

Divergence and Convergence of Diagnoses for Depression Between ICD-9 and DSM-III-R

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Summary. Contrasting the classification systems ICD-9 and DSM-III-R, a comparison of diagnoses for unipolar depressive disorders is presented from a sample of 168 psychiatric outpatients. A relatively clear correspondence existed between ICD-9 endogenous depression and DSM-III-R major depression. Neurotic depression (ICD-9) divided into either dysthymia or major depression in DSM-III-R. A generally greater variety of corresponding ICD-9 diagnoses was observed for DSM-III-R categories, since patients with eating disorders, alcohol or drug dependence, or with neuroses other than depressive type often received an additional specific DSM-III-R diagnosis for depression. For ICD-9 diagnostics, a decreased threshold was found for diagnosing depressive reaction, as compared with the equivalent DSM-III-R diagnosis of adjustment disorder with depressed mood. A new technique is introduced in order to adjust corresponding proportions according to base rate differences.

Key words: Classification – Depression – DSM-III-R – ICD-9

Introduction

The introduction of clearly outlined diagnostic criteria, including symptoms and other clinical characteristics like duration and course of psychiatric disorders, is one of the most essential features provided by the classification systems DSM-III and its recent revision DSM-III-R (APA 1987). Diagnoses based on descriptive inclusion and exclusion criteria have proved to be more reliable than diagnoses within the traditional clinical ICD approach (e.g., Helzer et al. 1977; Spitzer et al. 1978, 1979; Robins et al. 1981; Kendell

1982; Bech and Clemmesen 1983; Semler et al. 1987; Wittchen and Schulte 1988).

There are substantial discrepancies between DSM-III/DSM-III-R and the currently used ICD-9 system (WHO 1978) concerning number and content of diagnostic categories (Bobon 1980; Andreasen 1982; Paykel 1983; Spitzer and Williams 1983). Moreover, each classification system refers to different diagnostic terms, and implies a specific diagnostic process (Skodol and Spitzer 1982; Wittchen et al. 1985; Wittchen and Schulte 1988). This suggests that diagnoses may only partly be comparable when patients are classified either in one or both systems.

From the viewpoint of ICD-9 diagnostics, a shift to the operational, criteria-based approach could have the consequence that patients with the same ICD-9 diagnosis split up into different categories within the other system. That is, a category might *diverge* into a number of classes which emphasize different aspects of the disorder in question.

Conversely, distinct categories of one of the systems could be accounted for by only one category of the other system. Thus, a *convergence* would appear, neglecting differences between patients that were conceived to be of relevance in the first system. The principles of divergence and convergence are graphically illustrated in Fig. 1.

This has implications for clinical practice as well as for scientific work. For example, the question arises to which degree studies, based on patient groups subdivided by ICD-9 diagnoses, will stay valid also in the light of the new criteria-based system. Diagnostic disagreement between systems could strongly reduce comparability of results within an area of research. Information is therefore needed for estimating congruence between diagnostic categories which more or less directly correspond to each other.

This problem will be dealt with in this paper, focusing on the most frequently used diagnoses for all

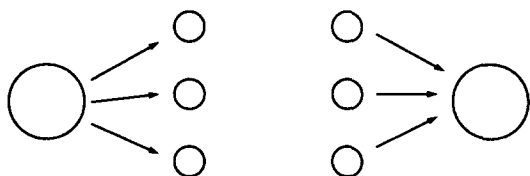


Fig. 1. The principles of divergence (left) and convergence (right) between categories of different classification systems

Table 1. Classification of unipolar depressive disorders in ICD-9

Schizophrenia
295.7 Schizo-affective type
Affective psychoses
296.1 Manic-depressive psychosis, depressed type
Other non-organic psychoses
298.0 Depressive type
Neurotic disorders
300.4 Neurotic depression
Personality disorder
301.1 Affective
Acute reaction to stress
308.0 Predominant disturbance of emotions
Adjustment reaction
309.0 Brief depressive reaction
309.1 Prolonged depressive reaction
311 Depressive disorder, not elsewhere classified

