

# Development of Diagnostic Checklists for Use in Routine Clinical Care

## A Guideline Designed to Assess *DSM-III-R* Diagnoses

Wolfgang Hiller, PhD, Dipl Psych; Michael Zaudig, MD; Werner Mombour, MD

• To enhance diagnostic assessment in routine clinical care, the Munich Diagnostic Checklists have been developed for a systematic criteria-related evaluation of the most common psychiatric disorders according to *DSM-III-R*. Design, concept, and areas of application of the instrument are described. An initial test-retest study showed that satisfactory to excellent diagnostic agreement can be reached.

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A high degree of clarity and precision in the definition of psychiatric disorders has been achieved with a new generation of operationalized and criteria-related classification systems, most recently represented by the *DSM-III-R*.<sup>1</sup> Diagnoses derived through use of such classification systems are considered to be more objective and reliable, since they are consistently based on observable signs, symptoms, and other descriptive criteria. These classification systems are intended for clinical practice as well as for scientific work.<sup>2,4</sup>

The clinician (or scientist) explores the patient's psychopathologic condition in a systematic and comprehensive manner and refers to the definitions in the classification system when evaluating whether a specific diagnosis can be given. All relevant diagnostic information must be obtained for an adequate classification, and such a process might be enhanced if diagnostic criteria are explicitly used as guidelines during verbal and/or nonverbal examination.

The *DSM-III* and *DSM-III-R* have stimulated the development of comprehensive interviews<sup>2,5-7</sup> that structure and standardize diagnostic procedures. With such instruments, considerable improvements in reliability are found in empirical studies.<sup>5,7,8</sup> However, these structured instruments may not be practical in the clinical setting for two reasons. First, they tend to be time-consuming (frequently more than 1 hour for a single patient), and second, they are inflexible in application (the diagnostician must adhere to a fixed order of sequence that often deviates from the usual course of free clinical explorations).

Thus, the question arises to which degree systematic diagnostic evaluations can be conducted under routine clinical conditions with strict time limits (eg, 15 to 45 minutes in outpatient clinics) and whether such evaluations can be supported (and guided) by instruments. The approach we report herein was derived from former methods used to assess psychopathologic conditions. For example, checklists or rating scales such as those developed by Wittenborn<sup>9</sup> or Lorr et al<sup>10</sup> have proved useful for both clinical and scientific work. Most rating scales have been designed for an empirical grouping of symptoms (syndromes) on the basis of statistical analyses, but this method should be adaptable for the purpose of classifica-

tion (ie, assigning patients to diagnostic categories).

We developed the Munich Diagnostic Checklists (MDCL), an adaptation of the *DSM-III-R*, to serve as an instrument of evaluating and assessing diagnoses in individual patients in a clinical setting. Our work was stimulated by the specific conditions of the Psychiatric Outpatient Department of the Max-Planck-Institute of Psychiatry in Munich (West Germany), where 15 to 20 patients are examined and treated daily after referral from a general hospital, private psychiatrist, or general practitioner.

### DESCRIPTION OF THE MDCL

The MDCL is a set of 30 pocket-sized lists, each containing the criteria of a specific *DSM-III-R* category, coding boxes for rating their presence or absence, and all relevant options needed for a diagnostic decision. Each checklist can be used by the diagnostician to accept or reject a diagnosis (ie, to test a diagnostic hypothesis) during or immediately after clinical examination.

