has been found to differentiate between families rated as healthy or unhealthy by experienced clinicians for each dimension, as well as to correlate in the expected directions with other self-report measures of family functioning[29]. While the correlations between the subscales of the FAD are moderate (.37–.67), these correlations are theoretically consistent and approach zero when the effects of General Functioning are covaried[9]. The FAD has been used in numerous clinical studies, as well as the Family Environment Scale (FES)[34], in a wide range of areas, including depressive disorders[22,41,43], eating disorders[10,12], adolescent psychology[14,18,23], chronic physical diseases[3,7,25,35], cancer[26] and so forth.

Before starting the present study, we produced a Japanese version of the FAD (FAD-J) with the permission of the original authors[36]. Each subscale of the FAD-J has acceptable levels of internal consistency (.64–.87) and test-retest reliability (with an interval of two weeks; .64–.78). Correlations between subscales on the FAD-J are mostly low, and concurrent validity with the Japanese version of the Family Environment Scale (FES-J) was desirable. Correlations of the FAD-J with social desirability are also uniformly low[38]. Saito et al[39] pointed out that considering that some of the subscales of FES-J were not reliable and that there was a room for a further feasibility study in Japan, there might be different degrees of translatability for each of the family concepts used in the FES and that evaluation of families in different societies necessitates culturally appropriate constructs and instruments. However, the FAD-J has been statistically standardized through the above-mentioned processes and the feasibility of the FAD in Japan has also been confirmed[37]. Therefore, we employed the FAD as an instrument for assessing family functioning which was the most essential variable in the present study.

Statistical analysis

As for analysis of family data, the FAD family scores and the FAD individual scores were considered. The FAD family scores were calculated as the means of the scores of the individual members of the family, and they are considered to be a reflection of family functioning as a whole. The FAD individual scores reflect each family member's perception of family functioning.

Mann-Whitney's U-test was used to compare the sociodemographic characteristics and the FAD scores between two groups. A P value less than .05 was considered significant.

We used the integrated statistical analysis program package, High-quality Analysis Libraries for Business and Academic Users (HALBAU) for Windows (HALWIN)[42], Version 5.32, for all data analyses.

RESULTS

Characteristics of the subjects

The sociodemographic characteristics of the subjects are shown in Table 1. Of the 20 patients completing the research procedure, 10 were female and 10 male. Their ages ranged from 32 to 65, with a mean of 48.8 years (SD = 8.6). The 17-item HRSD mean score at the participation of the study was 29.5 (SD = 4.8), which meant that the level of depression was rather severe. 15 of the 20 patients were first onset cases, and the others were recurrent. Three of the 20 had made suicide attempts.

The characteristics of Depressive families (including patients with depression) and Control families are shown in Table 2. Comparing these

Table 1. Demographic characteristics of 20 patients

Sex (Male/Female)	10/10
Age*	48.8 (8.6)
Baseline score of HRSD*	29.5 (4.8)
Age of onset*	46.7 (10.4)
Number of depressive phases (including index phase	
once	15
twice	4
four times	1
History of suicide attempts	3

* Each value indicates mean (standard deviation).
HRSD: Hamilton Rating Scale for Depression

Table 2. Demographic characteristics of depressive and control families

		Depressive families (N = 20)	Control families (N = 27)	z value	p value
Age*					
	husband	50.0 (8.5)	48.6 (3.0)	0.410	N.S.
	wife	47.6 (9.1)	45.9 (3.0)	1.003	N.S.
	couple	97.6 (17.1)	94.6 (5.4)	0.603	N.S.
Number of family members*		3.3 (0.9)	3.9 (0.7)	2.258	0.024
Socio-economic status (SES)*16)		3.1 (0.6)	2.9 (0.7)	1.282	N.S.
	I	0	0		
	II	3	8		
	III	12	15		
	IV	5	4		
	V	0	0		

* Each value indicates mean (standard deviation).

Table 3. Comparison of family functioning between depressive and control families

FAD subscale	FAD score*			
	Depressive families (N = 20)	Control families (N = 27)	z value	p value
Problem Solving	2.22 (0.46)	1.97 (0.33)	2.153	0.031
Communication	2.16 (0.34)	1.96 (0.32)	1.981	0.048
Roles	2.11 (0.29)	1.97 (0.30)	1.399	N.S.
Affective Responsiveness	2.30 (0.41)	2.14 (0.39)	1.809	N.S.
Affective Involvement	2.22 (0.28)	2.15 (0.31)	0.517	N.S.
Behavior Control	2.18 (0.36)	2.02 (0.30)	1.442	N.S.
General Functioning	2.02 (0.35)	1.82 (0.27)	2.002	0.045

* Each FAD score indicates mean (standard deviation).