Table 2. Classification of unipolar depressive disorders in DSM-III-R

Mood disorders
296.2 × Major depression, single episode
296.3 × Major depression, recurrent
with or without melancholia
with or without psychotic features
with or without seasonal patterns
300.40 Dysthymia
primary or secondary type
early or late onset
311.00 Depressive disorder not otherwise specified
Psychotic disorders not elsewhere classified
295.70 Schizo-affective disorder
Adjustment disorders
309.00 with depressed mood

forms of unipolar depressive disorders. We compared patients who were simultaneously classified according to ICD-9 and DSM-III-R. The principal concepts of classes offered for the classification of depressive patients in both systems and possible sources of disagreement will be discussed.

ICD-9 provides for 9 categories for the classification of unipolar depressive disorders. As shown in Table 1, they are listed under 8 different main headings. Severe forms of depression are usually classified

as affective or other non-organic psychoses, or schizo-affective disorder. ICD-9 allows for a differentiation between psychotic, neurotic, and reactive depression. Unipolar affective psychoses are often referred to as endogenous depression. Neurotic depression and affective personality commonly require an enduring, frequently reoccurring, or chronic depressive mood. Three distinct categories are available for stress-related symptomatology.

The 6 depression categories of DSM-III-R are summarized in Table 2. Only three main headings are needed. The diagnosis of a major depression, as part of the broader group of mood disorders, can be specified as to single or recurrent episodes. Additional subdivisions for psychotic features, and specifications for melancholia and for seasonal patterns are included. Milder forms of depression are categorized as dysthymia and, within a separate section, as adjustment disorders.

Some of the categories (of the comparable DSM-III system) were studied by Wittchen et al. (1985), Phillip and Maier (1985), Maier et al. (1986), and Torgersen (1986). For neurotic depression (ICD), Wittchen et al. (1985) reported a greater correspondence with major depression than with dysthymia (93.5% vs. 14.5% in a sample of subjects with psychiatric disorders, 71.0% vs. 22.6% in cases from a general population sample). This is partly in accordance with data presented by Torgersen (1986), showing that a research diagnosis of major depression was given in 49.5% of subjects classified as neurotic depressive in ICD, whereas dysthymia was given in only 19.4%. Another 19.4% of the subjects was diagnosed as depressive adjustment disorders.

Data on the relation of affective psychoses (ICD) to major depression vary between studies to some degree. Wittchen et al. (1985) found a probability of 91.2% for the diagnosis of a major depression in 18 patients with affective psychosis. Among the figures reported by Maier et al. (1986), for a sample of 73 inpatients with endogenous depression (ICD), the highest ones were 49% for recurrent major depressive episodes and 48% for major depression with melancholia. Similar results were obtained by Phillip and Maier (1985). In all studies, patients with unipolar as well as bipolar disorders were included.

However, a considerable discrepancy in the data reported may result from sample differences. If a category from one system is compared with a number of categories from the second system, the base rates (i.e., prevalence rates within the particular setting) of the various classes in the second system may strongly influence agreement values.

For example, when frequencies of ICD diagnoses are evaluated for a sample of subjects with major de-

pression, only a small proportion could be diagnosed as endogenous depressive (ICD). This means, a low rate for divergence into endogenous depression results. This would not be surprising if there was, in the sample, only a low base rate for endogenous depression (i.e., if only a few cases of endogenous depression were included). Conversely, a high number of subjects with this diagnosis would be likely to produce high divergence rates. Thus, if only pure sample frequencies are analyzed, the true correspondence may be over- or underestimated. Since the critical base rates were not published in the reports cited, an a posteriori adjustment cannot be established.

We therefore present, in the study reported here, raw as well as adjusted frequency rates for correspondence. A systematic between system comparison is intended for three pairs of diagnostic classifications: neurotic depression vs. dysthymia, endogenous depression vs. major depression, and depressive reaction vs. adjustment disorder with depressed mood. These pairs of diagnoses are regarded as correspondences by the American Psychiatric Association (APA), since all DSM-III/DSM-III-R categories were labeled with the same digit codes as the equivalent ICD-9 diagnoses.