The MDCL set contains checklists for the most frequently occurring Axis I diagnoses in the *DSM-III-R*: *Mood (Affective) Disorders*—Major Depressive Episode, Manic or Hypomanic Episode, Dysthymia, Cyclothymia, and Adjustment Disorder; *Anxiety Disorders*—Panic Disorder, Agoraphobia, Simple Phobia, Social Phobia, Obsessive-Compulsive Disorder, and Generalized Anxiety Disorder; *Schizophrenia and Other Psychotic Disorders*—Schizophrenia, Schizophreniform Disorder, Schizoaffective Disorder, Delusional (Paranoid) Disorder, and Brief Reactive Psychosis; *Organic Mental Disorders*—Delirium, Withdrawal, Intoxication, Amnestic Syndrome, Organic Hallucinoses, Organic Delusional Syndrome, Organic Mood Syndrome, Organic Anxiety Syndrome, and Organic Personality Syndrome; and *Other Nonorganic and Nonpsychotic Disorders*—Alcohol Dependence/Abuse, Psychoactive Substance Dependence/Abuse, Anorexia Nervosa, Bulimia Nervosa, and Somatization Disorder.

Each list is two to four pages long. Two-page lists consist of one single sheet (printed on the front and the back), and three- or four-page lists are folded once. Different colors and the pocket format were chosen to increase their practical use.

The design and structure of the MDCL are illustrated in Fig 1 with the front page of one list ("Major Depressive Episode"). For example, the MDCL Major Depressive Episode gives all criteria that must be evaluated for a major depressive syndrome, and the clinician can code each symptom with "No," "Yes," or "Probably" (whenever a symptom cannot be assessed definitely but is judged to be present with some degree of confidence). During exploration, the list can be used to systematically screen for all symptoms (either present or previous episode), and the diagnostician can decide if criterion A of a major depressive syndrome is or was fulfilled (by checking if five items were coded "Yes" or "Probably").

Figure 2 gives an example of how the MDCL facilitates a

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From the Psychiatric Outpatient Department, Max-Planck-Institute of Psychiatry, Munich, West Germany.

Reprint requests to Psychiatric Outpatient Department, Max-Planck-Institute of Psychiatry, Kraepelinstrasse 10, D-8000 Munich 40, West Germany (Dr Hiller).

**Major Depressive Episode**

Name: \_\_\_\_\_

Age: \_\_\_\_\_ Date: \_\_\_\_\_

**A**

- Define the pattern of depressive symptomatology
- Minimum duration for all symptoms: *two weeks*
- Relate all symptoms to the *same 2-week period*
- Consider only *non-organic* symptoms

	No	Probably	Yes
(1) Depressed mood most of the day (nearly every day)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(2) Markedly diminished interest or pleasure in almost all activities most of the day (nearly every day)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(3) Decrease or increase in appetite (nearly every day), or significant weight loss or weight gain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(4) Insomnia or hypersomnia (nearly every day)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(5) Observable psychomotor agitation or retardation (nearly every day)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(6) Fatigue or loss of energy (nearly every day)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(7) Feelings of worthlessness or excessive or inappropriate guilt (nearly every day)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(8) Diminished ability to think or concentrate, or indecisiveness (nearly every day)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(9) Recurrent thoughts of death or suicide, or suicide attempt or specific plan for committing suicide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

At least 5 items from (1) to (9), including (1) or (2)

Stop ←

**Specify if symptomatology is current or previous:**

	Yes	Probable	Yes	Probable	Yes	Probable
<b>Current:</b> Depressive symptomatology exists currently for the first time.	<input type="checkbox"/>	<input type="checkbox"/>	<b>Current and Previous:</b> Depressive symptomatology exists currently, and there have been identical or similar symptoms in past history.	<input type="checkbox"/>	<input type="checkbox"/>	<b>Previous:</b> Depressive symptomatology existed in past history once or repeatedly. (time frame: _____)

Fig 1.—Front page of the Munich Diagnostic Checklists (MDCL) "Major Depressive Episode."

diagnostic decision. This page 3 of the Major Depressive Episode list is used in case a major depressive episode is present. The clinician must first decide if the depressive episode is part of a depressive (unipolar) or bipolar disorder, which enables him to derive the appropriate fourth digit of the diagnosis (the first three digits are always "296"). In a consecutive step, the clinician can specify the severity of the current state, the fifth diagnostic code. Figure 3 shows the complete form of the MDCL for "Obsessive Compulsive Disorder."

