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Neurosis from the Viewpoint of DIS (Diagnostic Interview Schedule)

Yukiyasu Nonaka, M.D., Masahisa Nishizono, M.D.
and Joe Yamamoto, M.D.*

Department of Psychiatry, Fukuoka University School of Medicine, Fukuoka
**Neuropsychiatric Institute, Center for the Health Science, University of California, Los Angeles, U.S.A.*

Abstract: We examined the relationship between clinical and DIS-Lifetime diagnoses given independently on 106 psychiatric patients clinically diagnosed as suffering from neurosis. They had many coexisting DIS diagnoses, and some of them had no DIS diagnosis. The key to the coexistence relationships in DIS diagnosis was a major depressive episode, and the subjects were classified into four types by the DIS coexistence relationships; Type I: 28 cases (26.4%) had coexisting diagnoses belonging to anxiety disorders or somatoform disorders, in addition to a major depressive episode. They were suffering from clinically severe neurosis accompanied by borderline personality disorder. Type II: 30 cases (28.3%) belonged to anxiety disorders or somatoform disorders without a major depressive episode, and had clinically symptomatic neurosis. Type III: 18 cases (17.0%) had a major depressive episode without anxiety disorders or somatoform disorders, and had clinically depressive neurosis or depressive episode with less distortion of the personality. Type IV: 30 cases (28.3%) were other than Type I–III, and were clinically similar to symptomatic neurosis.

Key Words: *DIS diagnosis, clinical diagnosis, neurosis, borderline personality disorder*

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INTRODUCTION

DSM-III (Diagnostic and Statistical Manual of Mental Disorders, Third Edition)[6] published in 1980 by the American Psychiatric Association presents an extremely unique diagnostic classification, characterized by using the multiaxial diagnosis and distinct diagnostic criteria. In the multiaxial diagnosis, with a goal toward a comprehensive diagnosis of patients to facilitate treatment, clinical syndromes are entered on Axis I, personality disorders and specific development disorders on Axis II, physical diseases and conditions on Axis III, severity of psychosocial stressors on Axis IV, and the highest level of adaptive functioning over the past one year on Axis V.

With regard to neurosis, since DSM-III takes a nontheoretical position in terms of pathogenesis and the approach to grasp semiotic features descriptively, the neurosis is deleted from Axis I because the term "neurosis" and its conception are ambiguous. This calls for a further review and discussion.

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Mailing address: Yukiyasu Nonaka, M.D., Department of Psychiatry, Fukuoka University School of Medicine, 7-45-1, Nanakuma, Jonan-ku, Fukuoka 814-01, Japan.

As to the diagnosis of the personality disorder on Axis II, "personality traits" are defined as being "enduring patterns of perceiving, relating to, and thinking about the environment and oneself . . ." and constitute "personality disorders" when such personality traits are so strengthened as to be of a morbid state. Furthermore, it says that "diagnoses of more than one personality disorder should be made if the individual meets the criteria for more than one." And it is more important that because DSM-III depends too much on descriptive features even in making a diagnosis of personality disorder, it lacks in the viewpoint of psychodynamics, such as in the developmental level of emotion, defense mechanism, or differentiation of personality organization.

Previously a conventional concept of neurosis placed Axes I and II in the center integrating all aspects, Axes III, IV and V in consideration. Because DSM-III separated them, it is a matter of course that the concept and the term neurosis became ambiguous.

Notwithstanding being criticized concerning the above, DSM-III certainly has been accepted worldwide and reviewed for the reason that it has brought in more of a scientific method based on objective procedure for making psychiatric diagnoses, which had been rather dependent on the personal technique of the psychiatrist. Under such circumstances, it leads to making a computer diagnosis available, in which a structural diagnostic interview is conducted in accordance with the diagnostic criteria and a diagnosis is reached by analyzing the obtained data by computer.

In our university hospital, the Japanese version of DIS (Diagnostic Interview Schedule)[41] originated by NIMH (National Institute of Mental Health) was made and has been in use since June, 1980 to obtain a "DIS computer diagnosis" from the data to be used in psychiatric diagnosis and studies in a variety of fields. The results of DIS, originally developed for use in the epidemiological research in general, show a high concordance rate with the clinical diagnosis (DSM-III) made by psychiatrists. However, our study (1984 and 1985) has revealed some considerably interesting differences between the DIS computer diagnosis (DSM-III) and conventional clinical diagnosis (ICD-9) which we commonly use in our clinical practice.[31 34 36]

Based on the above, the authors conducted DIS on the neurotic patients under medical care in the psychiatric department of Fukuoka University Hospital to judge the characteristics of the DIS diagnosis and its clinical application as has been reported in this paper.

SUBJECTS AND METHODS

The subjects are 106 patients (45 males and 61 females) with a mean age of 34.1 (S.D. ± 13.0). Among those are 72 outpatients who, while visiting our department for the first time during the period from June, 1980 to May, 1985, agreed to cooperate with our study. The mean age of the outpatients was 38.2 (± 13.1). Thirty-four were inpatients who had been under hospitalized treatment in our department during the period from March, 1984 to September, 1985. The mean age of the inpatients was 25.4 (± 6.9).

At first each patient was given the clinical diagnosis and DIS diagnosis independently in the manner as described below (Outline of Main Examination Items). Then the relationship between the clinical diagnosis and DIS diagnosis was studied. Secondly, the DIS diagnosis of each patient was sorted out depending on the coexistence relationship it contained, and was classified according to the specific character of respective coexistence relationships. Thirdly, in order to examine the clinical significance of the classification based on the coexistence relationship, only on the 34 inpatients, to whom we have access to for more reliable data, we carried out a pursuit survey for psychodynamic personality

diagnosis, remarkable symptoms,[32 35] GAS (General Assessment Scale),[43] main defense mechanisms,[30] developmental level, premorbid character, personality test of the Fukuoka University version,[33 42] family unity and the psychiatric problems of the family members within the second degree of kinship, medicines mainly used, psychotherapeutic approach, acting-out, number of days under hospitalization, and improvement degree at the time of discharge from the hospital.

Outline of Main Examination Items

Clinical Diagnosis

The clinical diagnosis was made in accordance with ICD-9.[54] Diagnoses for the outpatients were made by mutual consultation of the doctor in charge and the author. There were 18 cases of hypochondriacal neurosis, 16 of depressive neurosis, 15 of anxiety neurosis, 15 of hysterical neurosis, and so forth. For the inpatients we used diagnoses made through consultation of the entire staff at the time of discharge. Depressive neurosis was seen in 11 cases, hysterical neurosis in 10, obsessive-compulsive neurosis in 7, and so forth. All of them fall into the category of the conventional clinical diagnosis.

DIS Diagnosis

The DIS[41] is a diagnostic interview schedule developed by NIMH to be used in the epidemiological survey of the general population. The interviewers do not necessarily have to be psychiatrists but require preliminary training of about two weeks. The DIS is a systematized interview program and the interviewee answers simply YES or NO to the questions on psychiatric symptoms they may have had by that time which the interviewer asks one by one in accordance with the schedule. An interview takes about one hour or one hour and a half. The obtained data are analyzed by computer to get the DIS diagnosis.

Among various psychiatric problems the interviewee may have had in his life, on 20 disorders shown in Table 1, all of the diagnoses satisfying the diagnostic criteria in DSM-III are revealed for the DIS diagnostic group. In other words, they are lifetime diagnoses of the interviewee and also the preliminary diagnostic group to which the hierarchical exclusion criteria are applied to make definite diagnoses of DSM-III.

In our study at this time, the interviewers were trained beforehand using video tapes and confirmed to be nearly on an equal level. The outpatients were interviewed by doctors and psychotherapists and the inpatients solely by doctors.

Psychodynamic Personality Diagnosis

Different from the clinical diagnosis which attaches importance to the symptomatic level, the psychodynamic personality diagnosis was considered only on those patients whose personality factors would become important for the treatment in view of their clinical history and treatment process. As the criteria for the psychodynamic personality diagnosis, ability of reality testing, integration of identity, defense mechanism (operation) were comprehensively considered and those who fit the concept of borderline personality organization by Kernberg (1967, 1981)[23 24] were diagnosed as personality disorders. Patients with personality disorders were further categorized into two subtypes—borderline personality disorder and narcissistic personality disorder. The patients of the former subtype distinctly display identity diffusion and unstable interpersonal relationship and those of the latter have rather emphasized fantastic narcissistic aspects.

Main Defense Mechanism

The main defense mechanism was described by taking up the lower level mechanism among a variety of defense mechanisms that came to be shown during the treatment process and categorizing them into narcissistic defense, immature defense, neurotic defense, and mature defense, which were listed by Meissner (1975).[30]

Personality Test of Fukuoka University Version

The Fukuoka University version of personality test[33 42] is a modification of Cattel's personality test schedule. In the Fukuoka University version, personality is classified into the following;

Type A: cyclothymia, reality affirmative, and stable in interpersonal attitude and emotion,

Type B: similar to Type A but unstable either in interpersonal attitude or emotion,

Type C: temperate in every aspect but irresolute,

Type D: schizothymia and paranoid but stable either in interpersonal attitude or emotion, and

Type E: similar to Type D but unstable in both interpersonal attitude and emotion and more shut-in than Type D.

RESULTS

The results of the examination are shown in Appendixes 1 and 2.