Table 4. Comparison of perceived family functioning between members of depressive and control families

FAD subscale	FAD score*			
	Members of Depressive families (N = 65)	Members of Control families (N = 104)	z value	p value
Problem Solving	2.20 (0.53)	1.97 (0.46)	2.936	0.0033
Communication	2.16 (0.40)	1.95 (0.50)	3.164	0.0016
Roles	2.11 (0.39)	1.97 (0.41)	2.423	0.0154
Affective Responsiveness	2.32 (0.54)	2.13 (0.58)	2.127	0.0335
Affective Involvement	2.23 (0.41)	2.15 (0.46)	1.219	N.S.
Behavior Control	2.19 (0.44)	2.03 (0.45)	2.324	0.0202
General Functioning	2.02 (0.45)	1.81 (0.43)	2.646	0.0081

* Each FAD score indicates mean (standard deviation).

Table 5. Comparison of perceived family functioning between depressive and control couples

FAD subscale	FAD score*			
	Depressive couples (N = 40)	Control couples (N = 54)	z value	p value
Problem Solving	2.12 (0.62)	1.84 (0.48)	2.397	0.0165
Communication	2.10 (0.42)	1.81 (0.44)	3.354	0.0008
Roles	2.11 (0.38)	1.85 (0.37)	3.437	0.0006
Affective Responsiveness	2.28 (0.56)	1.94 (0.51)	3.039	0.0024
Affective Involvement	2.23 (0.43)	2.05 (0.44)	1.683	N.S.
Behavior Control	2.20 (0.44)	1.89 (0.42)	3.337	0.0009
General Functioning	2.00 (0.50)	1.66 (0.34)	3.300	0.0010

* Each FAD score indicates mean (standard deviation).

characteristics between the two groups, no significant differences in age, socioeconomic status, and so forth were found, but the number of family members of Control families was significantly more than that of Depressive families (p<.05).

Comparison between depressive families and control families

The FAD family scores of the two groups are compared in Table 3. Depressive families reported significantly worse family functioning than the control families in Problem Solving, Communication, and General Functioning (p<.05). Depressive families also tended to have poorer functioning with regard to Affective Responsiveness.

The FAD scores of individual family members in the two groups are compared in Table 4. Comparison between the 65 members of the depressive families, including the depressed patients, and the 104 members of the control families showed that the members of the depressive families perceived significantly worse family functioning than the members of the control families in 6 areas: Problem Solving, Communication, Roles, Affective Responsiveness, Behavior Control, and General Functioning.

Comparison between depressive couples and control couples

The FAD scores of the couples in the depressive families and the control families are compared in Table 5. Comparison of the individual scores of the 40 members of the depressive couples and the 54 members of the control couples showed that the depressive couples perceived significantly worse family functioning than the control couples in the

areas of Problem Solving, Communication, Roles, Affective Responsiveness, Behavior Control, and General Functioning.

DISCUSSION

Impairment of family functioning during the acute phase of monopolar depression

The results of this study showed that family functioning in the acute phase of endogenous monopolar depression measured by the FAD was significantly poorer than that of control families in three areas: Problem Solving, Communication, and General Functioning. In addition, although the difference did not reach the level of significance, the results suggested a tendency toward poorer family functioning as a whole in the depressive families compared to the control families. These findings indicated that the families of depressed patients manifested significant dysfunction during the acute phase of the patient's depressive episode. Among other things, it had become difficult to solve a variety of problems that might threaten the integrity and capacity of the family at a level that could maintain effective family functioning, and sharing of information between family members had become unclear. Moreover, family functioning as a whole had worsened, including role allocation, affective exchanges, and behavior control.

Earlier research using the FAD compared family functioning in 28 inpatients in the acute phase of depression and family members living in the same household (depressive families) and 28 families with no physical or mental disorders (control families)[20]. The results showed that the depressive families had significantly poorer family functioning in six of seven areas: Problem Solving, Communication, General Functioning (p<.001), Roles, Affective Involvement (p<.01), and Affective Responsiveness (p<.05). No significant difference was observed in the area of Behavior Control only. Thus, family functioning in the families of patients with endogenous monopolar depression was more impaired than in control families in almost all areas, but particularly in the three areas of Problem Solving, Communication, and General Functioning.

The finding of marked dysfunction in those three areas is consistent with our own findings in this study. On the other hand, Keitner et al[20] discovered significantly poorer function in the area of Roles, Affective Responsiveness, and Affective Involvement, whereas in our study all of the scores were higher than in the control families and functions tended to be poorer, but none of the differences reached the level of significance. The reason for this may lie in the fact that our sample consisted of 20 outpatients, was slightly smaller-sized and the severity of depression was also slightly milder than in the study by Keitner et

al[20], whose subjects consisted of 28 inpatients. Other possible reasons that need to be considered are that cultural differences between the US and Japan and disagreement in the subjects' response to the questionnaire items may be reflected in the differences in results. Nevertheless, the fact that the finding of worse functioning in those three areas: Problem Solving, Communication, and General Functioning, was common to both the US and Japan and that the same tendencies were observed in the other areas as well strongly suggests specific characteristics that are common to the families of patients with monopolar depression in both countries.

Since evidence of dysfunction in the areas of Problem Solving and Communication among families with a patient in the acute phase of depression has been reported in earlier clinical observation studies[6,15,17], the results of our study show that evidence consistent with those long-time observation studies can also be relatively conveniently extracted by the FAD when families of Japanese patients are the subjects. They also demonstrated the validity of using the Japanese version of the FAD in empirical studies to evaluate family functioning.

