Alcohol Dependence in ICD-9 and DSM-III-R: A Comparative Polydiagnostic Study

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Summary. Diagnoses of alcohol dependence, using the classification systems ICD-9 and DSM-III-R, were compared in a sample of 215 psychiatric outpatients. A lower diagnostic threshold was obtained for DSM-III-R. This category tended to be more inclusive for relatively mild forms of inadequate alcohol use. Of those patients with ICD-9 alcohol dependence, 79% also met criteria for the corresponding DSM-III-R category, whereas 61% of subjects diagnosed as dependent according to DSM-III-R received the equivalent diagnosis in ICD-9. These results were obtained assuming equal base rates (sample frequencies) for dependence and abuse. Diagnoses were further compared with independently derived scores of the Munich Alcoholism Test (MALT), and the validity of DSM-III-R was found to be superior. Checklist-guided interviews had a positive impact upon accuracy and validity of diagnoses.

Key words: Classification – Alcohol dependence – Alcohol abuse – DSM-III-R – ICD-9

Introduction

The definition and classification of alcohol-related psychiatric disorders have become more uniform with the introduction of the revised third Statistical Manual of Mental Disorders, DSM-III-R (APA 1987). The diagnostic criteria of this system for alcohol dependence and abuse were modified substantially (compared with the former DSM-III), broadly in accordance with the concept of an alcohol dependence syndrome as developed by a WHO expert group (Edwards et al. 1977). This concept also forms the basis for the definition of alcohol dependence in the currently used clinical ICD-9 system (WHO 1978).

The DSM-III-R reformulations reflect the broad acceptance of the WHO model among clinicians and scientists in the field of alcoholism (e.g. Skinner and Allen 1982; Babor et al. 1986; Edwards 1986; Feuerlein 1987). In short, the model considers the dependence syndrome as an interrelated cluster of behavioural, cognitive and physiological symptoms. The syndrome can occur in different degrees of intensity rather than all-or-none. Not all elements must be present in one person, though the syndrome tends to become more coherent as severity increases. Moreover, Edwards et al. (1977) clearly distinguished dependence from alcohol-related disabilities.

However, DSM-III had been significantly at variance with the concept of Edwards et al. (Caetano 1985; Rounsaville 1987). For example, the assumption of graded intensity was not considered in the differentiation between dependence and abuse. Both diagnoses were independent of each other, since it was possible to diagnose abuse without dependence, dependence without abuse, or both.

Further objections had been that social and occupational consequences of inappropriate alcohol consumption were used as defining features (for dependence as well as for abuse), and that tolerance and withdrawal (signs of physical dependence) were included as obligatory criteria for the diagnosis of dependence. Consequently, a set of changes was adopted in DSM-III-R (cf. Rounsaville et al. 1986). Most important are:

1. The category of alcohol dependence was broadened beyond the physiological indices of tolerance and withdrawal, and it now represents the central diagnosis of

alcoholism. Abuse is conceptualized only as a residual category covering mild forms of the disorder. Each diagnosis excludes the other.

2. Impairment in social/occupational functioning was replaced by continued use despite awareness of such impairment. Thus, the symptom of impaired control was stressed.

3. Less emphasis was placed on tolerance and withdrawal. Both symptoms remain as indicators of alcohol dependence, but they are no longer employed as required criteria.

DSM-III-R contains a set of nine criteria which constitute a dependence syndrome (Table 1). At least three of them are required for a diagnosis, and they must have been present for at least 1 month, or have occurred repeatedly over a longer period of time. For alcohol abuse, dependence has to be ruled out, and a maladaptive pattern of drinking must be stated (either drinking despite negative consequences, or alcohol use when situations are physically hazardous).

Diagnoses of alcoholism in DSM-III-R and ICD-9 are thus based upon the same concept, but differences must be expected due to specific diagnostic processes inherent in each of the systems (Skodol and Spitzer 1982; Wittchen and Schulte 1988). Clinicians using ICD-9 are relatively free in their decisions, since no strict conditional clauses are given for symptomatology, duration, or severity of the disorder. In contrast, the specified criteria of DSM-III-R represent an operationalization of alcohol dependence and abuse, and they must be evaluated explicitly before assessing a diagnosis.