(Appendix 1)

Subject Number	Sex	Age	Clinical Diagnosis (ICD-9)	DIS Diagnosis (DSM-III)	Type*
1	M	18	Anxiety neurosis	Simple pho.	II
2	M	25	Anxiety neurosis	Obs-comp. d., panic d., alcohol, tobacco	II
3	M	30	Anxiety neurosis	Tobacco	IV
4	M	31	Anxiety neurosis	Agora., tobacco	II
5	M	33	Anxiety neurosis	Tobacco	IV
6	M	35	Anxiety neurosis	No diagnosis	IV
7	M	39	Anxiety neurosis	No diagnosis	IV
8	M	41	Anxiety neurosis	Agora., simple pho.	II
9	M	58	Anxiety neurosis	Tobacco	IV
10	F	22	Anxiety neurosis	M. D. E.	III
11	F	30	Anxiety neurosis	Agora., simple pho., psychosexual.	II
12	F	31	Anxiety neurosis	M. D. E., simple pho.	I
13	F	40	Anxiety neurosis	No diagnosis	IV
14	F	40	Anxiety neurosis	Agora., dysthymic d.	II
15	F	35	Anxiety neurosis	No diagnosis	IV
16	M	24	Hysterical neurosis	M. D. E., agora., panic d., somati.	I
17	M	26	Hysterical neurosis	Agora.	II
18	M	32	Hysterical neurosis	Tobacco	IV
19	M	42	Hysterical neurosis	Tobacco, pathological.	IV
20	F	18	Hysterical neurosis	No diagnosis	IV
21	F	18	Hysterical neurosis	M. D. E., psychosexual.	III
22	F	30	Hysterical neurosis	M. D. E., simple pho., alcohol, tobacco	I
23	F	31	Hysterical neurosis	M. D. E., psychosexual.	III
24	F	32	Hysterical neurosis	No diagnosis	IV
25	F	39	Hysterical neurosis	M. D. E.	III
26	F	44	Hysterical neurosis	Agora., simple pho., psychosexual.	II
27	F	47	Hysterical neurosis	Agora., psychosexual.	II
28	F	57	Hysterical neurosis	No diagnosis	IV
29	F	58	Hysterical neurosis	M. D. E.	III
30	F	62	Hysterical neurosis	No diagnosis	IV
31	M	20	Phobic neurosis	Agora., simple pho.	II
32	M	22	Phobic neurosis	Obs-comp. d., simple pho.	II
33	M	32	Phobic neuros		
34	M	33	Phobic neuros		
35	F	27	Phobic neuros		
36	M	27	Obsess compu neuros		
37	M	38	Obsess compu neuros		
38	M	20	Depre neuros		
39	M	41	Depre neuro		
40	M	57	Depre neuro		
41	F	21	Depre neuro		
42	F	32	Depre neuro		
43	F	33	Depre neuro		
44	F	35	Depre neuro		
45	F	35	Depre neuro		
46	F	37	Depre neuro		
47	F	37	Depre neuro		
48	F	38	Depre neuro		
49	F	38	Depr neuro		
50	F	38	Depr neuro		
51	F	43	Depr neuro		
52	F	48	Depr neuro		
53	F	56	Depr neuro		
54	F	26	Depe aliza neuro		

* Type: Classification of

Subject Number	Sex	Age	Clinical Diagnosis (ICD-9)	DIS Diagnosis (DSM-III)	Type*
33	M	32	Phobic neurosis	Simple pho.	II
34	M	33	Phobic neurosis	Agora., Dysthymic d., psychological.	II
35	F	27	Phobic neurosis	Obs-comp. d., agora., simple pho., tobacco, psychosexual.	II
36	M	27	Obsessive-compulsive neurosis	Obs-comp. d.	II
37	M	38	Obsessive-compulsive neurosis	M.D.E., obs-comp. d., simple ph.	I
38	M	20	Depressive neurosis	Tobacco	IV
39	M	41	Depressive neurosis	Alcohol	IV
40	M	57	Depressive neurosis	No diagnosis	IV
41	F	21	Depressive neurosis	No diagnosis	IV
42	F	32	Depressive neurosis	No diagnosis	IV
43	F	33	Depressive neurosis	Schizophrenic., obs-comp. d., psychosexual.	II
44	F	35	Depressive neurosis	M.D.E. agora.	I
45	F	35	Depressive neurosis	M.D.E., simple pho., psychosexual	I
46	F	37	Depressive neurosis	M.D.E., Alcohol, psychosexual	III
47	F	37	Depressive neurosis	M.D.E.	III
48	F	38	Depressive neurosis	Agora.	II
49	F	38	Depressive neurosis	M.D.E.	III
50	F	38	Depressive neurosis	M.D.E. tobacco	III
51	F	43	Depressive neurosis	No diagnosis	IV
52	F	48	Depressive neurosis	M.D.E., somati.	I
53	F	56	Depressive neurosis	No diagnosis	IV
54	F	26	Depersonalization neurosis	M.D.E.	III
55	M	24	Hypochondriacal neurosis	No diagnosis	IV
56	M	29	Hypochondriacal neurosis	M.D.E.	III
57	M	36	Hypochondriacal neurosis	Obs-comp. d., alcohol	II
58	M	38	Hypochondriacal neurosis	M.D.E., panic. d., tobacco.	I
59	M	39	Hypochondriacal neurosis	M.D.E.	III
60	M	43	Hypochondriacal neurosis	Barbiturate	IV
61	M	67	Hypochondriacal neurosis	Alcohol.	IV
62	F	20	Hypochondriacal neurosis	No diagnosis	IV
63	F	37	Hypochondriacal neurosis	Psychosexual	IV
64	F	38	Hypochondriacal neurosis	No diagnosis	IV
65	F	43	Hypochondriacal neurosis	M.D.E., tobacco	III
66	F	44	Hypochondriacal neurosis	Obs-comp. d.	II
67	F	50	Hypochondriacal neurosis	No diagnosis	IV
68	F	57	Hypochondriacal neurosis	M.D.E.	III
69	F	63	Hypochondriacal neurosis	No diagnosis	IV
70	F	65	Hydochondriacal neurosis	No diagnosis	IV
71	F	67	Hypochondriacal neurosis	M.D.E.	III
72	F	69	Hypochondriacal neurosis	No diagnosis	IV

* Type: Classification of types on the coexistence of DIS diagnoses.

(Appendix 2)

No.	Sex Age	Clinical Diagnosis (ICD-9) (Personality) Diagnosis	Remarkable Symptoms	Main Defense Mechanism Developmental Level	Premorbid Character Personality Test	Family	Psychiatric Problem in the 2nd Degree Kinship	Psychothe Appro Acting
1	M.M. M 29	Depersonalization neurosis (narcissistic personality disorder)	Depressive neuras., hypochon., Depersonalization, anxious, asocial	Narcissistic Oral phase	Immodithymic, nervous Type E	Nuclear fam., single child, dominant M., powerless F., pseudomutuality	Nothing	Psychoan Self-mutil and prete suicide
2	H.Y. M 20	Depersonalization neurosis (narcissistic personality disorder)	Depersonalization, hypochon, depress., neuras.	Narcissistic Oral phase	Nervous, immodithymic Type E	Nuclear fam., absent parents, let-alone policy	Nothing	Psychoan Not
3	S.K. M 22	Obsessive-compulsive neurosis (narcissistic personality disorder)	Depressive antisocial obsessive, asocial, anxious	Narcissistic Anal phase	Nervous, viscous Type B	Nuclear fam., strong grandf., powerless F., pseudomutuality	Nothing	Psychoan Escape fr Ignoranc and activ
4	T.S. F 26	Phobic neurosis	Hypochon, obsessive, asocial	Immature Oedipal phase	Viscous Type A	Large fam., separation from M.	Nothing	Psychoan Not
5	Y.Y. F 25	Hysterical neurosis (borderline personality disorder)	Anxious, hypochon., depress., conversion, antisocial	Immature Oedipal phase	Hysterical Type D	Large fam., strong tie between hus. and his m., pseudomutuality	Nothing (brought in fatherless fam.)	Psychoan Self-muti love affa
6	K.R. F 36	Hysterical neurosis	Anxious, hypochon., neuras., depress., conversion	Immature Oedipal phase	Hysterical Type B	Fam. with m. only, unmarried couple	Nothing (parents and 3 brothers divorced)	Psychoar No
7	N.K. M 37	Depressive neurosis	Depressive	Neurotic Post-oedipal phase	Cyclothymic (dependent) Type C	Large family	Nothing	Supporti No
8	T.M. F 23	Depressive neurosis (borderline personality disorder	Neuras., asocial, hypochon., depressive	Narcissistic Oral phase	(Unstable) Type E	Fam. with f. only (disorganized)	F: psychosis (inpatient S: neurosis (inpatient	Psychoar Self-mut
9	N.T. M 37	Depressive neurosis	Depressive, anxious	Neurotic Post-oedipal phase	Nervous, immodithymic (dependent) Type C	Nuclear family	Nothing	Supporti No
10	T.F. F 19	Depressive neurosis (borderline personality disorder)	Anxious, depressive, neuras., hypochon.	Narcissistic Oedipal phase	Schizothymic Type C	Large family great grandps. powerless F., unstable M.,	Nothing	Psychoa Self-mu
11	N.M. M 37	Depressive neurosis	Depressive	Neurotic Oedipal phase	Immodithymic (dependent) Type B	Large family	Nothing	Supporti No
12	T.K. F 24	Anxiety neurosis	Anxious, hypochon., neuras, depressive	Immature Oedipal phase	Immodithymic nervous Type B	Nuclear family	F: alcoholism M: writing disability	Psychoa Self-mu