Methods

General Procedure. The study is based on a sample of 420 adult outpatients who were consecutively examined in the Psychiatric Outpatient Department of the Max-Planck-Institute of Psychiatry in Munich. Subjects were referred from a general hospital, psychiatrists in private practices, and general practitioners, for psychiatric diagnostics and treatment proposals.

Psychopathology was assessed by use of the Munich Diagnostic Checklist (MDCL), an extensive instrument recently developed by us (Hiller et al. 1987) for obtaining data relevant to DSM-III-R diagnoses for affective, psychotic, organic, and substance-use disorders. The MDCL contains several hundred symptoms, signs, and other diagnostically relevant criteria. The clinician uses the instrument as a semi-structuring guideline during exploration. Present status as well as longitudinal findings (course) are considered (lifetime diagnoses).

With each patient, an intensive, face-to-face interview was performed by one of five clinicians (physicians and psychologists), all with experience in psychiatric evaluation and treatment. The approximate interview length was 30 to 120 min, and it was usually conducted in one sitting. Use of the MDCL was demonstrated and practised with each interviewer before the first application. Each rating was followed by direct daily supervision. When questions arose, specific patients were recontacted for further clarification, and additional information was obtained from family members and/or physicians and therapists who previously had seen the patients.

Clinical ICD-9 diagnoses were made on the same day the patient was examined. At this time, any DSM-III-R diagnoses for the patient were unknown to the clinicians. These diagnoses were later generated by a computer program, based on the analysis of MDCL data.

Subjects. A total of $N = 168$ subjects presented with depressive symptomatology, leading to a specific diagnosis of depression in at least one of the classification systems. The subsample did not include any cases with certain or probable organic mental disorders or schizophrenia and related syndromes. Three groups were formed for analysis of DSM-III-R categories, including $n = 100$ subjects for *major depression*, $n = 49$ for *dysthymia*, and $n = 5$ for *adjustment disorder with depressed mood*. Corresponding groups according to ICD-9 classes contained $n = 18$ subjects with *endogenous depression*, $n = 73$ with *neurotic depression*, and $n = 37$ with *depressive reaction*.

The *sociodemographic characteristics* of the sample with diagnoses of depression at the time of investigation were as follows: (1) Aged 40.0 ± 12.7 (mean \pm SD); (2) 115 women and 53 men; (3) 57 married, 2 living (unmarried) with a spouse, 76 single, 21 divorced or separated, 12 widowed; (4) educational level: 56 primary school with or without graduation; 56, college; 26, vocational schools; 27, university or comparable institution; 3, other schools.

Statistical Analyses. We evaluated to what extent a diagnostic category A of one of the systems splits up (diverges) into different categories $B_1, 2, \dots, k$ of the other system. For analysis of category A, a *divergence rate* is defined as the conditional probability of category B_j ($j = 1, 2, \dots, k$), given that the patient comes from the subsample of category A [i.e., $P(B_j|A)$]. Thus, a divergence rate gives the proportion of patients from category A to be classified, in the opposite system, under category B_j . When a single category A is analyzed, divergence rates for the categories $B_1, 2, \dots, k$ usually sum up to 1.00 (i.e., 100%).

Since *base rates* for the categories $B_1, 2, \dots, k$ (frequencies within the sample) vary considerably and thus lead to difficulties in interpretation, we adjusted divergence rates according to the equation:

$$\text{div}_j^* = \frac{\text{div}_j / P(B_j)}{\sum_j (\text{div}_j / P(B_j))}$$

where div_j is the observed divergence rate, and $P(B_j)$ the base rate of category B_j in the total sample. The adjusted rates $\text{div}_{1, 2, \dots, k}^*$ represent a distribution that could be expected if base rates for all B categories were identical in the sample.

Complementary to divergence rates, we computed *convergence rates* giving the probability of category A, whenever the person comes from the subsample of one of the categories B_1, B_2, \dots , or B_k [i.e., $P(A|B_j)$]. Convergence rates express the prediction of A from B_j , whereas divergence rates refer to the prediction of B_j from A.

