Diagnostic Criteria for Use in Psychiatric Research

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Diagnostic criteria for 14 psychiatric illnesses (and for secondary depression) along with the validating evidence for these diagnostic categories comes from workers outside our group as well as from those within; it consists of studies of both outpatients and inpatients, of family studies, and of follow-up studies. These criteria are the most efficient currently available; however, it is expected that the criteria be tested and not be considered a final, closed system. It is expected that the criteria will change as various illnesses are studied by different groups. Such criteria provide a framework for comparison of data gathered in different centers, and serve to promote communication between investigators.

THIS communication presents specific diagnostic criteria for those adult psychiatric illnesses that have been sufficiently validated by precise clinical description, follow-up, and family studies to warrant their use in research as well as in clinical practice.

These criteria are not intended as final for any illness. The criteria represent a distillation of our clinical research experience, and of the experiences of others cited in the references. This communication is meant to provide common ground for different research groups so that diagnostic definitions can be emended constructively as further studies are completed. The use of formal diagnostic criteria by a number of groups, regardless of whether their interests are clinical, psychodynamic, pharmacologic, chemical, neuropsychological, or neurophysiological, will result in a solution of the problem of whether patients described by different groups are comparable. This first and crucial taxonomic step should expedite psychiatric investigation.

Diagnosis has functions as important in psychiatry as elsewhere in medicine. Psychiatric diagnoses based on studies of natural history permit prediction of course and outcome, allow planning for both immediate and long-term treatment, and make communication possible between psychiatrists and other physicians, as well as among psychiatrists themselves. Such functions are of obvious importance in research.[1-4]

In contrast to the American Psychiatric Association *Diagnostic and Statistical Manual of Mental Disorders (DSM-II)*, in which the diagnostic classification is based upon the "best clinical judgement and experience" of a committee and its consultants, this communication will present a diagnostic classification validated primarily by follow-up and family studies. The following criteria for establishing diagnostic validity in psychiatric illness have been described elsewhere and may be divided into five phases.[5]

The Five Phases

1. Clinical Description.

In general, the first step is to describe the clinical picture of the disorder. This may be a single striking clinical feature or a combination of clinical features thought to be associated with one another. Race, sex, age at onset, precipitating factors, and other items may be used to define the clinical picture more precisely. The clinical picture thus does not include only symptoms.

2. Laboratory Studies.

Included among laboratory studies are chemical, physiological, radiological, and anatomical (biopsy and autopsy) findings. Certain psychological tests, when shown to be reliable and reproducible, may also be considered laboratory studies in this context. Laboratory findings are generally more reliable, precise, and reproducible than are clinical descriptions. When consistent with a defined clinical picture they permit a more refined classification. Without such a defined clinical picture, their value may be considerably reduced. Unfortunately, consistent and reliable laboratory findings have not yet been demonstrated in the more common psychiatric disorders.

3. Delimitation From Other Disorders.

Since similar clinical features and laboratory findings may be seen in patients suffering from different disorders (eg, cough and blood in the sputum in lobar pneumonia, bronchiectasis, and bronchogenic carcinoma), it is necessary to specify exclusion criteria so that patients with other illnesses are not included in the group to be studied. These criteria should also permit exclusion of borderline cases and doubtful cases (an undiagnosed group) so that the index group may be as homogeneous as possible.

4. Follow-up Study.

The purpose of the follow-up study is to determine whether or not the original patients are suffering from some other defined disorder that could account for the original clinical picture. If they are suffering from another such illness, this finding suggests that the original patients did not comprise a homogeneous group and that it is necessary to modify the diagnostic criteria. In the absence of known etiology or pathogenesis, which is true of the more common psychiatric disorders, marked differences in outcome, such as between complete recovery and chronic illness, suggest that the group is not homogeneous. This latter point is not as compelling in suggesting diagnostic heterogeneity as is the finding of a change in diagnosis. The same illness may have a variable prognosis, but until we know more about the fundamental nature of the common psychiatric illnesses, marked differences in outcome should be regarded as a challenge to the validity of the original diagnosis.