Psychiatric Problem in the 2nd Degree Kinship	Psychotherapeutic Approach Acting-Out	Medicine (mg/day)	Days Improvement	GAS Point at Admission	DIS Diagnosis	Type*
Nothing	Psychoanalytical	Brom. 15 Lofe. 75	237	48	M.D.E., simple pho., social., alcohol	I
	Self-mutilation and pretence of suicide	Zote. 50	Slightly improved			
Nothing	Psychoanalytical	Brom. 6 Clom. 200	114	57	M.D.E., panic d., simple pho.	I
	Nothing		Fairly improved			
Nothing	Psychoanalytical Escape from ward Ignorance of rules and activities	Diaz. 15 Clom. 50 Levo. 150	501 Slightly improved	42	M.D.E., M.E., obs-comp. d.	I
Nothing	Psychoanalytical	Brom. 15	80	52	M.D.E., M.E. panic d., agora., simple pho., tobacco.	I
	Nothing		Fairly improved			
Nothing (brought in fatherless fam.)	Psychoanalytical	Brom. 11 Sulp. 300	87	41	M.D.E., M.E., agora., simple pho., somati., antisocial., psychosexual.	I
	Self-mutilation, love affair		Slightly improved			
Nothing (parents and 3 brothers divorced)	Psychoanalytical	Mapr. 100	80	41	M.D.E., agora, simple pho., psychosexual, alcohol, tobacco	I
	Nothing		Fairly improved			
Nothing	Supportive	Brom. 9 Mapr. 125	29	65	M.D.E., tobacco	III
	Nothing		Fairly improved			
F: psychosis, (inpatient) S: neurosis (inpatient)	Psychoanalytical Self-mutilation	Brom. 12 Amit. 100 Chlo. 225	160 Fairly improved	44	M.D.E., panic d., agora., simple pho., somati., antisocial, psychosexual, alcohol, tobacco	I
Nothing	Supportive	Brom. 20 Amit. 160	54	55	M.D.E., panic d., social., psychosexual, tobacco	I
	Nothing	Chlo. 25	Fairly improved			
Nothing	Psychoanalytical	Brom. 15 Lofe. 100	368	38	M.D.E., schizophrenic d., agora,, obs-comp. d., somati.	I
	Self-mutilation	Zote. 300	Slightly improved			
Nothing	Supportive	Sulp. 150	42	63	M.D.E., tobacco	III
	Nothing		Extremely improved			
F: alcoholism M: writing disability	Psychoanalytical	Diaz. 15 Clom. 55	387	41	Agora., simple pho., obs-comp. d., dysthymic d.	II
	Self-mutilation	Zote. 75	Fairly improved			

(Appendix 2, continued)

No.	Sex Age	Clinical Diagnosis (ICD-9) (Personality Diagnosis)	Remarkable Symptoms	Main Defense Mechanism Developmental Level	Premorbid Character Personality Test	Family	Psychiatric Problem in the 2nd Degree Kinship	Psyc
13	H.F. M 19	Hysterical neurosis	Hypochon., depressive, conversion	Neurotic Post-oedipal phase	Cyclothymic (immature) Type A	Living alone	S: obs.-comp., neurosis (inpatient)	Sup
14	D.Y. F 24	Hysterical neurosis	Anxious, depressive, conversion, antisocial	Immature Oedipal phase	Nervous Type C	Nuclear family, f. at home a few weeks in a year	Grandf: psychosis	Sup
15	M.K. F 25	Hysterical neurosis	Anxious, hypochon, conversion, neuras.	Immature Oedipal phase	Cyclothymic (immature) Type E	Nuclear family, mostly absent hus., mostly living with her p. because of hus. absence	Nothing	Sup
16	Y.H. M 19	Obsessive-compulsive neurosis	Obs-comp.	Neurotic Anal phase	Nervous Type B	Large family, overcaring m. & grandm., interfering f. pseudomutuality	Nothing	Sup
17	H.K. F 26	Depressive neurosis (borderline personality disorder)	Depressive, neuras., anxious, hypochon.	Narcissistic Oral phase	Nervous, hysterical Type C	Living alone (disorganized), divorced	Nothing	Sup
18	U.Y. M 19	Obsessive-compulsive neurosis (borderline personality disorder)	Anxious, asocial, antisocial nervous, depressive, ob-comp.	Narcissistic Oral phase	Immodithymic, nervous Type C	Nuclear family, strong m., powerless f., pseudomutuality	Nothing	Psy
19	I.K. F 40	Hysterical neurosis	Hypochon., anxious, depressive, asocial, neuras.	Immature Oedipal phase	Hysterical Type C	Nuclear family	F: alcoholism	Sup
20	G.Y. F 17	Depersonalization neurosis (borderline personality disorder)	Depersonalization, depressive, asocial, neuras.	Narcissistic Oral phase	Schizothymia Type E	Nuclear family, strong tie with mother	Nothing	Psy
21	Y.A. F 38	Hysterical neurosis	Anxious, depressive, hypochon., conversion, asocial	Immature Oedipal phase	Hysterical Type B	Large family, discord with hus., pseudomutuality	Nothing (parents divorced)	Psy
22	J.M. F 17	Hysterical neurosis	Anxious, hypochon., conversion, neuras., asocial	Immature Oedipal phase	Hysterical Type A	Nuclear family	Nothing	Psy
23	I.C. F 33	Obsessive-compulsive neurosis	Anxious, hypochon., neuras., depressive, obs-comp.	Immature Oral phase	Immodithymic (dependent) Type D	Nuclear family	Nothing	Sup
24	H.M. M 27	Obsessive-compulsive neurosis	Obs-comp., anxious, asocial	Immature Anal phase	Viscous Type C	Nuclear family	Nothing	Psy

orbid acter nality st	Family	Psychiatric Problem in the 2nd Degree Kinship	Psychotherapeutic Approach Acting-Out	Medicine (mg/day)	Days Improvement	GAS Point at Admission	DIS Diagnosis	Type*
ymic ire)	Living alone	S: obs.-comp., neurosis (inpatient)	Supportive Nothing	Diaz. 10	36 Extremely improved	52	Panic d., somati., tobacco	II
	Nuclear family, f. at home a few weeks in a year	Grandf: psychosis	Supportive Nothing	Halo. 30	46 Fairly improved	8	Simple pho.	II
ymic ire)	Nuclear family, mostly absent hus., mostly living with her p. because of hus. absence	Nothing	Supportive Nothing	Diaz. 5	19 Fairly improved	41	Somati.	II
	Large family, overcaring m. & grandm., interfering f. pseudomutuality	Nothing	Supportive Nothing	Brom. 15 Clom. 150 Zote. 200	205 Fairly improved	58	Obs-comp. d.	II
al	Living alone (disorganized), divorced	Nothing	Supportive Self-mutilation, escape from ward, love affair	Brom. 15 Clom. 150 Zote. 75	141 Slightly improved	31	M.D.E., panic d., somati., psychosexual, tobacco	I
hymic,	Nuclear family, strong m., powerless f., pseudomutuality	Nothing	Psychoanalytical Violence, stealing, drinking, escape from ward	Brom. 15 Clom. 100 Zote. 50	165 Slightly improved	41	Obs-comp. d., psychosexual, alcohol	II
al	Nuclear family	F: alcoholism	Supportive Ignorance of activities	Alpr. 1.2	116 Slightly improved	25	Agora., panic d., psychosexual	II
ymia	Nuclear family, strong tie with mother	Nothing	Psychoanalytical Suicidal attempt	Brom. 9 Halo. 1.5	234 Slightly improved	50	M.D.E., panic d.	I
al	Large family, discord with hus., pseudomutuality	Nothing (parents divorced)	Psychoanalytical Self-mutilation, refusal of food	Clom. 75	84 Fairly improved	24	Panic d., psychosexual	II
al	Nuclear family	Nothing	Psychoanalytical Self-mutilation, escape from ward	Amit. 30	166 Fairly improved	45	M.D.E., agora., social., somati.	I
hymic ent)	Nuclear family	Nothing	Supportive Nothing	Brom. 15 Clom. 75	97 Fairly improved	56	Obs-comp. d., psychosexual	II
	Nuclear family	Nothing	Psychoanalytical Escape from ward	Levo. 200	734 Slightly improved	41	Obs-comp. d.	II

(Appendix 2, continued)