Measures of concordance between A and B_j are given with κ (kappa coefficient; Cohen 1960). Since no hypotheses could be derived about the exact degree of congruence between A and each of the B_j categories, we did not apply tests of significance. A test of deviation from chance agreement (i.e., κ greater zero) does appear to be appropriate because relatively low values may become statistically significant (e.g., 0.30), yet not sufficient for good correspondence.

For the analysis of divergence from ICD-9, only the principal ICD-9 diagnosis (established with a good or high degree of certainty) was considered. Additional ICD-9 diagnoses were included only when divergence from DSM-III-R categories was studied. Thus, a comparison of deviation values is provided with or without strict application of hierarchical classification rules, as inherent in ICD-9. For DSM-III-R evaluation, the principle of multiple diagnoses in one person was applied throughout our analyses.

Results

The three pairs of compared diagnoses will be discussed separately.

Neurotic Depression and Dysthymia

Neurotic depression and dysthymia are similarly designed to cover relatively mild, but disproportionate and enduring depressive symptomatology which usually first appears in childhood, adolescence, or early adult life. Both systems clearly separate these diagnoses from psychotic disorders, which frequently include delusions, hallucinations, or manic symptoms.

However, a number of substantial discrepancies in diagnostic criteria and descriptions clearly limit the comparability of both disorders. Divergence in classification must be expected for the following reasons:

- For *time* and *course* criteria, dysthymia requires a period of at least two years with constant or most frequent depressed mood, and does not permit depression-free intervals for more than two months. No equivalent time criteria exist for neurotic depression. If patients, despite a clearly longstanding depression, fail to meet criteria for dysthymia (e.g., remission episodes for three or four months), they could be nevertheless frequently classified as neurotic depressive.
- For more *severe* depressive disorders with chronic course, DSM-III-R provides the major depression category. Dysthymia may be diagnosed only if major depressive episodes do not occur unequivocally during the first two years after the onset of depression. Unlike this, neurotic depression includes mild as well as more severe forms of depression, as long as delusions and hallucinations are not present. A considerable number of patients diagnosed as neurotic depressive could therefore be classified as major depression in DSM-III-R. This additionally reduces the correspondence between dysthymia and neurotic depression.
- From the viewpoint of the ICD-9 system, the criteria for dysthymia may, in some cases, be met by patients who received in ICD-9 other diagnoses than neurotic depression. For example, a depressive syndrome may be interpreted as *superimposed* on anxiety neurosis, alcoholism, or eating disorders, and therefore a second diagnosis of neurotic depression is not given.
- A diagnostic divergence can also result from the ICD-9 definition of neurotic depression as recognizably following a distressing experience (psychic trauma). Such *etiological assumptions* do not exist for dysthymia.

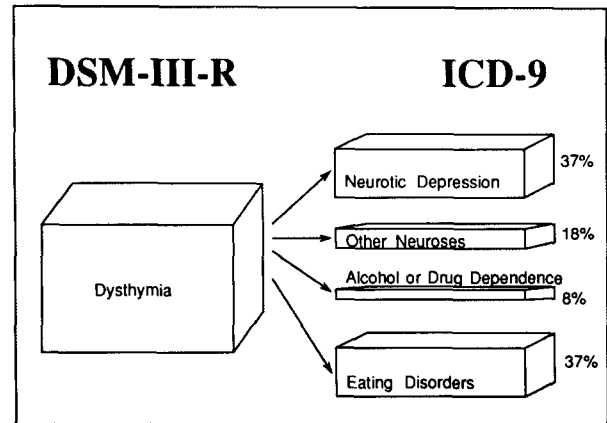


Fig. 2. Divergence from Dysthymia (DSM-III-R) into different categories of the ICD-9 system (adjusted rates)

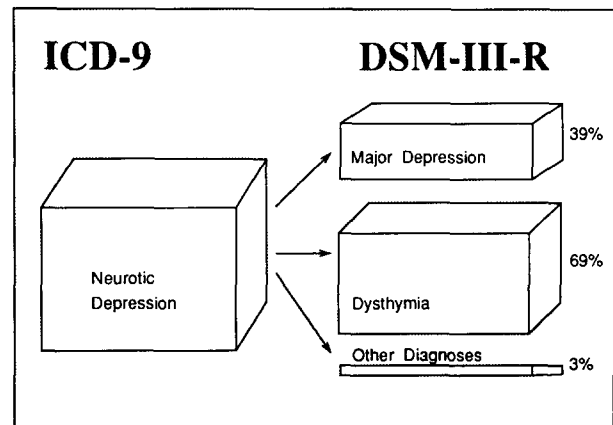


Fig. 3. Divergence from Neurotic Depression (ICD-9) into different categories of the DSM-III-R system (adjusted rates)