5. Family Study.

Most psychiatric illnesses have been shown to run in families, whether the investigations were designed to study hereditary or environmental causes. Independent of the question of etiology, therefore, the finding of an increased prevalence of the same disor-

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der among close relatives of the original patients strongly indicates that one is dealing with a valid entity.

While no psychiatric syndrome has yet been fully validated by a complete series of steps, a great deal of work has been published indicating that substantial validation is possible. This communication is a summary of that work in the form of specific diagnostic criteria. The studies of validation for each illness are cited. In addition, we in this department have carried out a study of interrater reliability and validation of reliability with an 18-month follow-up study of 314 psychiatric emergency room patients (to be published) as well as a seven-year follow-up study of 87 psychiatric inpatients (to be published), each of whom was interviewed personally and systematically. There were four different raters in the emergency room study. Agreement ranged from 86% to 95% about diagnosis with diagnostic criteria similar to those outlined in this report. There were two different raters in the inpatient study; reliability between those raters was 92%. In the emergency room study and in the inpatient study, validity, as determined by correctly predicting diagnosis at follow-up by criteria such as those of this report, was 93% and 92%, respectively.

Not only are specific criteria necessary for each diagnosis, but criteria are also needed for scoring individual symptoms as positive. The following criteria have been used for this purpose. (1) The patient saw a physician (includes chiropractor, naturopath, healer, etc) for the symptom. (2) The symptom was disabling enough to interfere with the patient's usual routine. (3) The symptom led the patient to take medication on more than one occasion. (4) The examining physician believes that, because of its clinical importance, the symptom should be scored positive even though the aforementioned criteria were not present; eg, a spell of blindness lasting a few minutes that the patient minimizes, or hallucinations or delusions which the patient does not recognize as pathological, and which did not disrupt the patient's usual routine. (5) Symptoms are *not* scored positive if they can be explained by a known medical disease of the patient (this does not apply to organic brain syndrome and mental retardation).

It will be apparent below that certain diagnoses are mutually exclusive (primary affective disorders and schizophrenia), while others may be made in the same patient (antisocial personality disorder with alcoholism or drug dependency; hysteria or anxiety neurosis with secondary depression). More work will be necessary before the full significance of various diagnostic combinations becomes evident. It should also be clear that any of the diagnoses may be further subdivided according to various clinical, demographic, or other variables. For example, primary depression may be divided into psychotic and nonpsychotic, bipolar and unipolar, early onset and late onset. Similarly, schizophrenia may be subdivided into paranoid, hebephrenic, and catatonic subtypes.

Diagnostic Criteria

Primary Affective Disorders.[6-16] —*Depression.*—For a diagnosis of depression, *A* through *C* are required.

A. Dysphoric mood characterized by symptoms such as the following: depressed, sad, blue, despondent, hopeless, "down in the dumps," irritable, fearful, worried, or discouraged.

B. At least five of the following criteria are required for "definite" depression; four are required for "probable" depression. (1) Poor appetite or weight loss (positive if 2 lb a week or 10 lb or more a year when not dieting). (2) Sleep difficulty (include insomnia or hypersomnia). (3) Loss of energy, eg, fatigability, tiredness. (4) Agitation or retardation. (5) Loss of interest in usual activities, or decrease in sexual drive. (6) Feelings of self-reproach or guilt (either may be delusional). (7) Complaints of or actually diminished ability to think or concentrate, such as slow thinking or mixed-up thoughts. (8) Recurrent thoughts of death or suicide, including thoughts of wishing to be dead.

C. A psychiatric illness lasting at least one month with no preexisting psychiatric conditions such as schizophrenia, anxiety neurosis, phobic neurosis, obsessive compulsive neurosis, hysteria, alcoholism, drug dependency, antisocial personality, homosexuality and other sexual deviations, mental retardation, or organic brain syndrome. (Patients with life-threatening or incapacitating medical illness preceding and paralleling the depression do not receive the diagnosis of primary depression.)