No.	Sex Age	Clinical Diagnosis (ICD-9) (Personality) (Diagnosis)	Remarkable Symptoms	Main Defense Mechanism Developmental Level	Premorbid Character Personality Test	Family
25	T.S. M 27	Phoblic neurosis (narcissistic personality disorder)	Asocial, anxious, depressive	Narcissistic Oral phase	Schizothymic Type E	Nuclear family strong tie with mother, pseudomutuality
26	O.R. M 16	Depressive neurosis (narcissistic personality disorder)	Asocial, hypochon., depressive, anxious	Narcissistic Oral phase	Nervous, immodithymic Type C_1'	Nuclear family
27	K.J. F 16	Hysterical neurosis (borderline personality disorder)	Anxious, depressive, hypochon.	Narcissistic Oral phase	Hysterical Type C	Nuclear family, strict f., unstable m.
28	S.R. F 17	Depressive neurosis (borderline personality disorder)	Depressive, asocial, neuras, anxious, hypochon.	Immature Oedipal phase	Immodithymic Type B	Nuclear family, discording, parent unstable m.
29	N.M. F 25	Depressive neurosis (borderline personality disorder)	Depressive, anxious, neuras,	Immature Oral phase	Nervous Type E	Separated parents, fam. with unstable m. only
30	N.Y, M 23	Depressive neurosis (borderline personality disorder)	Neuras., depressive	Immature Oedipal phase	(Immature) Type B	Nuclear family
31	S.Y. M 27	Obsessive- compulsive neurosis	Obs-comp., depressive anxious, neuras.	Neurotic Anal phase	Immodithymic Type B	Living alone
32	I.S. M 26	Depressive neurosis (borderline personality disorder)	Depressive, anxious	Narcissistic Oral phase	Nervous Type E	strong grandps., unstable and weak ps.
33	M.T. M 24	Obsessive-compulsive neurosis (borderline personality disorder)	Obs-comp., neuras., depressive, asocial, depersonalization	Narcissistic Oral phase	Nervous Type E	Living alone, binding with m.
34	M.S. F 23	Hysterical neurosis (borderline personality disorder)	Depressive, conversion, asocial, anxious, hypochon.	Immature Oral phase	Nervous (dependent) Type D	Nuclear family, unstable hus.

Abbreviations of DIS Diagnosis
M.D.E.: major depressive episode, M.E.: manic episode, panic d.: panic disorder, agora.: agoraphobia, simple pho.: simple phobia, social: social phobia, obs-comp. d.: obsessive-compulsive disorder, dysthymic d.: dysthymic disorder, somati.: somatization disorder, antisocial: antisocial personality disorder, tobacco: tobacco dependence, psychosexual: psychosexual dysfunction, alcohol: alcohol abuse and dependence, barbiturate: barbiturate abuse and dependence, pathological: pathological gambling, schizophrenic: schizophrenic disorder.

Psychiatric Problem in the 2nd Degree Kinship	Psychot Ap Acti
Nothing	Psycho
	Escape ignoran activiti
Nothing	Psycho
	Self-mu violenc ignoran activiti
Grandf: suicide M: hysterical neurosis, self-multilation	Psycho Self-mu escape
Nothing	Suppor
	Refusa escape love af
F: alcoholism M: neurosis	Psycho
	Self-m love af
Nothing	Suppor
	Love a
Grandf: alcoholism	Psych
	Escape
Nothing	Psych
	Self-m suicide
Nothing	Psych
	Self-m ignora activit
S: obsessive compulsive neurosis	Suppo
	Ignora activit

Abbreviations of Medi
Brom.: bromazepam, I
pramine, Amit.: amitri
Zote.: zotepine, Halo.:

Psychiatric Problem in the 2nd Degree Kinship	Psychotherapeutic Approach Acting-Out	Medicine (mg/day)	Days Improvement	GAS Point at Admission	DIS Diagnosis	Type*
Nothing	Psychoanalytical	Brom. 20	349	59	M.D.E., panic d., social	I
	Escape from ward, ignorance of activities		Slightly improved			
Nothing	Psychoanalytical	Clom. 20 Zote. 100	645	51	M.D.E., obs-comp. d., social	I
	Self-mutilation, violence, escape, ignorance of activities	Levo. 100	Slightly improved			
Grandf: suicide M: hysterical neurosis, self-multilation	Psychoanalytical	Clox. 6 Sulp. 150	89	50	Panic d.	II
	Self-mutilation, escape from ward	Levo. 75	Slightly improved			
Nothing	Supportive	Brom. 12 Clom. 55	75	61	M.D.E. obs-comp. d., simple pho., panic d.	I
	Refusal of food, escape from ward, love affair	Zote. 30	Fairly improved			
F: alcoholism M: neurosis	Psychoanalytical	Brom. 15 Mapr. 75	378	45	M.D.E., social., psychosexual	I
	Self-mutilation, love affair	Zote. 150	Slightly improved			
Nothing	Supportive	Brom. 20 Clom. 100	82	40	M.D.E.,	III
	Love affair	Levo. 50	Extremely improved			
Grandf: alcoholism	Psychoanalytical	Diaz. 15 Clom. 150	98	45	M.D.E., obs-comp. d., panic d., tobacco	I
	Escape from ward	Zote. 100	Unchanged			
Nothing	Psychoanalytical	Levo. 1,050	928	32	M.D.E., obs-comp. d., ogora., social	I
	Self-mutilation, suicide		Died			
Nothing	Psychoanalytical	Brom. 12 Zote. 75	1,069	40	M.D.E., obs-comp. d., agora., social, simple pho., somati., barbiturate, tobacco	I
	Self-mutilation, ignorance of activities		Fairly improved			
S: obsessive compulsive neurosis	Supportive	Etiz. 3 Clom. 30	40	55	M.D.E., somati., panic d., tobacco	I
	Ignorance of activities		Slightly improved			

Abbreviations of Medicine
Brom.: bromazepam, Diaze.: diazepam, Alpr.: alprazolam, Clox.: cloxazolam, Etiz.: etizolam, Clom.: clomipramine, Amit.: amitriptyline, Mapr.: maprotiline, Lofe.: lofepramine, Sulp.: sulpiride, Ch'or.: chlorpromazine, Zote.: zotepine, Halo.: haloperidol, Levo.: levomepromazine.

Clinical Diagnosis and DIS Diagnosis (Tables 1 and 2)

The relationship between the clinical diagnosis and DIS diagnosis of the subjects is shown in Table 1. The major relations are as described below. (Hereunder ordinary letters are used in this report to represent the clinical diagnosis: for example, anxiety neurosis, depressive neurosis; and italics are for DIS diagnosis, such as the *major depressive episode, panic disorder*).

First, the concordance rate between the clinical diagnosis and its corresponding DIS diagnosis was checked. In all 9 obsessive-compulsive neurosis cases *obsessive-compulsive disorder* was noted. In all 7 cases of phobic neurosis at least one of those *phobic disorders*, such as *agoraphobia, simple phobia,* or *social phobia,* was noted. Both of those clinical diagnoses showed a concordance rate of 100% with DIS diagnoses. The *major depressive episode* was noted in 66.7% of depressive neurosis cases and 100% of depersonalization neurosis cases, both of which marked a high concordance rate.

On the other hand, hypochondriacal neurosis had no concordance with *somatization disorder* and *panic disorder* made up only 6.3% of anxiety neurosis, making a low concordance rate. Hysterical neurosis showed a mid-level of the concordance having *so-*

Table 1: Clinical Diagnosis and DIS Diagnosis

DIS Diagnosis \ Clinical Diagnosis	Anxiety neurosis N:16(%)		Hysterical neurosis N:25(%)		Phobic neurosis N: 7(%)		Obsessive-compulsive neurosis N: 9(%)		Depressive neurosis N:27(%)		Depersonalization neurosis N: 4(%)		Hypochondriacal neurosis N:18(%)	Total N:106(%)	
Organic brain syndrome															
Schizophrenic disorder									2 (7.4)					2 (1.9)	
Major depressive episode	2 (12.5)		10 (40.0)		2 (28.6)		4 (44.4)		18 (66.7)		4(100.0)		6 (33.3)	46 (43.4)	
Manic episode			1 (4.0)		1 (14.3)		1 (11.1)							3 (2.8)	
Panic episode	1 (6.3)		6 (24.0)		2 (28.6)		1 (11.1)		4 (14.8)		2 (50.0)		1 (5.6)	17 (16.0)	
Agoraphobia	5	7 (43.8)	8	10 (40.0)	4	7 (100.0)	1	2 (22.2)	5	10 (37.0)		2 (50.0)		23	38 (35.8)
Simple phobia	5		5		5		2		3		2			22	
Social phobia			1		1		1		4		1			8	
Obsessive-compulsive disorder	2 (12.5)				2 (28.6)		9(100.0)		5 (18.5)				2 (11.1)	20 (18.9)	
Dysthymic disorder	2 (12.5)				1 (14.3)									3 (2.8)	
Somatization disorder			6 (24.0)				1 (11.1)		4 (14.8)					11 (10.4)	
Antisocial personality disorder			1 (4.0)						1 (3.7)					2 (1.9)	
Psychosexual dysfunction	1 (6.3)		8 (32.0)		1 (14.3)		2 (22.2)		7 (25.9)				1 (5.6)	20 (18.9)	
Ego-dystonic homosexuality															
Transsexualism															
Alcohol abuse and dependence	1 (6.3)		2 (8.0)				1 (11.1)		3 (11.1)		1 (25.0)		2 (11.1)	10 (9.4)	
Tobacco dependence	5 (31.3)		6 (24.0)		2 (28.6)		2 (22.2)		7 (25.9)				2 (11.1)	24 (22.6)	
Drug abuse and dependence							1 (11.1)						1 (5.6)	2 (1.9)	
Anorexia nervosa															
Pathological gambling			1 (4.0)											1 (0.9)	
No diagnosis	4 (25.0)		4 (16.0)		0		0		5 (18.5)		0		7 (38.9)	20 (18.9)	
Total(without No diagnosis)	24		55		21		24		63		10		15	214	