In all, there are a number of reasons why patients with the diagnosis of neurotic depression could miss the specific criteria for dysthymia, and dysthymic disorder can be expected, in some cases, to be hierarchically subsumed under ICD-9 categories other than neurotic depression. Dysthymia and neurotic depression may thus overlap only to a reduced degree, showing considerable spreading-out into both directions.

From our sample, adjusted divergence rates for both categories are displayed in Fig. 2 and 3. For a more detailed evaluation (for this and the following analyses), unadjusted divergence rates, base rates for individual categories, convergence rates, and κ are summarized in Table 3. Since low base rates attenuate the value of κ , overall percentage agreement is reported in addition.

As shown in Fig. 2, dysthymia diverged with equal proportions (37%) into the ICD-9 categories for neurotic depression and eating disorders (i.e., anorexia

Table 3. Comparison of diagnoses between ICD-9 and DSM-III-R

	div	base rate	div*	con	perc	κ
a. ICD-9 diagnoses for $n = 49$ patients with dysthymia (DSM-III-R)						
Neurotic depression	0.35	10.0	0.37	0.40	86.4	0.30
Other neuroses	0.16	10.0	0.18	0.19	82.1	0.08
Alcohol or drug dependence	0.22	31.9	0.08	0.08	61.7	-0.06
Eating disorders	0.27	7.6	0.37	0.41	86.9	0.25
b. DSM-III-R diagnoses for $n = 73$ patients with neurotic depression (ICD-9)						
Major depression (only)	0.29	18.6	0.16	0.27	74.1	0.12
Dysthymia (only)	0.22	6.4	0.35	0.59	83.8	0.25
Major depr. and dysthymia	0.31	6.9	0.46	0.79	86.7	0.39
Other diagnoses	0.18	68.1	0.03	0.05	20.7	-0.28
Major depression (total)	0.60	25.5	0.39	0.41	78.1	0.36
Dysthymia (total)	0.53	13.3	0.69	0.70	87.9	0.53
c. ICD-9 diagnoses for $n = 100$ patients with major depression (DSM-III-R)						
Endogenous depression	0.13	3.8	0.31	0.81	78.6	0.17
Neurotic depression	0.27	10.0	0.25	0.64	79.1	0.28
Other neuroses	0.14	10.0	0.13	0.33	72.9	0.07
Depressive reaction	0.12	10.5	0.11	0.27	71.4	0.03
Eating disorders	0.11	7.6	0.13	0.34	73.8	0.06
Alcohol or drug dependence	0.20	31.9	0.06	0.15	53.8	-0.14
Other diagnoses	0.03	26.2	0.01	0.03	51.4	-0.29
d. DSM-III-R diagnoses for $n = 18$ patients with endogenous depression (ICD-9)						
Major depression	0.83	25.5	0.61	0.14	77.4	0.18
Bipolar disorder NOS	0.11	5.5	0.38	0.09	91.2	0.05
Other diagnoses	0.06	69.0	0.01	<0.01	27.1	-0.08
e. DSM-III diagnoses for $n = 37$ patients with depressive reaction (ICD-9)						
Major depression	0.27	25.5	0.06	0.09	70.5	0.01
Dysthymia	0.08	13.3	0.04	0.05	79.3	-0.05
Adjustment disorder	0.13	1.2	0.66	1.00	92.4	0.22
Other diagnoses	0.41	56.9	0.04	0.06	90.0	0.12
No diagnoses	0.11	3.1	0.20	0.31	41.4	-0.05

div = divergence rate

base rate = frequency rate (percentage) in the total sample ($n = 420$)

div* = adjusted divergence rate (according to base rate)

con = convergence rate

perc = overall percentage agreement

 κ = kappa

and bulimia nervosa). However, in patients with eating disorders, depression represents an additional feature. The residual divergence for dysthymia split up into other categories for neuroses (18%) and alcohol or drug dependence (8%). Thus, these categories tend to include longstanding depressive states which, in ICD-9, are not represented in diagnostic labeling.