Mania.—For a diagnosis of mania, *A* through *C* are required.

A. Euphoria or irritability.

B. At least three of the following symptom categories must also be present. (1) Hyperactivity (includes motor, social, and sexual activity). (2) Push of speech (pressure to keep talking). (3) Flight of ideas (racing thoughts). (4) Grandiosity (may be delusional). (5) Decreased sleep. (6) Distractibility.

C. A psychiatric illness lasting at least two weeks with no preexisting psychiatric conditions such as schizophrenia, anxiety neurosis, phobic neurosis, obsessive compulsive neurosis, hysteria, alcoholism, drug dependency, antisocial personality, homosexuality and other sexual deviations, mental retardation, or organic brain syndrome.

There are patients who fulfill the above criteria, but also have a massive or peculiar alteration of perception and thinking as a major manifestation of their illness. These patients are considered by some to have a "schizophreniform"

or "atypical" psychosis, ie, an illness of acute onset (less than six) months), in a patient with good premorbid psychosocial adjustment, with prominent delusions and hallucinations in addition to the affective symptoms. Clinical studies of this disorder indicate that from 60% to 90% of cases have a remitting illness and return to premorbid levels of psychosocial adjustment with a longitudinal course consistent with primary affective disorder.[17-22] The remaining 10% to 40% have a chronic illness consistent with schizophrenia. These patients are, therefore, classified as having an undiagnosed psychiatric disorder and are not included in either primary affective disorder or schizophrenia.

Secondary Affective Disorders.—Secondary depression, "definite" or "probable," is defined in the same way as primary depression, except that it occurs with one of the following: (1) A preexisting nonaffective psychiatric illness which may or may not still be present. (2) A life-threatening or incapacitating medical illness which precedes and parallels the symptoms of depression.

Schizophrenia.[17-31]—For a diagnosis of schizophrenia *A* through *C* are required.

A. Both of the following are necessary: (1) A chronic illness with at least six months of symptoms prior to the index evaluation without return to the premorbid level of psychosocial adjustment. (2) Absence of a period of depressive or manic symptoms sufficient to qualify for affective disorder or probable affective disorder.

B. The patient must have at least one of the following: (1) Delusions or hallucinations without significant perplexity or disorientation associated with them. (2) Verbal production that makes communication difficult because of a lack of logical or understandable organization. (In the presence of muteness the diagnostic decision must be deferred.)

(We recognize that many patients with schizophrenia have a characteristic blunted or inappropriate affect; however, when it occurs in mild form, interrater agrement is difficult to achieve. We believe that, on the basis of presently available information, blunted affect occurs rarely or not at all in the absence of B-1 or B-2.)

C. At least three of the following manifestations must be present for a diagnosis of "definite" schizophrenia, and two for a diagnosis of "probable" schizophrenia. (1) Single. (2) Poor premorbid social adjustment or work history. (3) Family history of schizophrenia. (4) Absence of alcoholism or drug abuse within one year of onset of psychosis. (5) Onset of illness prior to age 40.

Anxiety Neurosis.[32]—For a diagnosis of anxiety neurosis, *A* through *D* are required.

A. The following manifestations must be present: (1) Age of onset prior to 40. (2) Chronic nervousness with recurrent anxiety attacks manifested by apprehension, fearfulness, or sense of impending doom, with at least four of the following symptoms present during the majority of attacks: (*a*) dyspnea, (*b*) palpitations, (*c*) chest pain or discomfort, (*d*) choking or smothering sensation, (*e*) dizziness and (*f*) paresthesias.

B. The anxiety attacks are essential to the diagnosis and must occur at times other than marked physical exertion or life-threatening situations, and in the absence of medical illness that *could* account for symptoms of anxiety. There must have been at least six anxiety attacks, each separated by at least a week from the others.