Table 2: Average Number of DIS Diagnosis Per Patient

		Anxiety neurosis	Hysterical neurosis	Phobic neurosis	Obsessive-compulsive neurosis	Depressive neurosis	Depersonalization neurosis	Hypochondriacal neurosis	Total
Inpatient	Number of Subjects	1	10	2	7	11	3		34
	Number of DIS Diagnoses	1.0	3.2±2.1	4.5±2.1	3.1±2.4	3.9±2.2	3.0±1.0		3.5 ±2.0
Outpatient	Number of Subjects	15	15	5	2	16	1	18	72
	Number of DIS Diagnoses	1.3±1.2	1.5±1.4	2.6±1.5	2.0±1.4	1.3±1.1	1.0	0.8±0.9	1.3±1.2
Total	Number of Subjects	16	25	7	9	27	4	18	106
	Number of DIS Diagnoses	1.5±1.3	2.2±1.8	3.1±1.8	2.9±2.2	2.3±2.1	2.5±1.3	0.8±0.9	2.0±1.8

(mean ± S.D.; t test * $p < 0.05$, ** $p < 0.01$)

matization disorder of 24.0% and *psychosexual dysfunction* of 32.0%, positioned just in the middle between the above-mentioned high and low concordance levels.

There were 20 cases (18.9%) of *no diagnosis* in which no diagnosis was made with DIS and all of them were outpatients. They were noted in 38.9% of hypochondriacal neurosis (7 out of 17 cases), 25.0% of anxiety neurosis, 18.5% of depressive neurosis, and 16.0% of hysterical neurosis with the clinical diagnosis. There were no cases with *no diagnosis* in phobic neurosis, obsessive-compulsive neurosis, and depersonalization neurosis.

Next, the mean number (± S.D.) of DIS diagnosis per patient was 2.0 (± 1.8), as shown in Table 2. It was 3.5 (± 2.0) for the inpatients which significantly outnumbered the outpatients 1.3 (± 1.2).

Coexistence of DIS Diagnoses and Classification of Types Based on the Coexistence (Tables 3 and 4)

In considering the coexisting diagnoses, importance was attached to finding the characteristics of the mutual coexistence relationships between the typological diagnoses of the conventional neurosis. Twenty DIS diagnoses were classified into 8 DIS diagnostic groups of the *major depressive episode, panic disorder, phobic disorder, obsessive-compulsive disorder, somatization disorder, psychosexual dysfunction, tobacco dependence,* and *other* and were checked as to whether there was a coexistence relationship between them.

At first when coexistence was considered based on the above 8 categories, there were 33 (31.1%) cases without coexisting diagnoses.

Secondly, 53 cases (50.0%) that had coexisting diagnoses were examined.

As shown in Table 3, for example, the coexistence relationship between *panic disorder* and *phobic disorder* was noted in 8 out of 53 cases, but when cases with the *major depressive episode* were excluded, only one case of coexisting diagnoses of *panic disorder* and *phobic disorder* remained. There were 6 cases in total that had a coexistence relationship of *phobic disorder* and *somatization disorder,* all of which, however, included a *major depressive episode* and there was no case with coexistence of *phobic disorder* and *somatization disorder* unaccompanied by a coexisting *major depressive episode.*

As indicated in the examples above, the *major depressive episode* was the key to the coexistence relationships based on DIS diagnoses, and the coexistence relationships dis-

Table 3: Coexistence Relationships of DIS Diagnoses (without no diagnosis)

	no coexistence N : 3 3	with coexisting diagnoses N : 5 3						
		②	③	④	⑤	⑥	⑦	⑧
① 46	11	12	21	8	9	10	14	10
② 17	1		8	3	5	5	9	3
③ 38	7	1		9	6	11	8	11
④ 20	4	1	3		2	4	4	8
⑤ 11	1	1	0	0		1	4	3
⑥ 20	1	2	4	4	0		5	6
⑦ 24	5	2	2	2	1	1		6
⑧ 11	3	1	3	5	0	2	2	

(without No diagnosis and No coexistence N : 5 3)

(without No diagnosis, No coexistence, and Major depressive episode N : 1 8)

①: Major depressive episode ②: Panic disorder ③: Phobic disorder

④: Obsessive-compulsive disorder ⑤: Somatization disorder

⑥: Psychosexual dysfunction ⑦: Tobacco dependence ⑧: Other

Table 4: Classification of Types Based on Coexisting DIS Diagnoses (N: 106)

Major Depressive Episode	With More Neurotic Diagnoses than One	With More Diagnoses than One, Except Ones Mentioned Left	Number (%)	Type Number (%)
+	+		28 (26.4)	I
+	−	+	7 (6.6)	III
+	−	−	11 (10.4)	18 (17.0)
−	+*		30 (28.3)	II
−	−	+	10 (10.6)	IV
−	−	−	20 (18.9)	30 (28.3)

With more neurotic diagnoses than one: With more diagnoses than one among panic disorder, phobic disorder, obsessive-compulsive disorder and somatization disorder.

With more diagnoses than one, except ones mentioned left: With more diagnoses than one among psychosexual dysfunction, tobacco dependence and other.

+ : exist, — : not exist, blank: not matter whether exist or not, * Six cases have coexisting DIS diagnoses here.

tinctly decreased when cases including the *major depressive episode* were excluded. Therefore, the *major depressive episode* was focused on in further studies.

The result is as shown in Table 4. The cases in which the *major depressive episode* had a coexistence relationship with *anxiety disorders* and/or *somatoform disorders* (i.e. *panic disorder, phobic disorder, obsessive-compulsive disorder, somatization disorder*) totaled 28 (26.4%). Cases in which the *major depressive episode* had a coexistence relationship with *psychosexual dysfunction, tobacco dependence* and/or *other* totaled 7 (6.6%).

Next, excluding the cases with the *major depressive episode*, the cases that had at least one or more diagnoses of *panic disorder, phobic disorder, obsessive-compulsive disorder*, or *somatization disorder* totaled 30 (28.3%), out of which only 6 cases (5.6%) had a mutual coexistence relationship between the diagnoses.

Therefore, according to the coexistence relationship with the *major depressive episode* as the axis, all the 106 cases examined were classified into four types as shown in Table 4.

Type I: cases that had, in addition to the *major depressive episode*, one or more diagnoses of *phobic disorder, panic disorder, somatization disorder* and/or *obsessive-compulsive disorder*.

Type II: cases that did not have the *major depressive episode* but had one or more *phobic disorder, panic disorder, somatization disorder* and/or *obsessive-compulsive disorder*.

Type III: cases that had only the *major depressive episode* or cases that had *psychosexual dysfunction, tobacco dependence* and/or *other*, coexistent with the *major depressive episode*.

Type IV: cases other than Types I–III.

Of all the 106 cases, 28 cases (26.4%) were classified as Type I, 30 cases (28.3%) as Type II, 18 cases (17.0%) as Type III, and 30 cases (28.3%) as Type IV.

Clinical Diagnoses and Classification of Types Based on DIS Coexisting Diagnoses (Tables 5 and 6)

Table 5 indicates the relationship between clinical diagnoses and the classification based on DIS coexisting diagnoses.

What was conspicuous and noted in the classification was that 75.0% of depersonalization neurosis was Type I, 71.4% of phobic neurosis was Type II and 55.6% of hypochondriacal neurosis was Type IV.

When the inpatients and outpatients were compared, they displayed quite a contrast as shown in Table 6. Thirty-four inpatients who were generally regarded as serious were classified in order of majority as; 20 cases (58.8%) of Type I, 11 (32.4%) of Type II, 3 (8.8%) of Type III, and no cases of Type IV. On the other hand, 72 outpatients were in order of majority classified as; 30 cases (41.7%) of Type IV, 19 (26.4%) of Type

Table 5: Clinical Diagnoses and Classification of Types Based on DIS Coexisting Diagnoses

Type	I	II	III	IV	Total
Anxiety neurosis	1 (6.3%)	7 (43.8)	1 (6.3)	7 (43.8)	16 (100.0)
Hysterical neurosis	6 (24.0)	9 (36.0)	4 (16.0)	6 (16.0)	25 (100.0)
Phobic neurosis	2 (28.6)	5 (71.4)			7 (100.0)
Obsessive-compulsive neurosis	4 (44.4)	5 (55.6)			9 (100.0)
Depressive neurosis	11 (40.7)	2 (7.4)	7 (25.9)	7 (25.9)	27 (100.0)
Depersonalization neurosis	3 (75.0)		1 (25.0)		4 (100.0)
Hypochondriacal neurosis	1 (5.6)	2 (11.1)	5 (27.8)	10 (55.6)	18 (100.0)
Total	28 (26.4)	30 (28.3)	18 (17.0)	30 (28.3)	106 (100.0)

Table 6: Classification of Types Based on DIS Coexisting Diagnoses with Distinction of Inpatient and Outpatient

Type	I	II	III	IV	Total
Inpatient	20 (58.8%)	11 (32.4)	3 (8.8)		34 (100.0)
Outpatient	8 (11.1)	19 (26.4)	15 (20.8)	30 (41.7)	72 (100.0)
Total	28 (26.4)	30 (28.3)	18 (17.0)	30 (28.3)	106 (100.0)

Table 7: Presence of Psychodynamic Personality Diagnoses and Classification of Types Based on DIS Coexisting Diagnoses (Inpatient)

Type	I N : 20 (%)	II N : 11 (%)	III N : 3 (%)	Total N : 34 (%)
Exist	15 (75.0)	2 (18.2)	1 (33.3)	18 (52.9)
Not exist	5 (25.0)	9 (81.8)	2 (66.7)	16 (47.1)

Table 8: Personality Test of Fukuoka University Version and Classification of Types Based on DIS Coexisting Diagnoses (Inpatient)

Type	I N : 20 (%)	II N : 11 (%)	III N : 3 (%)	Total N 34 (%)
A	2 (10.0)	1 (9.1)		3 (8·8)
B	4 (20.0)	3 (27.3)	2 (66.7)	9 (26.5)
C	4 (20.0)	5 (45.5)	1 (33.3)	10 (29.4)
D	2 (10.0)	1 (9.1)		3 (8.8)
E	8 (40.0)	1 (9.1)		9 (26.5)

II, 15 (20.8%) of Type III and the least was Type I which had 8 cases (11.1%).