Fig. 3 gives adjusted divergence proportions for neurotic depression. This disorder was diagnosed as dysthymia more often than dysthymia was diagnosed as neurotic depression (69% vs. 37%; see also Fig. 2).

This illustrates that an enduring depressive syndrome obviously more often leads to the diagnosis of dysthymia, as compared with neurotic depression.

For the divergence of neurotic depression into major depression (with or without dysthymia) we computed an overall rate of 39%. It should be kept in mind that the percentage rates in Fig. 3 exceed the sum of 100%, since major depression and dysthymia do not occur independently of each other. For the diagnosis of major depression exclusively (i.e., no coexisting major depression), and for the group of

patients who received both diagnoses for major depression and dysthymia, divergence proportions are additionally given in Table 3. The largest proportion shows a 46% chance for "double diagnosis". Thus, neurotic depression in most cases included enduring depressive states which were complicated by more severe major depressive episodes.

Endogenous Depression and Major Depression

The concepts of endogenous and major depression share some common features (e.g., Maier et al. 1986; Andreasen et al. 1988). Both categories are used to diagnose severe states of depression, which can include symptoms like delusions, hallucinations (mostly consistent with the depressed mood), and psychomotor apathy or agitation. The course can be described by a marked tendency for recurrence (often with regular intervals), or by chronicity.

Clear boundaries between endogenous depression and other categories for depressive disorders do not exist in ICD-9. In clinical practice, critical features for diagnosing endogenous depression are phasic course, sudden onset in the absence of psychosocial stressors, and reduced probability that the severe symptomatology will be influenced by psychological factors. Such patients are likely to meet the criteria for major depression. Thus, a high correspondence between the two diagnoses should be expected from the ICD-9 viewpoint.

This was partly confirmed by our data showing a 61% chance for patients with an endogenous depression to be classified as major depression (Fig. 4). However, there was a considerable proportion of subjects with an unspecific bipolar disorder (NOS = not otherwise specified) in the subsample (38%). In these cases, one or more hypomanic episodes had been reported, which still were not sufficiently severe for the clinicians using ICD-9 diagnoses to justify a diagnostic shift from unipolar to bipolar affective psychosis. This illustrates frequent difficulties in clearly separating these disorders in clinical practice. Other DSM-III-R diagnoses played a negligible role for endogenous depression.

The situation is different for the distribution of ICD-9 disorders of patients diagnosed as major depression within the DSM-III-R system. This category is conceptualized much more broadly (c.f. Andreasen 1982) and may (additionally to endogenous depression) include

- severe forms of neurotic depression,
- marked depressive reactions to psychosocial stressors (e.g. familial or occupational conflicts),

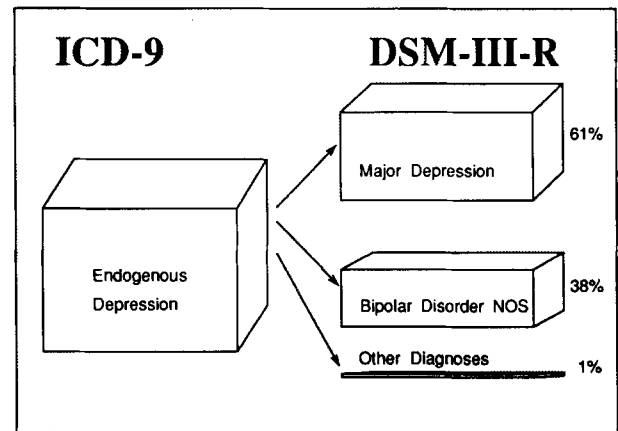


Fig. 4. Divergence from Endogenous Depression (ICD-9) into different categories of the DSM-III-R system (adjusted rates)