Table 1. Criteria for DSM-III-R alcohol dependence

1.	Alcohol often taken in larger amounts or over a longer period than the person intended
2.	Persistent desire or one or more unsuccessful efforts to cut down or control alcohol use
3.	A great deal of time spent in activities necessary to get alcohol, drinking, or recovering from its effects
4.	Frequent intoxication or withdrawal symptoms when expected to fulfil major role obligations at work, school, or home, or when drinking is physically hazardous
5.	Important social, occupational, or recreational activities given up or reduced because of drinking
6.	Continued drinking despite knowledge of having a persistent or recurrent social, psychological, or physical problem that is caused or exacerbated by drinking
7.	Marked tolerance: need for markedly increased amounts of alcohol (i.e. at least a 50% increase) in order to achieve intoxication or desired effect, or markedly diminished effect with continued use of the same amount
8.	Characteristic withdrawal symptoms
9.	Alcohol often taken to relieve or avoid withdrawal symptoms

The criteria-related approach of DSM-III-R is conceived to have substantial advantages, since an objective standard for diagnosing was established, and reliability has been found to be considerably improved (e.g. Helzer et al. 1977; Spitzer et al. 1978; 1979; Semler et al. 1987; Robins 1982). A shift from traditional to operational diagnostics is intended also for the imminent replacement of ICD-9 by ICD-10 (Wittchen and Schulte 1988).

Until now, however, practical consequences of the different diagnostic procedures as given by ICD-9 and DSM-III-R have not been investigated. Incongruencies between both systems for diagnoses of alcoholism must be expected, but no clear notion exists about their degree and significance. Above all, it seems to be essential to have estimates of whether research findings based on ICD-9 selected groups will remain valid under the preconditions of the new criteria-based system.

The study presented here provides a systematic comparison of alcohol-related disorders in ICD-9 and DSM-III-R. Data were derived from patients who were simultaneously (polydiagnostically) classified according to both systems. The focus will be on contrasting dependence and abuse, but other psychiatric disorders will be considered additionally. Comparable analyses have already been carried out for depressive and anxiety disorders (Hiller et al. 1988, 1989). In a second step, diagnoses of both systems will be related to an independent indicator of alcoholism, the Munich Alcoholism Test (MALT; Feuerlein et al. 1977, 1979). The purpose is to evaluate the congruence between this criterion and the diagnostic assignments, in order to gain estimates of the validity of the diagnoses under study.

Methods

General procedure. Data were collected from 215 adult outpatients with and without alcohol-related problems. They were consecutively examined within an 18-month period in the Psychiatric Outpatient Department of the Max-Planck-Institute of Psychiatry in Munich. Minimum age was 18 years. Diagnosticians were four physicians and one clinical psychologist, all experienced in psychiatric evaluation and treatment. Sixty-five percent of the patients were referred from a general hospital, after or during physical treatment (including diseases due to alcohol consumption, e.g. intoxication, delirium, alcohol-induced seizures, polyneuropathy, diseases of the liver or the pancreas). The remaining patients had been sent by psychiatrists in private practices and general practitioners. Most patients suffering from alcohol-related problems had previously been detoxicated in a hospital, and they had then sought help in order to prevent further alcohol abuse.

For each patient, a clinical ICD-9 diagnosis was made on the day of examination. Furthermore, the Munich Diagnostic Checklist (MDCL; Hiller et al. 1987) was used to assess signs, symptoms and diagnostic criteria for 33 of the most prevalent

and common DSM-III-R disorders. The instrument is designed for standard psychiatric examinations, and it covers affective, psychotic, organic and substance-use disorders. The clinician uses the MDCL as a semi-structured guideline when conducting face-to-face explorations. Diagnoses (lifetime) were generated by a computer program after ratings had been completed. When the clinicians diagnosed according to ICD-9, they did not know the DSM-III-R diagnoses for the particular patient.

MDCL interviews were usually carried out in one sitting, and they lasted between 30 and 120 min. All ratings were followed by direct daily supervision. When questions arose, patients were recontacted for further clarification, and additional information was obtained from family members and/or physicians and therapists who had previously seen the patients.