Presence of Psychodynamic Personality Diagnoses and Classification of Types Based on DIS Coexisting Diagnoses (Inpatients) (Table 7)

Personality diagnoses of 34 inpatients are shown in Table 7.

In 20 cases of Type I, cases with personality disorder totaled 15 (75.0%), which was significantly higher in number when compared with the other types. Ten cases (50.0%) were diagnosed as borderline personality disorder and 5 (25.0%) were diagnosed as narcissistic personality disorder. In Type II, contrary to Type I, the number of cases with no personality disorder was extremely large, 81.1%. Type III displayed characteristics intermediated between Type I and Type II.

Fukuoka University Version of Personality Test and Classification of Types Based on DIS Coexisting Diagnoses (Inpatients) (Table 8)

The results of the personality test, the Fukuoka University version, are shown in Table 8.

In Type I many were Type E, very unstable in interpersonal attitude and emotion, in Type II many were Type C, temperate but irresolute, and many of Type III were Type B, more reality-affirmative and con-

Table 9: Average Point of GAS and Classification of Types Based on DIS Coexisting Diagnoses (Inpatient)

Type	I N : 20	II N : 11	III N : 3	IV N : 34
GAS average	46.6±8.4	39.7±15.3	56.0±13.9	45.2±12.0

(mean ± S.D.)

Table 10: Psychotherapeutic Approach and Classification of Types Based on DIS Coexisting Diagnoses (Inpatient)

Type	I N : 20 (%)	II N : 11 (%)	III N : 3 (%)	Total N : 34 (%)
Supportive	4 (20.0)	6 (54.5)	3 (100.0)	13 (38.2)
Psychoanalytical	16 (80.0)	5 (45.5)		21 (61.8)

Table 11: Medicine and Classification of Types Based on DIS Coexisting Diagnoses (Inpatient)

Type	I N : 20 (%)	II N : 11 (%)	III N : 3 (%)	Total N : 34 (%)
Antianxiety	16 (80.0)	8 (72.7)	2 (66.7)	26 (76.5)
Antidepressant	15 (75.0)	6 (54.5)	3 (100.0)	24 (70.6)
Antipsychotic	11 (55.0)	6 (54.5)	1 (33.3)	18 (52·9)

Sulpiride is regarded as antidepressant. There are some overlaps.

siderably stable in emotion.

General Assessment Scale (GAS) and Classification of Types Based on DIS Coexisting Diagnoses (Inpatients) (Table 9)

Table 9 shows the assessment of social adaptability or mental health of inpatients at the time of hospitalization measured with the General Assessment Scale (GAS).

Type III marked the highest social adaptability of just prior to hospitalization at 56.0, and Type II was the lowest at 39.7.

Psychotherapeutic Approach and Classification of Types Based on DIS Coexisting Diagnoses (Inpatients) (Table 10)

Psychotherapeutic approaches are shown in Table 10. The fact that a psychoanalytic approach was taken so much in Type I suggests that a supportive approach simply focusing on symptoms and/or adaptability is insufficient for treatment of Type I and requires intensive psychotherapy with a psychodynamic address.

Medicine and Classification of Types Based on DIS Coexisting Diagnoses (Inpatients) (Table 11)

Medicines that were used are listed in Table 11.

For neurosis so severe or so advanced as to require hospitalization, a wide range of medicine was used no matter what the type, whether Type I, II, III or IV.

Table 12: Number of Days under Hospitalization and Classification of Types Based on DIS Coexisting Diagnoses (Inpatient)

Type	I N : 20	II N : 11	III N : 3	Total N : 34
Number of days	290 ± 292	180 ± 211	51 ± 28	233 ± 262

(mean ± S.D.)

Table 13: Number of Days under Hospitalization with Distinction of Psychotherapeutic Approach (Inpatient)

Psychotera. approach	Supportive N : 13	Psycho-analytical N : 21	Total N : 34
Number of days	75 ± 53	382 ± 292	233 ± 262

** (between 75 ± 53 and 382 ± 292)

** (between 75 ± 53 and 233 ± 262)

(mean ± S.D.; t test * $p < 0.05$, ** $p < 0.01$)

Number of Days under Hospitalization and Classification of Types Based on DIS Diagnoses (Inpatients) (Tables 12 and 13)

The number of days under hospitalization is listed in Tables 12 and 13. The mean number of days under hospitalization was 290 days in Type I, 180 days in Type II and 51 days in Type III. When it was checked in accordance with the difference in psychotherapeutic approaches taken, the cases with the psychoanalytic approach had 382 days which was significantly longer ($p < 0.01$) than 75 days for the cases with the supportive approaches. It signifies that cases of Type I, having personality problems, need treatment with the psychoanalytic approach and their hospitalization period tends to be longer.

Acting-Out and Classification of Types Based on DIS Coexisting Diagnoses (Inpatients) (Table 14)

Acting-out during the hospitalized treatment period is shown in Table 14.

Out of the total of 34 cases, cases with no acting-out during hospitalized period totaled 11 (32.4%).

Out of 20 Type I patients, 16 (80.0%) had some acting-out. Most notably 10 cases (50.0%) with self-mutilation and 7 cases (35.0%) of running away from the hospital arrested our attention and those cases signify that the treatment relationship is apt to be unstable in Type I.

Level of Emotional Development Disturbance and Classification of Types Based on DIS Coexisting Diagnoses (Inpatients) (Table 15)

The levels of major disturbance grasped from the viewpoint of emotional development are shown in Table 15.

Cases indicating problems at the oral phase were the most in Type I and it indicates that Type I had more cases with problems in the earlier stage of emotional development than Type II or III.

Table 14: Acting

Type
Stealing
Violence
Love affair
Ignorance of dail activities in wa
Escape from war without permis
Refusal of food medicine
Self-mutilation
Suicidal attempt
Others
Nothing in partic

Table 1 Classifi

Type
Oral phase
Anal phase
Oedipal phase
Postoedipal phase

Table Ty

Type
Narcissistic
Immature
Neurotic

Main Defense Mechan of Types Based on DIS (Inpatients) (Table 16

The defense mechan the course of treatmen tory are shown in Tab

In Type I the narci nisms of lower levels or denial were often defense mechanisms su

Table 14: Acting-Out and Classification of Types Based on DIS Coexisting Diagnoses

Type	I N : 20 (%)	II N : 11 (%)	III N : 3 (%)	Total N : 34 (%)
Stealing		1 (9.1)		1 (2.9)
Violence	1 (5.0)	1 (9.1)		2 (5.9)
Love affair	4 (20.0)		1 (33.3)	5 (14.7)
Ignorance of daily activities in ward	5 (25.0)	1 (9.1)		6 (17.6)
Escape from ward without permission	7 (35.0)	3 (27.3)		10 (29.4)
Refusal of food and medicine	1 (5.0)	1 (9.1)		2 (5.9)
Self-mutilation	10 (50.0)	3 (27.3)		13 (38.2)
Suicidal attempt	3 (15.0)			3 (8.8)
Others		1 (9.1)		1 (2.9)
Nothing in particular	4 (20.0)	5 (45.5)	2 (66.7)	11 (32.4)

Table 15: Level of Emotional Developmental Disturbance and Classification of Types on DIS Coexisting Diagnoses (Inpatient)

Type	I N : 20 (%)	II N : 11 (%)	III N : 3 (%)	Total N : 34 (%)
Oral phase	11 (55.0)	3 (27.3)		14 (41.2)
Anal phase	2 (10.0)	2 (18.2)		4 (11.8)
Oedipal phase	6 (30.0)	5 (45.5)	2 (66.7)	13 (38.2)
Postoedipal phase	1 (5.0)	1 (9.1)	1 (33.3)	3 (8.8)

Table 16: Main Defense Mechanism and Classification of Types Based on DIS Coexisting Diagnoses (Inpatient)

Type	I N : 20 (%)	II N : 11 (%)	III N : 3 (%)	Total N : 34 (%)
Narcissistic	12 (60.0)	2 (18.2)		14 (41.2)
Immature	6 (30.0)	7 (63.6)	1 (33.3)	14 (41.2)
Neurotic	2 (10.2)	2 (18.2)	2 (66.7)	6 (17.6)

Main Defense Mechanism and Classification of Types Based on DIS Coexisting Diagnoses (Inpatients) (Table 16)

The defense mechanisms appearing during the course of treatment or in the clinical history are shown in Table 16.