The MDCL differs from structured interviews in that its use is not restricted to face-to-face explorations. The clinician is also free to include third-party information (eg, from relatives, friends, or former medical reports) or direct observations of the patient's behavior. This is especially relevant when a diagnosis must be made for patients who cannot be interviewed adequately because of certain acute psychiatric conditions (eg, mutism, delirium, intoxication, confusional states). Furthermore, it is often necessary to include several sources of information for patients who tend to deny or deemphasize their symptoms (eg, alcoholics).

The MDCL does not require standardized questioning, probing, or a fixed order of progression. The diagnostician is free to focus on the most prominent complaints as verbalized by the patient. For example, if no evidence of depression or anxiety is found in a patient with severe alcohol problems, there is no need to refer to checklists for specific mood or anxiety disorders. Instead, the clinician can directly use the MDCL "Alcohol Dependence and Abuse" checklist to evaluate if the patient meets criteria for one of these disorders. This

**Major Depressive Episode: Diagnostic Assignment**

Disorder	Probable	Yes
Depressive Disorder		
Major Depression, Single Episode	296.2x <input type="checkbox"/>	<input type="checkbox"/>
Major Depression, Recurrent	296.3x <input type="checkbox"/>	<input type="checkbox"/>
Bipolar Disorder		
<i>In order to give this diagnosis, check for a possible manic symptomatology using the MDCL "Manic or Hypomanic Episode"</i>		
Bipolar Disorder with a full Manic Episode:	Probable	Yes
Bipolar Disorder, Manic	296.4x <input type="checkbox"/>	<input type="checkbox"/>
Bipolar Disorder, Depressed	296.5x <input type="checkbox"/>	<input type="checkbox"/>
Bipolar Disorder, Mixed	296.6x <input type="checkbox"/>	<input type="checkbox"/>
<i>Bipolar Disorder without a full Manic Episode, but with a Hypomanic Syndrome or other atypical manic symptomatology:</i>		
Bipolar Disorder NOS	296.7x <input type="checkbox"/>	<input type="checkbox"/>

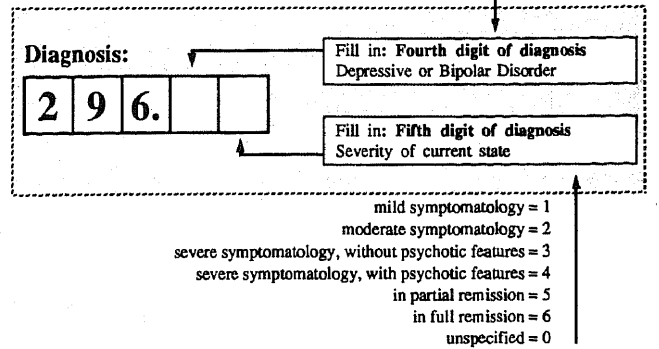


Fig 2.—Section of Munich Diagnostic Checklists "Major Depressive Episode" used to diagnose a Depressive or Bipolar Disorder.

procedure corresponds with usual modes of clinical exploration.

**AREAS OF APPLICATION**

Flexibility of application was one of our major goals when constructing the MDCL, since the instrument was to be used primarily within the framework of routine outpatient examinations. However, the MDCL is not limited to this setting and can be used for other diagnostic purposes.

Completed checklists could be enclosed with an inpatient's clinical records and serve as standardized and more objective documentation. They also might serve as teaching tools for residents, students, and nonpsychiatric clinicians. Residents could familiarize themselves with the most important diagnostic characteristics of mental disorders, using the MDCL in their own explorations. Another use might be to select specific groups of patients for investigations in psychiatric research or to supplement other more structured instruments that focused on specific diagnoses. If checklists were incorporated into clinical records, future research that used retrospective chart reviews might be facilitated.