Additional indicators of alcoholism were collected by the MALT, developed by Feuerlein et al. (1977, 1979, 1980). This instrument combines signs and symptoms of inappropriate alcohol use into a unidimensional, mixed self-rated and physician-rated scale. All patients completed the self-assessment section before clinical examination, answering 24 questions about drinking behaviour, attitude toward drinking, emotional and social impairment due to alcohol, and somatic complaints on a dichotomous scale ("yes" vs "no"). The 7-item schedule for assessment by the diagnostician includes findings from physical examination, laboratory data, the patient's history, and information gained from family and friends. Ratings were made by the clinician who screened the patient by use of the MDCL. The clinician was kept blind to the MALT self-rating scores.

Subject characteristics. Subjects with alcohol-related problems were carefully screened for potential additional mental disorders. In our sample, alcohol dependence was found to coexist with other psychiatric disorders in 57%, divided up into drug dependence (22%), unipolar depression (34%), bipolar disorders (7%), anxiety disorders (11%), chronic organic mental disorders (9%), personality disorders (12%), and other disorders (6%). The patients without alcohol problems suffered from mood disorders (32%), anxiety disorders (15%), drug dependence (9%), personality disorders (7%), chronic organic mental disorders (7%), schizophrenia (5%), and other disorders (24%; including eating, somatization and sexual disorders).

The *sociodemographic characteristics* of the total sample (215 subjects) at the time of investigation were as follows: (1) aged 39.5 ± 11.1 (mean $\pm$ SD) with a range between 18 and 74 years; (2) 126 men and 89 women; (3) 76 married, 90 single, 41 divorced or separated, 8 widowed; (4) educational level: 75, primary school with or without graduation; 2, school for retarded children; 73, college; 36, vocational schools; 27, university or comparable institution; 2, other schools. There were no substantial differences in these characteristics between the groups with and without alcohol-related disorders.

Statistical analyses. Conditional probabilities were applied in order to evaluate the degree of congruence between ICD-9 and DSM-III-R categories of alcohol dependence and abuse. Usually, a perfect 1:1 congruence between two corresponding diagnoses cannot be observed, and a category A of one of the systems then splits up (diverges) into different categories $B_{1,2,...,k}$ of the other system.

When category A is analysed, a *divergence* rate can be defined as the conditional probability of category B_j ($j = 1,2,...,k$), given that the patient comes from the subsample of category A (i.e. $P(B_j|A)$). Thus, a divergence rate is determined from the proportion of patients from category A to be classified, in the opposite system, under category B_j. For a single category A, di-

vergence rates for the categories $B_{1,2,...,k}$ usually sum up to 1.00 (i.e. 100%).

Most commonly, however, *base rates* for the B_j categories (i.e. frequencies within the sample) vary to some extent. This can lead to serious difficulties in interpretation, since empirical divergence rates strongly depend on specific sample compositions. For example, if only a few subjects with disorder B_j are included in a study, a low divergence rate $P(B_j|A)$ must be expected even if a high proportion of the subjects in B_j are classified as A. Therefore, weighted rates were computed which express sample rates for divergence by taking the specific base rate for each of the B_j categories into account:

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

In this equation, div_j is the observed divergence rate, and $P(B_j)$ the base rate of category B_j in the total sample. This procedure assumes a model where the base rates of all B_j categories are identical.

Complementary to divergence rates, *convergence rates* were computed giving the probability of category A, whenever the person comes from the subsample of one of the categories B_1, $B_2,...$, 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 association between A and B_j are additionally given with κ (kappa; Cohen 1960). κ expresses congruence between two categories over and above chance agreement. Since low base rates attenuate the value of κ, overall percentage agreement will be reported in addition. Hypotheses about the expected degree of congruence between A and each of the B_j categories could not be set up, and tests of significance are thus not applied.

Results

Alcohol-related diagnoses between ICD-9 and DSM-III-R will be compared first, and their relationship to data from the MALT will be analysed subsequently.

Comparison between ICD-9 and DSM-III-R

Groups were formed according to diagnoses of alcohol dependence, abuse, and no alcohol-related disorders. Figure 1 displays the frequency of subjects for each of these three groups, contrasting ICD-9 and DSM-III-R. There was an increased rate of alcohol dependence in DSM-III-R (70.7% vs 66.0%), whereas alcohol abuse was diagnosed more often within ICD-9 (7.4% vs 1.9%). Both tendencies seem to be in balance, since the proportion of subjects without alcoholic disorders was almost identical in both classification systems (27.4% vs 26.5%).