In Type I the narcissistic defense mechanisms of lower levels such as a projection or denial were often observed, immature defense mechanisms such as a regression or acting-out were frequently noted in Type II and the neurotic defense mechanisms such as a repression or rationalization were noted often in Type III.

Improvement Degree at the Time of Discharge and Classification of Types Based on DIS Coexisting Diagnoses (Inpatients) (Table 17)

Improvement degrees at the time of discharge from the hospital are shown in Table

Table 17: Improvement Degree at the Time of Discharge and Classification of Types Based on DIS Coexisting Diagnoses (Inpatient)

Type	I N : 20 (%)	II N : 11 (%)	III N : 3 (%)	Total N : 34 (%)
Extremely improved		1 (9.1)	2 (66.7)	3 (8.8)
Fairly improved	8 (40.0)	6 (54.5)	1 (33.3)	15 (44.1)
Slightly improved	10 (50.0)	4 (36.4)		14 (41.2)
Unchanged, others	2 (10.0)			

17.

The improvement degree shown the most by the respective types was slightly improved in Type I, fairly improved in Type II, and extremely improved in Type III.

DISCUSSION

DIS Diagnosis and Clinical Diagnosis

DIS

As aforementioned (in Outline of Main Examination Item), DIS was originally developed for the purpose of identification and diagnostic classification of psychiatric patients in the epidemiological survey of the general population and has been widely and highly used.[7 14 20 22 53] In the studies on the relationship between the DIS diagnosis made through the interview schedule and the clinical diagnosis (DSM-III or ICD) made by a clinical psychiatrist, some reported that, when the subjects were from the general population, the DIS diagnosis made from interviews by nonpsychiatrists had a high concordance rate with the clinical diagnosis made by psychiatrists,[20] while some other reported concordance rates could not be said to be high over all of the diagnostic categories.[7 14]

However, in comparative studies of the DIS diagnosis with other diagnostic schedules made for psychiatric inpatients the concordance rate of the DIS diagnosis with the clinical diagnosis has been reported to be high.[21 52 53] Thus, DIS, developed by NIMH for the purpose of an epidemiological survey and widely supported, has been deemed valid for the structural diagnostic interview.

Our Previous Studies and Limitation of DIS

So far nothing has been reported on the studies carried out in Japan using DIS except for the studies by our groups in Fukuoka University. With the cooperation of Yamamoto, J., UCLA, we made a Japanese version of DIS in June, 1980 and applied it to our daily clinical activities and studies on the inpatients and outpatients in our psychiatry department.[36] Furthermore, in order to substantiate and advance the consultation-liaison psychiatry, we have recently been extending and developing our studies with DIS by extending application to the inpatients of other departments.[31 34]

This is the summary of our studies with psychiatric patients that we had previously made. In the study with 87 outpatients, of which 45 were suffering from neurosis, 18 from depression, and 24 from other diagnoses, few had the concordance between clinical diagnoses and DIS diagnoses. Twenty-seven cases (31.0%) were with *no diagnosis*, meaning none of the DIS diagnosis was applicable. Our clinical perspective study seeking the reason for the above result revealed that as compared with the cases with agreement between clinical and DIS diagnoses, in those cases with disagreement between clinical diagnoses and DIS diagnoses, including the cases of *no diagnosis*, the treatment period was much longer, premorbid character of the patients was immodithymia, the out-

come of treatment was not so good, although the symptom assessment scale level was low.

However, in the DIS study with inpatients, almost all of the subjects, not only neurotics but also those within the realm of schizophrenia or depression, had DIS diagnoses concorded with clinical diagnoses and furthermore their DIS diagnoses had some coexistent diagnoses.[36]

In actual clinical practice, clinical doctors had no choice but to make the clinical diagnosis in order to speculate on the following course of disorders and organize an appropriate treatment plan, no matter whether the cases had no DIS diagnosis because of the number, frequency, and/or duration period of the symptoms not satisfying the operative criteria or the cases were with many symptoms satisfying several diagnostic criteria.

Through those studies in the past, it became obvious that DIS, originally developed for the epidemiological research of the general population, had, as a matter of course, some limitation in being directly used in psychiatric clinical practice and also the DIS diagnosis can never replace the clinical diagnosis but can only be used as a scale to know the constellation of syndromes (coexistence relationship) in accordance with diagnostic criteria of Axis I in DSM-III.

In addition, a difference of nationality in symptom expressions may not be ignored. To bring into Japan without adjustment the DSM-III developed in the United States as psychiatric diagnostic criteria there and DIS based on the DSM-III may be an issue to be studied and discussed in the future.

Taking the findings from our past experience with DIS into consideration, our study at this time used DIS as one assessment scale to grasp the clinical syndromes of psychiatric patients.

Agreement and Disagreement between Clinical Diagnosis and DIS Diagnosis in this Study

In this study, confining the subjects to neurotics, those cases with so severe and/or advanced neurosis as to require hospitalization had agreement between clinical diagnoses and DIS diagnoses, furthermore accompanied by multiple coexisting diagnoses (mean number of DIS diagnoses 3.5 per patient).

When examined by difference in clinical diagnoses, phobic neurosis and obsessive-compusive neurosis, which have rather distinct and specific symptomatic structures as disease specifications, and most depressive neurosis had high agreement between clinical and DIS diagnoses, and they displayed the form of polysymptomatic neuroses, accompanied by a number of other coexisting diagnoses. By contrast, anxiety neurosis, hypochondriacal neurosis, and some part of depressive neurosis, the main symptoms of which are rather general symptoms such as anxiety, hypochondriasis, or depression, resulted in a few number of cases with agreement of clinical and DIS diagnoses because the number and the level of severity of their symptoms did not satisfy the DIS diagnostic criteria. Sometimes in such neuroses the number of cases of *no diagnosis,* without any DIS diagnosis, increased. Hysterical neurosis was positioned between those two groups and some had agreement of clinical and DIS diagnoses and some were noted as *no diagnosis.*

Coexisting Diagnoses

Hierarchical Exclusion Diagnosis

As one method to determine the diagnosis in cases where several diagnoses or symptoms coexist, general models of diagnostic hierarchy have been assumed since Kraepelin and those patients with broadly ranged symptoms generally came to be assigned to a single diagnostic category. (In other words, it is not a matter of contradiction but common for psychosis to have neurotic symptoms as well as psychotic symptoms, and psychosis is given a higher level in diagnostic hierarchy for the reason that neurosis should not have psychotic symptoms. Therefore, those cases having neurotic symptoms and psychotic symptoms coexistently are to be given not

both the diagnoses of neurosis and psychosis but a diagnosis of psychosis which is the higher diagnostic level.) The first review of such a hierarchy model of diagnosis with the full scale was the study by Foulds and Bedford[15] using the delusions-symptoms-states inventory. Stating that a patient positioned at a particular class level in the diagnostic hierarchy did not show symptoms in the higher class levels but showed symptoms in the lower class levels, they used it as one of the grounds in support of the validity of hierarchical exclusion diagnostic model. However, some later studies with PSE (Present State Examination) reported that about half to two-thirds of the patients with psychotic symptoms, supposedly at the higher class in the hierarchy did not have neurotic symptoms in the lower class levels.[49 50]

Under such background, the hierarchical exclusion criteria were employed in the diagnostic criteria of Axis I in DSM-III, syndrome diagnosis, and applied on 60% of the disorders.[9]

Boyd *et al.* (1984)[9] stated on the characteristics of hierarchical exclusion criteria that disorders that DSM-III says were related to each other in a hierarchic fashion are always strongly associated with each other, and furthermore, there was a general tendency toward co-occurrence of disorders, so much[50] that the presence of any DIS disorder increases the odds of having almost any other DIS disorder. Wittchen *et al.* (1955)[53] said that without the exclusion criteria the number of positive anxiety-related disorders grew considerably. Weller *et al.* (1985)[52] reported DIS syndromes given to the inpatients were 2.1 in mean. Those statements agree with the result of our examination where as no inpatients were classified as Type IV and inpatients were given coexisting DIS diagnoses of 3.5 as an average.

Coexisting Diagnoses

The *major depressive episode* was the key to the coexistence relationships of DIS diagnoses. Noted in 43.4% of all subjects and in 28 (35.4%) of 79 cases omitting depressive neurosis (clinical diagnosis), the *major depressive episode* was the diagnosis which coexisted the most (in number) with other diagnoses.

Reviewing the result from other aspects, coexistence solely between the neurotic diagnoses (*panic disorder, phobic disorder, obsessive-compulsive disorder* and *somatization disorder*) excluding the *major depressive episode* was found in only 6 cases (5.6% of the total subjects) and these were in Type II. On the contrary, there were many cases of *major depressive episode* coexistent with neurotic diagnoses (Type I) − 28 (26.4% of the total subjects).

This infers that coexistence is apt to be present between diagnoses mutually far apart in the diagnostic hierarchy levels such as between the neurotic diagnosis and depression (*major depressive episode*) rather than between neurotic diagnoses which are in similar levels.