**EVALUATION OF THE MDCL**

Since 1987, the MDCL has been administered by us to several hundred outpatients with various mental disorders. These data were used for polydiagnostic comparisons,<sup>11-13</sup> for an analysis of overlap between depression and anxiety,<sup>14</sup> and for a systematic evaluation of the *DSM-III-R* criteria for alcohol dependence.<sup>15</sup>

The test-retest reliability of MDCL lifetime diagnoses for

**Obsessive Compulsive Disorder**

Name: \_\_\_\_\_

Age: \_\_\_\_\_ Date: \_\_\_\_\_

**A** Symptomatology with *obsessions* or *compulsions*

**Obsessions**

**1** Recurrent and persistent *ideas, thoughts, impulses, or images*, that are experienced as intrusive and senseless (at least initially)  
(e.g., a parent's having repeated impulses to kill a loved child, a religious person's having recurrent blasphemous thoughts)

No  Probably  Yes   
Stop ←

**2** The person attempts to *ignore or suppress* such thoughts or impulses or to *neutralize* them with some other thought or action

No  Probably  Yes   
Stop ←

**3** The person recognizes that the obsessions are the product of his or her *own mind*, *not* imposed from without (as in thought insertion)

No  Probably  Yes   
Stop ←

**4** If another Axis I disorder is present, the content of the obsession is *not* related to it (e.g., no obsessions about food in the presence of an Eating Disorder, about drugs in the presence of a Psychoactive Substance Use Disorder, or guilty thoughts in the presence of a depressive disorder)

No  Probably  Yes   
Stop ←

No  Probably  Yes   
Stop ←

**Compulsions**

**1** Repetitive, purposeful, and intentional *behaviors* that are performed in response to an obsession, or according to certain rules or in a stereotyped fashion

No  Probably  Yes   
Stop ←

**2** The behavior is *designed* to neutralize or to prevent discomfort or some dreaded event or situation; however, either the activity is not connected in a *realistic way* with what it is designed to neutralize or prevent, or it is clearly excessive

No  Probably  Yes   
Stop ←

**3** The person *recognizes* that his or her behavior is *excessive or unreasonable* (this may not be true for young children, or for people whose obsessions have evolved into overvalued ideas)

No  Probably  Yes   
Stop ←

Criteria 1 to 4 of obsessions are met, **or** criteria 1 to 3 of compulsions are met

No  Probably  Yes   
Stop ←

**B** The obsessions or compulsions cause *marked distress*, are *time-consuming* (take more than an hour a day), or significantly *interfere* with the person's normal routine, occupational functioning, or usual social activities or relationships with others

No  Probably  Yes   
Stop ←

If criteria A and B are met: **Diagnosis:**

**Obsessive Compulsive Disorder**

3	0	0.	3	0
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met  Probable  not met

Specify severity of current state:

mild symptomatology  
 moderate symptomatology  
 severe symptomatology  
 in partial remission  
 in full remission

If the symptomatology is judged to be *clinically relevant*, and no other specific anxiety disorder is present, the residual diagnosis of Anxiety Disorder NOS (*Not Otherwise Specified*) can be given:

Anxiety Disorder NOS  
300.00 Probable  Yes

Specify if symptomatology is current or previous:

Yes  Probable  Yes  Probable  Yes  Probable

**Current:** Symptomatology exists currently for the first time.

**Current and Previous:** Symptomatology exists currently, and it had also been present in past history.

**Previous:** Symptomatology existed in past history once or repeatedly. (time frame: \_\_\_\_\_)

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Fig 3.—Both pages of the Munich Diagnostic Checklists "Obsessive Compulsive Disorder."

nonpsychotic and nonorganic disorders was investigated in a sample of 60 adult outpatients. Subjects were examined on two separate occasions by one of four participating diagnosticians, and the time interval was kept between 1 and 4 days. We obtained satisfactory to excellent diagnostic agreement for most diagnoses with  $\kappa$  values ranging above .60. For example,  $\kappa$  was .80 for alcohol dependence and .77 for drug dependence, with overall percentage agreement of 90% and 95%, respectively. Further evaluations of the different uses of the MDCL as a clinical instrument, the types of functions for which it could be used, and the way it differs from other currently available instruments are needed.

