



WORLD HEALTH ORGANIZATION

A Multi-Axial Classification of Child Psychiatric Disorders

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An evaluation of a proposal

by

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GENEVA

1975

ISBN 92 4 154050 8

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ACKNOWLEDGEMENTS

The present study was undertaken and conducted with the support of the World Health Organization, as an activity within the framework of the WHO programme on standardization of psychiatric diagnosis, classification, and statistics.

The 22 participants in the study were: Dr P. Barker, Dr L. Bartlet, Dr A. Bentovim, Dr D. Black, Dr A. Bolton, Dr J. Collins, Dr J. Corbett, Dr C. Dennehey, Dr K. Fraser, Dr E. Frommer, Dr P. Graham, Dr M. Heller, Dr L. Hersov, Dr. B. Kirman, Dr I. Kolvin, Dr J. Lindsey, Dr R. Rodriguez, Dr D. Walk, Dr C. Wardle, Dr W. Warren, Dr C. Williams, and Dr S. Wolff. The authors are deeply grateful to these psychiatrists for their help in planning the study, in the extensive work required for its execution, and in the consideration of the implications of the findings. Many of the suggestions in this report about possible improvements in classifications come from them. However, the authors alone are responsible for any shortcomings there may be.

Introduction

Background

Classification, as a means of ordering information and of grouping phenomena, is basic to all forms of scientific enquiry. This fact was appreciated in medicine over 200 years ago with de Lacroix's classification of diseases (1). Since then a number of further needs have been recognized. First, there was the need for uniformity both in the terms used and in the way they are grouped. William Farr emphasized this requirement in the first annual report of the General Register Office of England and Wales in 1839 (2), and it was implemented some years later in the International List of Causes of Death. Because the requirement of uniformity necessitated international collaboration and agreement it was natural for the League of Nations and later the World Health Organization (WHO) to be entrusted with the task of preparing approved lists of diseases, together with their classifications. This function has been incorporated in the Constitution of WHO (3).

A further need is that classifications should be well designed for the purposes for which they will be used. The International Classification of Diseases (ICD) was originally developed for noting causes of death, and later for providing a single statement of the reasons for admitting inpatients to hospital. The ICD did not correspond well with the kind of statistics required on mental disorders and when, in 1959, Stengel reviewed for WHO the state of psychiatric classification (4), he concluded that the ICD had failed to find general acceptance as far as psychiatry was concerned and that major improvements were necessary. Stengel's analysis of the reasons for this failure and his arguments in favour of action were echoed by the first WHO Scientific Group on Mental Health Research, which in 1964 strongly advocated WHO support for the development of a classification of mental disorders internationally acceptable and capable of uniform application.

The Group's recommendation was incorporated in the first of four inter-related programmes that formed the basis of a 10-year research plan formulated by WHO in the mid 1960s (5, 6). This programme has been primarily concerned with the standardization of psychiatric diagnosis, classification, and statistics with a view to improving the Ninth Revision of the ICD, which is in preparation. One of its main features has been a series of annual international case-history exercises designed to elucidate the sources of diagnostic variations between representative psychiatrists from many different countries. The method and results of these seminars have served to demonstrate clearly that an experimental approach can not only elucidate many of the sources of disagreement that have long bedevilled progress and communication in this sphere but also indicate how closer agreement can be obtained. In this regard, one of

the most important points to emerge has been the need for new schemes of classification based on observation and empirical findings rather than on theoretical models.

It is necessary that classifications should adapt to changing requirements and developing knowledge. When section V of the CID (originally called "Mental, Psychoneurotic and Personality Disorders") was first developed, child psychiatry was in its infancy (7) and no adequate scheme of classification was available. This was still the case in 1960, when the WHO Expert Committee on Mental Health noted both the need for a comprehensive psychiatric classification for childhood and also the lack of such a classification (8). However, that situation has now changed. The third seminar in the WHO programme, which was devoted to child psychiatric disorders, showed that psychiatrists could agree on their classification (9). It was evident that this change would have to be reflected in the Ninth Revision of the ICD but it was equally clear that research would be needed to determine how best this might be done.

The inadequacies of the present ICD (ICD-8)—the Eighth Revision (10)—with respect to mental disorders were underlined in the first seminars in the WHO programme, which was concerned with schizophrenia and related conditions (6). One of the major conclusions reflected the participants' concern regarding the structure of the ICD, and in particular "its inability to provide for the classification of a multifactorial scheme of diagnosis when this is necessary to do justice to a complex clinical situation." Section V (now called "Mental Disorders") contains numerous examples of single rubrics into which heterogeneous types of information have been compressed. Such information may bear on causation (most mental illness is multicausal), premorbid personality, clinical features, or outcome. Logically, some provision should be made for distinguishing between these categories of information by employing some form of "multi-axial" classification for individual conditions. The issue was tackled directly at the third of the WHO seminars, devoted to mental disorders in childhood, which proposed a multi-axial scheme of classification for these disorders (9). In essence, the first axis was intended to cover the clinical psychiatric syndrome, the second to describe the level of intellectual function, and the third to comprise any associated or etiological factors, whether physical or environmental. Subsequently this third axis was split into two (11).