A comprehensive comparison of the alcohol-related diagnostic categories in terms of divergence and convergence is given in Table 2, and illustrated in its essential part in Fig. 2 (using *weighted* divergence

Percent
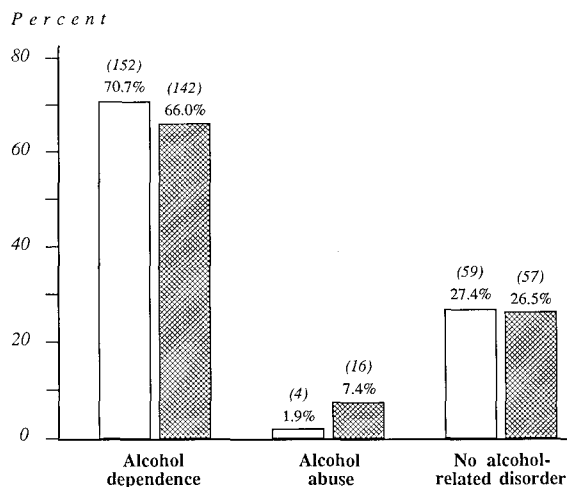
Fig. 1. Frequencies of diagnoses (absolute numbers in parentheses). □ DSM-III-R; ▩ ICD-9

rates). There was a conditional probability of 0.79, for patients diagnosed as alcohol dependent in ICD-9, to receive the corresponding DSM-III-R diagnosis (meaning that 79% of ICD-9 alcohol dependent patients will have the same disorder in DSM-III-R). This

Table 2. Comparison of diagnoses between ICD-9 and DSM-III-R

	div.	base rate	div.*	con.	p_0	κ
a. ICD-9 diagnoses for 152 patients with DSM-III-R alcohol dependence						
Alcohol dependence	0.93	66.0	0.61	0.99	0.94	0.87
Alcohol abuse	0.07	7.4	0.38	0.63	0.31	−0.02
No alcohol disorders	0.01	26.5	0.01	0.02	0.04	−0.61
b. DSM-III-R diagnoses for 142 patients with ICD-9 alcohol dependence						
Alcohol dependence	0.99	70.7	0.79	0.93	0.94	0.87
Alcohol abuse	0.01	1.9	0.21	0.25	0.33	−0.02
No alcohol disorders	0.00	27.4	0.00	0.00	0.07	−0.63
c. DSM-III-R diagnoses for 16 patients with ICD-9 alcohol abuse						
Alcohol dependence	0.63	70.7	0.10	0.07	0.31	−0.02
Alcohol abuse	0.13	1.9	0.79	0.50	0.93	0.18
No alcohol disorder	0.25	27.4	0.11	0.07	0.69	−0.01

div = divergence rate; base rate = frequency rate (percentage) in the total sample (n = 215); div.* = weighted divergence rate (according to base rate); con. = convergence rate; p_0 = observed proportion of overall agreement; κ = kappa
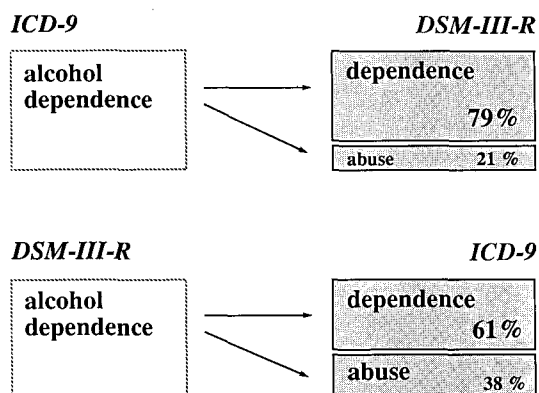
Fig. 2. Relationship between alcohol-related diagnoses in DSM-III-R and ICD-9

was clearly above the corresponding probability for the inverse situation (0.61, for patients with alcohol dependence in DSM-III-R to be given the equivalent ICD-9 diagnosis). Thus, discrepancy rates were 21% and 39%, respectively. A surprisingly high proportion of 38% of DSM-III-R alcohol-dependent patients must be expected to fall into the category of alcohol abuse in ICD-9.