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Michael von Bose, MD, Gabriele Dichtl, MD, and Dorothee Agerer, Dipl Psych, participated as diagnosticians in the MDCL reliability study.

**References**

1. American Psychiatric Association, Committee on Nomenclature and Statistics. *Diagnostic and Statistical Manual of Mental Disorders, Revised*. 3rd ed. Washington, DC: American Psychiatric Association; 1987.
2. Robins LE, Helzer JE, Croughan J, Ratelif KS. The NIMH Diagnostic Interview Schedule: its history, characteristics, and validity. *Arch Gen Psychiatry*. 1981;38:381-389.
3. Wittchen HU, Semler G, von Zerssen D. A comparison of two diagnostic methods. *Arch Gen Psychiatry*. 1985;42:677-684.
4. Robins LE, Helzer JE. Diagnosis and clinical assessment: the current state of psychiatric diagnosis. *Annu Rev Psychol*. 1986;37:409-432.
5. Di Nardo PA, O'Brien GT, Barlow DH, Waddell MT, Blanchard EB. Reliability of DSM-III anxiety disorder categories using a new structured interview. *Arch Gen Psychiatry*. 1983;40:1070-1074.
6. Spitzer RL, Williams JB, Gibbon M. *Structured Clinical Interview for DSM-III-R (SCID)*. New York, NY: Biometrics Research Department, New

- York State Psychiatric Institute; 1987.
7. Semler G, Wittchen HU, Joschke K, Zaudig M, von Geiso T, Kaiser S, von Cranach M, Pfister H. Test-retest reliability of a standardized psychiatric interview (DIS/CIDI). *Eur Arch Psychiatry Neurol Sci*. 1987;236:214-222.
8. Burnam NA, Karno M, Hough RL, Escobar JI, Forsythe AB. The Spanish Diagnostic Interview Schedule: reliability and comparison with clinical diagnoses. *Arch Gen Psychiatry*. 1983;40:1189-1196.
9. Wittchen JR. *Wittchen Psychiatric Rating Scales*. New York, NY: Psychological Corp; 1955.
10. Lorr M, Klett CJ, McNair DM. *Syndromes of Psychosis*. Elmsford, NY: Pergamon Press Inc; 1963.
11. Hiller W, Mombour W, Rummler R, Mittelhammer J. Divergence and convergence of diagnoses for depression between ICD-9 and DSM-III-R. *Eur Arch Psychiatry Neurol Sci*. 1988;238:39-46.
12. Hiller W, Zaudig M, von Bose M, Rummler R. Anxiety disorders: a comparison of the ICD-9 and DSM-III-R classification systems. *Acta Psychiatr Scand*. 1989;79:338-347.
13. Hiller W. Alcohol dependence in ICD-9 and DSM-III-R: a comparative polydiagnostic study. *Eur Arch Psychiatry Neurol Sci*. 1989;239:101-108.
14. Hiller W, Zaudig M, von Bose M. The overlap between depression and anxiety on different levels of psychopathology. *J Affective Disord*. 1989;16:223-231.
15. Hiller W, Mombour W, Mittelhammer J. A systematic evaluation of the DSM-III-R criteria for alcohol dependence. *Compr Psychiatry*. 1989;30:403-415.

**Editorial Comment.**—The Editorial Board thought the color-coded, pocket-sized checklists presented by Hiller et al represent a "handy" approach to integrating specified diagnostic criteria into clinical work. While with widespread general use the interrater reliability obtained in their setting may not be as substantial, the format they innovated might readily be incorporated into practical uses. These checklists are not currently available in a published format, but copies of selected diagnoses may be obtained from the authors on special request. —DXF