C. In the presence of other psychiatric illness(es) this diagnosis is made *only* if the criteria described in *A* and *B* antedate the onset of the other psychiatric illness by at least two years.

D. The diagnosis of probable anxiety neurosis is made when at least two symptoms listed in A-2 are present, and the other criteria are fulfilled.

Obsessive Compulsive Neurosis.[33,34]—For a diagnosis of obsessive compulsive neurosis, both *A* and *B* are required.

A. Manifestations 1 and 2 are required. (1) Obsessions or compulsions are the dominant symptoms. They are defined as recurrent or persistent ideas, thoughts, images, feelings, impulses, or movements, which must be accompanied by a sense of subjective compulsion and a desire to resist the event, the event being recognized by the individual as foreign to his personality or nature, ie, "ego-alien." (2) Age of onset prior to 40.

B. Patients with primary or probable primary affective disorder, or with schizophrenia or probable schizophrenia, who manifest obsessive-compulsive features, do not receive the additional diagnosis of obsessive compulsive neurosis.

Phobic Neurosis.[35,36]—For a diagnosis of phobic neurosis, both *A* and *B* are required.

A. Manifestations 1 and 2 are required. (1) Phobias are the dominant symptoms. They are defined as persistent and recurring fears which the patient tries to resist or avoid and at the same time considers unreasonable. (2) Age of onset prior to 40.

B. Symptoms of anxiety, tension, nervousness, and depression may accompany the phobias; however, patients with another definable psychiatric illness should not receive the additional diagnosis of phobic neurosis.

Hysteria.[37-39]—For a diagnosis of hysteria, both *A* and *B* are required.

A. A chronic or recurrent illness beginning before age 30, presenting with a dramatic, vague, or complicated medical history.

B. The patient must report at least 25 medically unexplained symptoms for a "definite" diagnosis and 20 to 24 symptons for a "probable" diagnosis in at least nine of the

following groups.

Group 1

Headaches
Sickly majority of life

Group 2

Blindness
Paralysis
Anesthesia
Aphonia
Fits or convulsions
Unconsciousness
Amnesia
Deafness
Hallucinations
Urinary retention
Trouble walking
Other unexplained "neurological" symptoms

Group 3

Fatigue
Lump in throat
Fainting spells
Visual blurring
Weakness
Dysuria

Group 4

Breathing difficulty
Palpitation
Anxiety attacks
Chest pain
Dizziness

Group 5

Anorexia
Weight loss
Marked fluctuations in weight
Nausea
Abdominal bloating
Food intolerances
Diarrhea
Constipation

Group 6

Abdominal pain
Vomiting

Group 7

Dysmenorrhea
Menstrual irregularity
Amenorrhea
Excessive bleeding

Group 8

Sexual indifference
Frigidity
Dyspareunia
Other sexual difficulties
Vomiting all nine months of pregnancy at least once, or hospitalization for hypermesis gravidarum

Group 9

Back pain
Joint pain
Extremity pain
Burning pains of the sexual organs, mouth, or rectum
Other bodily pains

Group 10

Nervousness
Fears
Depressed feelings
Need to quit working, or inability to carry on regular duties because of feeling sick
Crying easily
Feeling life was hopeless
Thinking a good deal about dying
Wanting to die
Thinking about suicide
Suicide attempts

Antisocial Personality Disorder.[40,41]—A chronic or recurrent disorder with the appearance of at least one of the following manifestations before age 15. A minimum of five manifestations are required for a "definite" diagnosis, and four are required for a "probable" diagnosis.

A. School problems as manifested by any of the following: truancy (positive if more than once per year except for the last year in school), suspension, expulsion, or fighting that leads to trouble with teachers or principals.

B. Running away from home overnight while living in parental home.

C. Troubles with the police as manifested by any of the following: two or more arrests for nontraffic offenses, four or more arrests (including tickets only) for moving traffic offenses, or at least one felony conviction.

D. Poor work history as manifested by being fired, quitting without another job to go to, or frequent job changes not accounted for by normal seasonal or economic fluctuations.