What are the sources of this diagnostic discrepancy? In order to outline typical constellations where patients are classified as alcohol dependent only in one of the diagnostic systems, data and clinical records of patients with discrepant diagnoses were examined in more detail. The following reasons were found for DSM-III-R alcohol dependence *not* to result in a corresponding ICD-9 diagnosis:

Recovering symptomatology. Symptoms of inappropriate alcohol use were, in some cases, in partial or complete *remission* at the time of investigation. Such patients reported a clear history of alcohol dependence, or former episodes of heavy drinking, but they had managed to regain control over alcohol consumption (often with therapeutic help), or to remain abstinent. Clinically (ICD-9), they were regarded as having recovered from alcohol dependence, but they nevertheless received a liftetime diagnosis of alcohol dependence within DSM-III-R.

In our sample, the following forms of recovering from alcohol dependence were found: (1) spontaneous remission (often in patients with only mild forms of alcoholism in past history); (2) change to other psychoactive drugs (the addictive behaviour was therefore no longer characterized by alcohol consumption); (3) remission after successful treatment (the ICD-9 diagnosis of alcohol dependence was not given if a longer period of time without alcohol use was reported, and if psychiatric disorders other than alcoholism dominated the present situation).

Beginning or mild symptomatology. When a symptomatology was characterized as a beginning or mildly developed form of alcohol dependence (e.g. relatively short history of inappropriate drinking, and only a few symptoms indicative of dependence), clinicians tended not to diagnose ICD-9 dependence. Instead, alcohol abuse was stated (or no alcohol disorder at all), and the diagnosis of dependence was left open to the further course of the disorder. Yet, such mild forms of alcohol symptomatology were frequently sufficient to fulfil the criteria for DSM-III-R dependence.

Hierarchial subsumption. Additional diagnostic discrepancy was likely to arise when complaints other than those related to alcohol were primarily reported by the patient. Then, alcohol problems were often found only after direct and insistent inquiry. If clinicians believed the disorder(s) other than those related to alcohol to be most important, signs of alcohol dependence were likely to be hierarchically subsumed (e.g. under depression or schizophrenia). In DSM-III-R, however, the diagnosis of alcohol dependence was given according to the system's general principle of comorbidity (or multiple diagnoses).

Diagnostic discrepancy between DSM-III-R and ICD-9 was frequently based on differences of severity (i.e. diagnostic thresholds), as required for the diagnosis of alcohol dependence. Most crucial, if patients only reported a few symptoms (e.g. none or only one in excess of the three symptoms necessary for a diagnosis), they consequently received a DSM-III-R diagnosis. Clinicians, on the other hand, also recognized alcohol-related problems in these patients, but they did not consider the drinking habits to be pathological enough to be classified as dependence in the framework of ICD-9. Hence, DSM-III-R seems to be more inclusive than ICD-9 for relatively mild forms of alcoholism.

Dissimulation tendencies were most often found in patients who were diagnosed as alcohol dependent according to ICD-9, but who did not receive the corresponding DSM-III-R diagnosis. The clinicians could not confidently state the symptoms needed for the operational diagnosis, but there was no doubt of alcohol dependence from their clinical impression (including features other than those included as DSM-III-R criteria).

It should be remembered that the proportions in Fig. 2 represent weighted divergence rates, i.e. estimates of divergence based on the assumption that dependence and abuse were equally frequent. However, diagnostic discrepancy decreases as fewer patients with alcohol abuse are found. This was the case in the present sample (cf. Fig. 1), and the directly *observed* discrepancy was only 7% (dependence in DSM-III-R,

abuse in ICD-9) and 1% (dependence in ICD-9, abuse in DSM-III-R; cf raw divergence rates in Table 2). Thus, discrepancy tends to increase in situations where a relatively high number of subjects are found to have mild forms of alcoholism (since these subjects are more likely to receive the diagnosis of abuse).

Relations between Diagnosis and MALT Data

The MALT has been developed independently from psychiatric classification systems as a quantitative and qualitative measure of alcoholism (including patterns of dependence and abuse). Its validity has been evaluated and confirmed (Feuerlein et al. 1980; Auerbach and Melchertsen 1981), and it is conceived to be a good prototype of short tests that combine medical and social indicators of alcoholism (e.g. Skinner et al. 1981). The MALT can therefore serve as criterion of validity for clinical diagnoses of alcoholism.