In the literature there are many reports noting the coexistence relationship between anxiety disorder (i.e. neurosis) and depression. Leckman *et al.* (1983)[27 28] stated that 58% of the depressed probands displayed anxiety symptoms that met the DSM-III criteria and the lifetime rate of major depression and anxiety disorders among first-degree family members of probands with major depression plus an anxiety disorder was found to be significantly increased regardless of when the anxiety symptoms occurred.

Breier *et al.* (1984, 1985, 1986)[10-12] reported in 60 patients with agoraphobia or panic disorder that patients with a history of major depression had a more severe anxiety disorder and most of their major depression was in anticipation of panic anxiety disorder and was of the endogenous type presenting an episodic process and furthermore episodes of depression and panic anxiety disorder might be the manifestations of a common underlying pathogenic process.

Fox *et al.* (1983)[13] and Barlow *et al.* (1985)[5] reported obsessive-compulsive disorder accompanied by depression was more severe than without depression.

Based on the points stated above, some take the view that anxiety disorders in general are characterized by less severe depressive symptomatology than major depression.[8] They agree with the result of our study that the patients of so severe neurotic symptoms as to require hospitalization were mostly found in Type I, where anxiety disorders and *major depressive episode* coexisted on the basis of DIS.

Next to a *major depressive episode, phobic disorder* was the coexistent diagnosis which was noted most frequently and appeared in the 35.8% of the total subjects and was observed in 31 (31.3%) of 99 cases excluding the case of phobic neurosis (clinical diagnosis). Our attention is drawn to the fact that in anxiety neurosis *panic disorder* occurred only in as few as 6.3% of the cases while *phobic disorder* in as many as 43.8% of the cases and that in hypochondriacal neurosis, which has a supposedly close relationship with anxiety neurosis, the incidence of *panic disorder* was 5.6%, almost the same rate as in anxiety neurosis but there was no observation of *phobic disorder*, which made a very clear contrast with anxiety neurosis. Such findings, when reviewed solely from the syndrome diagnosis, suggest a proximity between anxiety neurosis and *phobic disorder* and seem to agree with the suggestion of Noyes *et al.* (1986)[37] that agoraphobia is a more severe variant of panic disorder.

Clinical Significance of the Classification of Types

Characteristics of Type I

Type I is characterized by being polysymptomatic neurosis to include the *major depressive episode*. In personality tests of the Fukuoka University version many Type I patients had a shut-in tendency, unstable in interpersonal attitude and emotion, that is Type E. In psychodynamic assessment in treatment practice, use of the defense mechanisms of low levels such as splitting or projective identification, instability in self-consciousness and interpersonal relationship with his important person, and acting-out were observed. From the aspect of emotional development they are considered to be immature developmental disorders having problems at the oral phase or anal phase. Naturally, the majority of Type I patients, 75.0%, were given diagnoses of personality disorder such as for narcissistic personality disorder or borderline personality disorder. The clinical characteristics of such personality disorder seem to agree with the concept of the borderline patient which was set forth by Kernberg (1967, 1981)[23 24] and Gunderson (1975)[17] and which has now been widely recognized.

Originally, the term "borderline patient" was the concept brought about through practices of psychotherapeutic treatment and used to be an ambiguous term applied to those patients who were difficult to cure, except for those of typical neurosis or psychosis. This concept was placed in the 1950s in the schizophrenic spectrum as a "transitional state of neurosis and psychosis," but since the 1960s it has been understood within the framework of personality disorders[51] as a matter of "character pathology." In DSM-III,[6] it was placed within the realm of personality disorder based on the studies of Spitzer et al. (1979)[44 45] and was divided into the borderline personality disorder characterized by unstable personality and the schizotypal personality disorder characterized by bizarre communication and micropsychosis. The latter, schizotypal personality disorder, has come to be considered belonging to the schizophrenic spectrum.

Concerning borderline personality disorder, some pointed out that it was not easily distinguishable from antisocial personality disorder or histrionic personality disorder,[5 38 40] and some others suggested it was personality disorder without a characterologic

speciality.[26 29] However, recently overlap and proximity between personality disorder and affective disorder have come to be emphasized.[1–5 16–18 23 26 38–40 46–48] Under such circumstances, reviewing the literature about the connection between borderline personality disorder and affective disorder, Gunderson (1985)[19] suggested the possibility that the groups of different natures might be included there. However, there is no doubt that patients who have both depression and borderline personality disorder are more likely to attempt suicide than those with only one disorder.

In regard to the relationship between depression and borderline personality disorder, Akiskal (1981, 1984)[2 5] suggested that the source of characterologic pathology in borderline personality disorders, such as cyclothymia or bipolar II, was a hindrance to optimal ego maturation due to the high frequency episodes caused by frequent and episodic occurrence beginning in early adolescence. In other words, the characterologic disturbances of borderline patients may be secondary to affective disorder. Freedman (1982)[16] indicated that depression might have an earlier onset in the life cycle than generally appreciated. Dysthymia might be a serious disorder during adolescence and might progress to major depression. And the onset of such affective disorder was in an earlier period than that of borderline personality disorder.

As to the treatment, there have been discussions on the importance of preventing personality maladjustments to be fixed by applying a long-term administration of thymoleptics or lithium carbonate from the early stage for the patients who could not be ameliorated by psychotherapy and nonspecific pharmacotherapy[1] and also of preventing postdepressive personality disturbances by administering antidepressants to the depressive children with behavior disorder.[5]

What is emphasized in common in the above referred discussions is the importance of a depressive factor in personality disorders that causes difficult problems in treatment.

As a result, the effect of our study was to reconfirm such views and opinions in literature. That is, Type I, neurosis accompanied by depression, is clinically more severe than Type II unaccompanied by depression and the severity is summarized as a borderline patient, of which the depressive symptoms are an important factor.

From these considerations we conclude that Type I in this study is the clinically severe neurosis to satisfy the concept of "borderline personality disorder accompanied by depression."

Type II

Type II is the neurosis unaccompanied by depression and in the Fukuoka University version of personality test many Type II patients were temperature but irresolute (Type C) and in the psychodynamic personality diagnosis a few of them were noted as having a personality disorder. They had a lot of symptoms at the time of hospitalization and the reason is considered to be because they were defending oedipal conflicts with immature mechanisms such as regression, acting-out and somatization. Therefore, their mental health levels in GAS tended to be lower than Type I at the time of hospitalization, but they displayed higher amelioration levels in the treatment with supportive approaches and their required hospitalization period was shorter than Type I.

The above leads us to conclude that Type II is symptomatic neurosis with its main problem on the aspect of symptoms rather than the aspect of personality disorder.

Type III

Among inpatients there were only 3 cases classifiable as Type III. They had the character of reality affirmative tendency (Type B in the personality test of the Fukuoka University version) and because distinct amelioration was observed after a short period of treatment with supportive approaches and administration of antidepressants, they are

diagnosed as depressive neurosis or depressive episode with less distortion of personality.

Type IV

Type IV was not found among inpatients, but the outpatients of this type have been given treatment similar to Type II based on our previous studies. Such cases included some light cases with fewer symptoms than Type II and also some cases just after the onset and to be possibly transferring to Type II or Type III in the course of time.

As we have outlined so far, DIS was effective by being applied to the neurotics, for speculating severity levels of neurosis including consideration of the presence of personality disorder, from the viewpoint different from the clinical diagnosis and for reviewing the corresponding treatment plan.

CONCLUSION

The relationship between the clinical diagnosis and DIS-Lifetime diagnoses respectively given independently from each other were examined on 72 outpatients and 34 inpatients. The inpatients had many DIS coexisting diagnoses. Cases of phobic neurosis, obsessive-compulsive neurosis, and depressive neurosis showed a high concordance between the clinical and DIS diagnoses and, specifically, they were in the form of polysymptomatic neurosis having a number of other coexisting diagnoses. The cases of anxiety neurosis and hypochondriacal neurosis had a low concordance between the clinical and DIS diagnoses, and some of them had no DIS diagnosis. Hysterical neurosis showed a relationship level between those two groups.

The coexistence relationship in DIS diagnoses were examined. The *major depressive episode* was the key to the coexistence relationships. Cases which were clinically diagnosed as neurosis were classified into the following four types by the coexistence relationships;

Type I: neurosis which has coexisting diagnoses belonging to *anxiety disorders* or *somatoform disorders*, in addition to the *major depressive episode* (different from the so-called depressive neurosis)—28 cases (26.4%),

Type II: neurosis without the *major depressive episode* and belonging to *anxiety disorders* or *somatoform disorders*—30 cases (28.3%),

Type III: neurosis with only the *major depressive episode* or with coexisting diagnoses of either *psychosexual dysfunction, tobacco dependence*, or *other* as well as the *major depressive episode*—18 cases (17.0%), and

Type IV: neurosis other than Types I–III —30 cases (28.3%).

The clinical significance of the classification based on DIS coexisting diagnoses was examined on 34 inpatients and found that; Type I: severe neurosis accompanied by borderline personality disorder, Type II: symptomatic neurosis, Type III: depressive neurosis or depressive episode with less distortion of the personality, Type IV: other neuroses similar to symptomatic neurosis.

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Yasushi Mizu
Shusaku Kai,

Department of

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