E. Marital difficulties manifested by any of the following: deserting family, two or more divorces, frequent separations due to marital discord, recurrent infidelity, recurrent physical attacks upon spouse, or being suspected of battering a child.

F. Repeated outbursts of rage or fighting not on the school premises: if prior to age 18 this must occur at least twice and lead to difficulty with adults; after age 18 this must occur at least twice, or if a weapon (eg, club, knife, or gun) is used, only once is enough to score this category positive.

G. Sexual problems as manifested by any of the following: prostitution (includes both heterosexual and homosexual activity), pimping, more than one episode of venereal disease, or flagrant promiscuity.

H. Vagrancy or wanderlust, eg, at least several months of wandering from place to place with no prearranged plans.

I. Persistent and repeated lying, or using an alias.

Alcoholism.[42-45]—A "definite" diagnosis is made when symptoms occur in at least three of the four following groups. A "probable" diagnosis is made when symptoms occur in only two groups.

A. Group One: (1) Any manifestation of alcohol withdrawal such as tremulousness, convulsions, hallucinations, or delirium, (2) History of medical complications, eg, cirrhosis, gastritis, pancreatitis, myopathy, polyneuropathy, Wernicke-Korsakoff's syndrome. (3) Alcoholic blackouts, ie, amnesic episodes during heavy drinking not accounted for by head trauma. (4) Alcoholic binges or benders (48 hours or more of drinking associated with default of usual obligations: must have occurred more than once to be scored as positive.)

B. Group Two: (1) Patient has not been able to stop drinking when he wanted to do so. (2) Patient has tried to control drinking by allowing himself to drink only under certain circumstances, such as only after 5:00 PM, only on weekends, or only with other people. (3) Drinking before breakfast. (4) Drinking nonbeverage forms of alcohol, eg, hair oil, mouthwash, Sterno, etc.

C. Group Three: (1) Arrests for drinking. (2) Traffic difficulties associated with drinking. (3) Trouble at work because of drinking. (4) Fighting associated with drinking.

D. Group Four: (1) Patient thinks he drinks too much. (2) Family objects to his drinking. (3) Loss of friends because of drinking. (4) Other people object to his drinking. (5) Feels guilty about his drinking.

Drug Dependence (Excluding Alcoholism.[46]—This diagnosis is made when any one of the following are present. The drug type is specified according to *DSM-II*.

A. History of withdrawal symptoms.

B. Hospitalization for drug abuse or its complications.

C. Indiscriminate prolonged use of central nervous system active drugs.

Mental Retardation.—This disorder, which has different causes, is described both in terms of intellectual impairment as well as social maladaptation as described in *DSM-II*. In view of the fact that the social adaptation scales have not been standardized to the level of current intelligence tests, only the latter are used in making this diagnosis. The following criteria are used:

A. When the IQ is available from currently acceptable tests, the categories of *DSM-II* are used.

B. In the absence of IQ tests, the following will be accepted as evidence of suspected mental retardation: (1) Despite continued effort an individual fails the same grade two years in succession, or (2) despite continued effort the individual fails to pass the sixth grade by the time he is 16 years old.

(Caution should be used in making the diagnosis of mental retardation in the presence of another psychiatric illness, eg, schizophrenia, severe affective disorders, antisocial personality disorder.)

Organic Brain Syndrome.[47,48]—This diagnosis is made when either criterion *A* or criterion *B* is present.

A. Two of the following manifestations must be present. (In the presence of muteness the diagnosis must be deferred.) (1) Impairment of orientation. (2) Impairment of memory. (3) Deterioration of other intellectual functions.

B. This diagnosis is also made if the patient has at least one manifestation (*A*) in addition to a known probable cause for organic brain syndrome.

Homosexuality.[49-52]—For a diagnosis of homosexuality, *A* through *C* are required.

A. This diagnosis is made when there are persistent homosexual experiences beyond age 18 (equivalent to Kinsey rating 3 to 6).