In order to identify alcohol-dependent subjects, Feuerlein et al. (1979) have determined a critical MALT score of 11 points (the MALT global test score ranges between 0 and 52). Patients that reach this or a higher score are diagnosed as alcohol dependent. Subjects with lower scores are not considered to have the disorder. The cut-off score of 11 had been chosen because it had led to no false-positive and a minimum number of false-negative diagnoses (Feuerlein et al. 1979).

However, optimizing a cut-off point depends upon specific characteristics of the sample under investiga-

Percentage of discrepancy
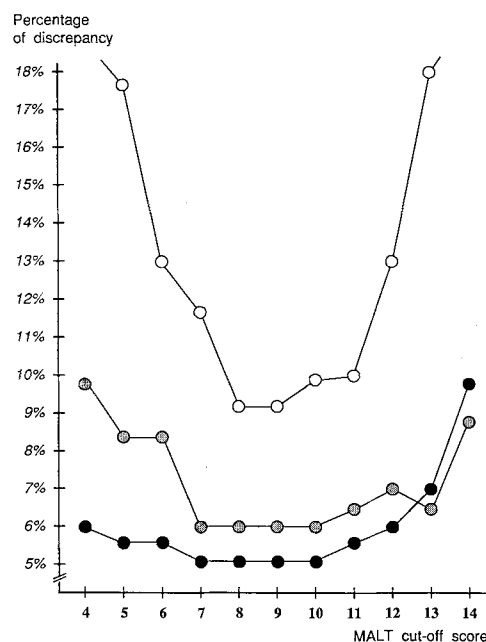
Fig. 3. Discrepancy between MALT and clinical diagnoses. O——O Standardization sample (ICD-8); ◉——◉ ICD-9 diagnosis; ●——● DSM-III-R diagnosis

tion (the MALT standardization sample consisted of 201 patients with a clinical diagnosis of alcohol dependence, and of 474 subjects without this diagnosis), and more or less deviating results may occur in different samples. Thus, for the purpose of this study, the critical MALT cut-off score was systematically varied, and the percentage of discrepancy between MALT and clinical diagnosis of alcohol dependence was computed for each of the values (false-positive and false-negative diagnoses were summed up with equal weights). The results are graphically illustrated in Fig. 3 for both ICD-9 and DSM-III-R diagnoses. The original proportions of misclassification (MALT vs ICD-8) from the standardization study of Feuerlein et al. (1979) are displayed as well.

For both ICD-9 and DSM-III-R, discrepancy rates were lowest when a MALT cut-off score between 7 and 10 was chosen. Incongruence rates were 5.1% between MALT and DSM-III-R and 6.0% between MALT and ICD-9. Figure 3 further shows that, in the sample, DSM-III-R diagnoses also reached better congruence with MALT assignments for other cut-off points (as compared with ICD-9).

A closer inspection of Fig. 3 reveals that DSM-III-R is superior especially in the lower cut-off range (i.e. 4–7), whereas ICD-9 diagnoses yielded better results in the upper range (13 and above). The main reason for this finding was that subjects with alcohol dependence according to DSM-III-R, but without the equivalent ICD-9 diagnosis, tended to have only a mild symptomatology, and they were thus more likely to reach relatively low cut-off points in the MALT. This resulted in an increased number of false-positive diagnoses for ICD-9 (i.e. MALT positive, ICD-9 negative). Conversely, an increased false-negative rate for DSM-III-R was obtained in the upper cut-off range (MALT negative, DSM-III-R positive).

The relationship between MALT and diagnoses fo each of the classification systems can be described numerically by φ, the product-moment correlation of two dichotomous variables (Fleiss 1981). The alternative of negative vs positive MALT diagnosis can be correlated with presence vs absence of a clinical diagnosis for alcohol dependence. Thus, φ is interpretable as a validity coefficient. Values are given in Table 3 for each of the hypothetical MALT cut-off scores.

Both ICD-9 and DSM-III-R reached values of nearly 0.90 in the cut-off range between 7 and 10 points. A tendency for slightly higher values can be seen for DSM-III-R, thus indicating a somewhat higher congruence of these diagnoses with the validity criterion.