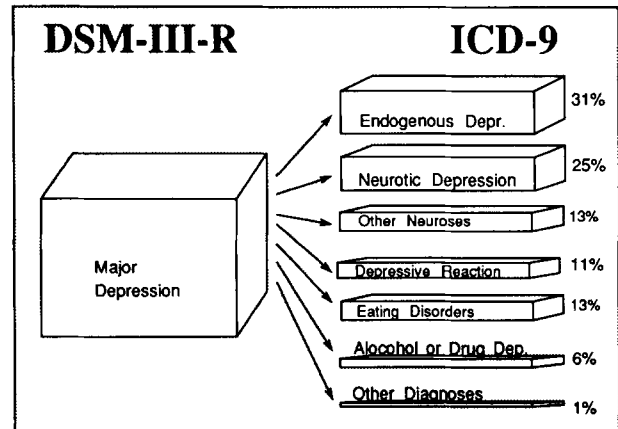


Fig. 5. Divergence from Major Depression (DSM-III-R) into different categories of the ICD-9 system (adjusted rates)

– depressive symptomatology which in ICD-9 is conceived as secondary to other disorders (e.g. anxiety disorders, alcohol or drug dependence).

As Fig. 5 shows, major depression split up, in our sample, into five ICD-9 categories with rates above 10%. Endogenous and neurotic depression contributed most (31% and 25%, respectively). Moreover, other neurotic disorders, depressive reaction, and eating disorders frequently represented corresponding ICD-9 diagnoses with rates between 11% and 13%, summing up to 37%.

In all, the assumption that major depression covers a broad range of disorders, which are separated in ICD-9, is confirmed. Since patients from five different ICD-9 categories converge with substantial proportions into major depression, this category, as a whole, seems to show relatively low specificity. This also turns out to be the reason for the high sample base rate of 25.5% for major depression, as compared with only 3.8% for endogenous depression.

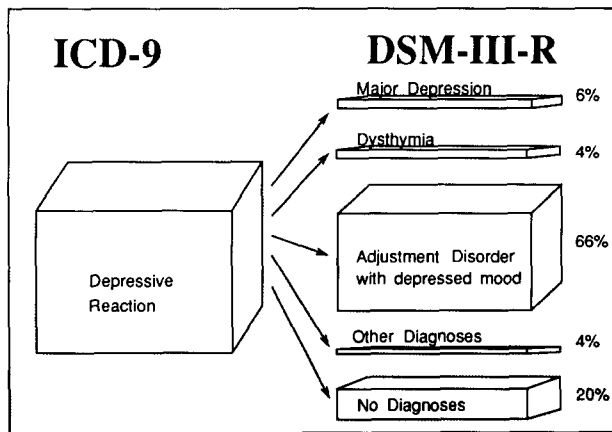


Fig. 6. Divergence from Depressive Reaction (ICD-9) into different categories of the DSM-III-R system (adjusted rates)

Depressive Reaction and Adjustment Disorder

The diagnoses of a brief or prolonged depressive reaction (ICD-9) or an adjustment disorder with depressed mood (DSM-III-R) should be established only in the absence of any other (specific) mental disorder. States of depression for depressive reactions are defined as being generally transient and closely related to some stressful event, and the symptomatology should not be specifiable as manic-depressive, psychotic, or neurotic (WHO 1978).

The concepts of reactive/adjustment disorders are widely similar in both systems. However, detailed comparison shows differences which may have considerable practical consequences. First, clearly defined time criteria as provided by DSM-III-R (onset of symptomatology within 3 months after occurrence of a stressor, duration no longer than 6 months) do not exist in ICD-9. Second, DSM-III-R gives only a gradual differentiation between adjustment disorder and a major depressive episode which must be diagnosed if the depressive reaction exceeds severity criteria and persists for at least two weeks. Third, the exclusion of any other (specific) mental disorder is well expressed in DSM-III-R (by criteria C and E), but rather hidden in the text of ICD-9. Therefore, in clinical use of ICD-9, many reactions to stress are diagnosed in neurotic and even in schizophrenic patients if there is merely an outside stressor and reaction to it. Additionally, strong current social trends emphasize that most mental disorders are caused by social and psychological stress.