It is not entirely clear from the range of the results obtained in our study whether the impaired family functioning of the monopolar depression patients represents an acute-phase state-dependent change or a trait-dependent change in the patient's family. Regarding this point, Keitner et al[20] reported another study comparing the follow-up FAD scores of 23 depressed samples at the remittent phase with 23 matched control samples. These analyses indicated that the depressed samples continued to report significantly poorer functioning in Problem Solving (p<.01), Communication (p<.05), and General Functioning (p<.05). The results indicate that while depressed families do exhibit some improvement in certain areas of family functioning after remission of symptoms, they still report significantly poorer functioning than control families in problem solving skills as well as ongoing problems in communicating and overall functioning. Accordingly, part of the family dysfunction seen in the acute phase of depression is "state-dependent", whereas the dysfunctions in these three areas of Problem Solving, Communication, and General Functioning can be considered "trait-dependent". When the results of research conducted in the US are taken into consideration, the dysfunction in these three areas found in our own study would also seem to show "trait-dependent" characteristics of family dysfunction in Japanese families of monopolar depression patients.

There are common methodological problems in analyzing family data whether calculating a mean score for each family or using family members'

individual scores. The latter precludes recognition of a particular member's perception of functioning, which parallels the common clinical finding that an individual member becomes the symptom bearer or scapegoat for the family[5]. When families' mean scores are used in the statistical analysis, the latent perceptual skewing of such family members is normalized, and problematic families may be overlooked. Clinically, it is important to identify problematic families by focusing on the perceptions of individual members in the family. There is also a report claiming that the method that uses family members' individual scores is more valid[24].

As a rule, the FAD uses the means of scores on each of the subscales of individual family members 12 years old and over in the same household as family scores. As stated above, by averaging the scores of the individual family members, the family's evaluation may be misleading. We previously reported that examination of individuals' scores is also important in assessment of family functioning by the FAD[38].

In this study we used the individuals' FAD scores, which were not assessed in the earlier studies by Keitner et al[20], to assess perception of family functioning from the standpoint of each family member as well as from the standpoint of the patient and the patient's spouse. The results showed that both the members of the depressive families and the depressive couples perceived significantly poorer family functioning than the control families and control couples, respectively, in most areas, i.e. the six subscales: Problem Solving, Communication, Roles, Affective Responsiveness, Behavior Control, and General Functioning. Thus, when examined at the level of each individual, members of the depressive families perceived poorer family functioning over broader areas than members of the control families. This also appears to be due to the higher power of the statistical differences that resulted from the increase in number of subjects by using the individual scores, and the worsening of family functioning that was not expressed by the family scores could have been revealed by the scores of the individuals.

Limitations of this study include the fact that all the subjects were outpatients from only one institution, the psychiatry department of a general hospital located in the center of Tokyo, that the sample size was small, only 20 patients, and that the control families were not subjected to a diagnostic interview by a psychiatrist. Thus, the results of this study leave room for further investigation to determine whether they are universal characteristics of Japanese families of patients with monopolar depression.

Psychosocial intervention for families of patients with monopolar depression

There have been several reports on relation-ships between family functioning of depressed patients and the outcome of the disease. Depressed patients with dysfunctional families had a significantly poorer course of illness, as manifested by higher levels of depression, lower levels of overall adjustment, and a lower proportion of recovered patients. Thus, impaired family functioning appears to be an important prognostic factor in monopolar depression[31]. Severity of medical conditions, family conflict, and lack of family support before treatment predicted a poorer treatment outcome[33].

As a result of this state of affairs, psychosocial interventions for families with a depressed patient are now considered essential through the whole course of depressive disorder[22], and there have been several reports of their efficacy. Glick et al[11] found that the use of the Inpatient Family Intervention program correlated with a clinically significant improvement at discharge, especially for female patients, and its effect was maintained six months after admission before attenuating at 18 months. Beardslee et al[2] reported that clinician-facilitated family intervention was associated with more positive self-reported and assessor-rated changes than the lecture intervention, and that its sustained effects were reported 1.5 years after enrollment.

The results of this study showed that perceived dysfunction, i.e., Problem Solving and Communication, are more characteristic of the families of monopolar depression patients than affective dysfunction, i.e., Affective Responsiveness and Affective Involvement. This finding is an important point in terms of proceeding with family therapy in the families of patients with monopolar depression. More specifically, when conducting psychosocial interventions in depressive families it is essential to include techniques that will increase the family's problem solving ability and promote communication. For example, a family intervention program called Problem-Centered Systems Therapy of the Family (PCSFT) has been developed by the original authors of the FAD, and its efficacy is in the process of evaluation[32]. From the results of our study, we would also like to stress the importance of examining family functioning in detail at the recovery stage or during relapses and recurrences of depression, developing a stepwise and structured family intervention program paralleling the course of depression, and empirically demonstrating its efficacy. These findings and speculations could greatly contribute to the more effective treatment for patients with endogenous monopolar depression and their family members.

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