B. Patients who fulfill the criteria for transsexualism are excluded.

C. Patients who perform homosexual activity only when incarcerated for a period of at least one year without access to members of the opposite sex are excluded.

Transsexualism.[53-55]—In order to receive a "definite" diagnosis of transsexualism, at least four of the five following manifestations must be present with at least one manifestation occurring prior to age 12. A diagnosis of "probable" transsexualism is made when three of the following manifestations are present with at least one occurring prior to age 12.

A. A persistent desire to belong to the opposite sex, with a sense of having been born into the wrong sex.

B. A strong desire to resemble physically the opposite sex by any available means, eg, manner of dress, behavior, hormone therapy, and surgery.

C. A strong desire to be accepted by the community as a member of the opposite sex.

D. A negative feeling about the patient's external genitalia (breasts are included) including attempts at mutilation and a desire for surgery.

E. A negative feeling towards heterosexual activity and a persistent feeling that physical attraction to members of the same sex is not a homosexual orientation.

Anorexia Nervosa.[56-60]—For a diagnosis of anorexia nervosa, *A* through *E* are required.

A. Age of onset prior to 25.

B. Anorexia with accompanying weight loss of at least 25% of original body weight.

C. A distorted, implacable attitude towards eating, food, or weight that overrides hunger, admonitions, reassurance and threats; eg, (1) Denial of illness with a failure to recognize nutritional needs, (2) apparent enjoyment in losing weight with overt manifestation that food refusal is a pleasurable indulgence, (3) a desired body image of extreme thinness with overt evidence that it is rewarding to the patient to achieve and maintain this state, and (4) unusual hoarding or handling of food.

D. No known medical illness that could account for the anorexia and weight loss.

E. No other known psychiatric disorder with particular reference to primary affective disorders, schizophrenia, obsessive-compulsive and phobic neurosis. (The assumption is made that even though it may appear phobic or obsessional, food refusal alone is not sufficient to qualify for obsessive-compulsive or phobic disease.)

F. At least two of the following manifestations. (1) Amenorrhea. (2) Lanugo. (3) Bradycardia (persistent resting pulse of 60 or less) (4) Periods of overactivity. (5) Episodes of bulimia. (6) Vomiting (may be self-induced).

Undiagnosed Psychiatric Illness.—Some patients cannot receive a diagnosis for one or more reasons. Among the more common problems that cause a patient to be considered undiagnosed are the following: (1) cases in which only one illness is suspected but symptoms are minimal. (2) Cases in which more than one psychiatric illness is suspected but symptoms are not sufficient to meet the criteria of any of the possibilities. (3) Cases in which symptoms suggest two or more disorders but in an atypical or confusing

manner. (4) Cases in which the chronology of important symptom clusters cannot be determined. (5) Cases in which it is impossible to obtain the necessary history to establish a definitive diagnosis.

Comment

There are many diagnoses listed in *DSM-II* not considered in this communication because sufficient clinical data for even limited diagnostic validation are not available. A recent attempt to delineate passive-aggressive personality disorder as a separate entity based on cross-sectional and longitudinal data brings to focus some of the problems in diagnostic validation. As the investigators of that study suggested, further studies are needed before the validity of that syndrome is established.[61]

Finally, the criteria presented in this report are "minimal" in two senses: First, all diagnostic criteria are tentative in the sense that they change and become more precise with new data. Second, we have made no effort to subclassify these illnesses. (For example, we have presented criteria to define primary affective disorders, unipolar type, without suggestions for further subdivision into forms of early and late onset, psychotic or nonpsychotic forms, agitated or retarded forms, and so forth. It is clear that primary affective disorder, unipolar type, is a reasonable major classification. The data to support its subclassification are still tentative.) We and other investigators will continue to work toward modification and subclassification. What we now present is our synthesis of existing information, a synthesis based on data rather than opinion or tradition. We hope that such a presentation will help to promote useful communication among investigators.

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