As Fig. 3 further shows, clearly higher discrepancy rates had been obtained in the standardization sample of Feuerlein et al. (1979). The best rates were not below 9.2% (cut-off scores 8 and 9). This presumably

Table 3. Correlation (φ) between MALT diagnosis (according to different cut-off scores) and diagnoses of alcohol dependence (ICD-9 and DSM-III-R)

MALT	ICD-9	DSM-III-R
Cut-off score		
4	0.79	0.85
5	0.82	0.86
6	0.82	0.86
7	0.87	0.88
8	0.86	0.88
9	0.86	0.88
10	0.86	0.89
11	0.85	0.88
12	0.85	0.87
13	0.87	0.85
14	0.81	0.80

reflects the fact that a diagnostic checklist (MDCL) had been employed in the study reported here, which may generally lead to more accurate examinations of patients (no structured instruments had been used in the investigation of Feuerlein et al.). Thus, it seems that clinical diagnoses according to ICD-9 tend to be more precise if based on a structured diagnostic process, even if diagnoses are not directly derived from specific symptoms or criteria.

Discussion

The comparison of varying definitions and operationalizations of psychiatric disorders is more than a semantic debate. Concept differences can have important consequences for research, treatment and public policy. For example, epidemiological studies are strongly dependent upon the definition of when to speak of a disorder (i.e. kind and severity of symptoms), and the results of such investigations form the basis for the organization of public health systems.

Major definitions of alcoholism, as given by the currently most important classification systems ICD-9 and DSM-III-R, are fortunately derived from the same theoretical model (Edwards et al. 1977). However, DSM-III-R differs in providing for a clear diagnostic operationalization, and practical impacts of this procedure were investigated in the study presented here.

A high degree of overlap was found between ICD-9 and DSM-III-R diagnoses of alcohol dependence. Discrepant results were mainly obtained from patients with a relatively mild pattern of alcohol problems. In these cases, DSM-III-R proved to have a lower thresh-

old for assigning the diagnosis (thus being more inclusive), whereas the practice of clinicians using ICD-9 was more conservative. This constellation resulted in a higher overall base rate for DSM-III-R diagnoses of alcohol dependence.

However, good agreement between both systems can be expected only if a comparison is mainly based on patients with severe alcohol problems. This situation was present in our sample, which mostly consisted of patients with somatic complaints due to an enduring excessive use of alcohol. The sample can be regarded as somehow representative of facilities specializing in consultation and treatment of severe alcohol problems, such as psychiatric departments in a general hospital or alcohol rehabilitation clinics.

A higher number of diagnostic discrepancies must be expected in institutions dealing with other than alcohol-related disorders. There, problems due to alcohol are mostly secondary, and thus often restricted to a few mild symptoms. It was simulated from the present data that severe and mild forms of alcoholism were equally frequent (i.e. same number of dependence and abuse diagnoses), and discrepancy rates of 21% (ICD-9, not DSM-III-R) and 39% (DSM-III-R, not ICD-9) resulted for diagnoses of alcohol dependence.

A second goal of this study was to evaluate the diagnostic validity of diagnoses for alcohol dependence in both classification systems. The criteria-related approach of DSM-III-R was found to be superior. There was a closer relationship between DSM-III-R and independently derived scores of the MALT, which was used as a criterion for validity.

Advantages of the DSM-III-R method became even more apparent in the light of some further methodological considerations. In the present study, ICD-9 diagnoses were assessed after the clinician had completed a checklist-guided and thus semi-structured interview with the patient. However, this is not typical for ICD-9 diagnoses, which are usually based upon completely free explorations. A comparison of both diagnostic strategies was therefore carried out (using additional data from Feuerlein et al. 1979), and a clearly higher validity was indicated for ICD-9 diagnoses as assessed in this study. It can therefore be concluded that DSM-III-R diagnoses (of alcohol dependence) lead to a considerably improved diagnostic validity, if compared with (classical) ICD-9 diagnoses after free interviews.

The results indicate that the comparatively low diagnostic threshold of DSM-III-R for alcohol dependence implies a more accurate diagnostic decision. However, this issue should be examined in more detail in an investigation which focuses on subjects presenting with only mild symptomatology of alcoholism.

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