Thus, the boundaries of DSM-III-R adjustment disorder seem to be tighter, and a lower frequency rate of this disorder must be expected, as compared with the corresponding ICD-9 category.

In our sample, most of the patients with the diagnosis of a depressive reaction missed at least one of

the criteria for DSM-III-R adjustment disorder with depressed mood. The base rate for depressive reaction was 10.5%, compared to only 1.2% for adjustment disorder.

Without exception, all patients with the DSM-III-R diagnosis of adjustment disorder received the corresponding ICD-9 diagnosis. In contrast, a broad divergence was obtained for depressive reaction, as Fig. 6 illustrates.

Though the connection between the corresponding diagnoses turned out to be highest (66%), 20% of the subjects did not receive any diagnosis in DSM-III-R. Thus, the probability of labeling patients as mentally ill (by making a psychiatric diagnosis) is increased when the diagnostician refers to ICD-9. Low divergence rates for depressive reaction were found for major depression (6%), dysthymia (4%), and other diagnoses (4%).

Discussion

For biological, pharmacological, and clinical studies in psychiatry, patients are often grouped according to clinical or research diagnoses. The classification system DSM-III/DSM-III-R has been developed for the purpose of operationally defined and more reliable diagnoses. However, its relationship with the currently used ICD-9 system is not sufficiently clear, and estimates of divergence and convergence between corresponding diagnoses of both systems are needed.

A comparison of corresponding categories was thus presented for unipolar depressive disorders. Theoretically, the ICD-9 diagnoses of endogenous, neurotic, and reactive depression can be compared with the DSM-III-R categories of major depression, dysthymia, and adjustment disorder with depressed mood.

For three ICD-9 categories investigated, a relatively clear category-to-category correspondence only existed for endogenous depression. This disorder most frequently turned out to be a major depression in DSM-III-R. Neurotic depression showed a close association to dysthymia, but also diverged, in a considerable number of cases, into major depression. We found the category of depressive reaction to be most overinclusive, since all DSM-III-R categories for unipolar depression were, to some degree, observed as corresponding.

Considerable convergence from multiple ICD-9 categories was seen for major depression and dysthymia. This tendency was most marked for major depression, since different forms of depression (endogenous, neurotic, and reactive) were found in this group. Moreover, depressive states tended to co-exist

in patients with alcohol or drug dependence, eating disorders, or neuroses other than depressive type. Within the descriptive approach of DSM-III/DSM-III-R, which encourages the use of multiple diagnoses to fully characterise a patient, these subjects often received the additional diagnosis of major depression or dysthymia. Thus, a convergence of a number of non-depressive disorders into one of the specific categories for depression in DSM-III-R resulted.

A low threshold was found for diagnosing depressive reactions in ICD-9, as compared with the corresponding DSM-III-R diagnosis (adjustment disorder with depressed mood). For the few cases of adjustment disorder in DSM-III-R, a 100% agreement with the diagnosis of depressive reaction was obtained. Unlike this, only about two thirds of the patients diagnosed in ICD-9 as depressive reactive received the corresponding DSM-III-R diagnosis.

Homogeneity is frequently conceived to be a critical aspect of a classification category (e.g., Andreasen 1982). A diagnosis is said to be homogenous or narrow if it only includes patients with a relatively specific psychopathology. As our results suggest, endogenous depression in ICD-9 and adjustment disorder with depressed mood in DSM-III-R appear to be the most uniform of all disorders under study. Major depression and dysthymia, however, certainly include a greater variety of clinically distinct features than their ICD-9 correspondences.

The goal of DSM-III-R to offer more homogeneous diagnostic groups is certainly not reached with the category of major depression. The old European category of endogenous depression, often questioned by US psychiatry, presents a much better realisation of this goal. Furthermore, if the ICD-9 category of depressive reaction were to be used clinically as strictly as the one of adjustment disorder in DSM-III-R (i.e., only a maladaptive reaction to stress in the absence of any other mental disorder), than it could offer comparable homogeneity.

Further research should focus on the question how more homogenous groups can be formed. This goal might also be reached with the help of subclassification within each category.

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