This report describes an attempt by a group of child psychiatrists in the United Kingdom to test and evaluate this scheme.

Multi-axial classification

The desirability of a multi-axial approach to classification has been urged by Essen-Möller in Sweden (12), Helmchen in Germany (36), and Wing in the United Kingdom (13), quite apart from the recommendations made at seminars in the WHO programme. These writers have pointed out that the Eighth Revision of the ICD classifies some psychiatric disorders by symptomatology, some by disease concept, some by etiology, and some by a mixture of all three. This arrangement results in various ambiguities and confusion and it also leads to a loss of important information. Thus, if the case is one of a psychosis associated with brain pathology it is possible to code the type of brain disease but

not the type of psychosis. For planning services it would be important to know whether the psychosis took the form of an acute confusional state, dementia, a paranoid state, or a depressive disorder, but this information would be unobtainable from the ICD coding (293). Furthermore, the grouping together of the brain diseases means that differentiation is lost. Thus, Huntington's chorea and multiple sclerosis both receive the same coding (293.4), although they are quite different diseases with different causes, different prognoses, and different mental complications. It has been urged that mental disorders should be classified according to phenomenology on one axis and that etiology should be dealt with on a separate axis.

The need for a multi-axial classification scheme in child psychiatry arose directly out of the case-history exercises in the WHO programme, with respect to patients who showed a psychiatric disorder as well as mental retardation, or a physical condition in association with either (11). Thus, at the third WHO seminar there was a case of a mentally retarded epileptic girl who in addition had a psychiatric disorder. Participants agreed that it was appropriate to code all three elements (psychosis, intellectual retardation, and epilepsy), but in fact most psychiatrists recorded only one, with a fairly even distribution among the three categories chosen for classification. Similarly, at the fifth seminar there was a case of a mentally retarded child with a severe conduct disorder. More than a third of the participants did not record the conduct disorder in their classification, in spite of the fact that they agreed in discussion that it constituted an important part of the diagnosis.

Of course, the ICD does allow the coding of different elements by the use of multiple categories. Thus, it is quite possible to classify the retarded, epileptic, psychotic child by means of ICD-8 categories 311 (mild mental retardation), 345 (epilepsy), and 295.8 (other psychosis, including childhood schizophrenia). However, there are no rules as to how many categories to use and, as the diagnostic exercise clearly showed, psychiatrists varied in the number of codings they employed. Furthermore, when they chose one they differed in their choice. Additionally, in a number of medical centres the rule is to code only one diagnosis per patient.

The net effect is that when the ICD is employed in the usual way it is not possible to obtain a complete list of all patients with mental retardation, or all with a mental disorder, or all with epilepsy. This is because patients with multiple conditions (a common situation) may have only one condition coded. The fact that a condition is not coded may mean that the condition was not present, that it was present but not thought important, or that it was not coded in spite of being thought important. This has serious implications for both planning services and for research. The multi-axial scheme was designed to remedy these deficiencies.

In fact, it is no more than a logical development of a multi-category scheme (such as the ICD) in which modifications have been introduced specifically to meet these difficulties. To ensure adequate coverage of data and to ensure comparability three rules are required: (1) a uniform number of codings must be made, (2) these codings must always refer to the same elements in diagnosis, and (3) they must always occur in the same order. There is an infinite variety of elements that could be included in such a scheme, but for it to be workable

in practice there must be a quite restricted number of axes. These need to be chosen on the basis of providing unambiguous information of maximum clinical usefulness in the greatest number of cases. With regard to child psychiatric disorders, the axes that were selected referred to the clinical psychiatric syndrome (neurotic disorders, infantile autism, etc.), to the intellectual level (normal, mildly retarded, etc.), to associated medical conditions (cerebral palsy, asthma, etc.), and to psychological or social factors that might be important in etiology. Most of these items are already in the ICD, so that the multi-axial scheme simply regrouped the categories under four broad headings called "axes". For each axis a "no abnormality" coding is provided and psychiatrists have to make some coding on each of the four axes for every patient. This provision ensures that comparable data on the four elements of diagnosis are coded in the same way and in the same order for all cases, so that systematic data retrieval is a straightforward matter.

This type of classification seemed to overcome the limitations of multi-category schemes such as the ICD and its use was urged in all succeeding seminars in the WHO programme. Nevertheless, whatever its theoretical advantages, it required empirical testing in practice. This testing was one of the main purposes of the present study.

Classification of child psychiatric disorders

The codings for the clinical syndromes in child psychiatry on the first axis of the multi-axial scheme were suggested during the course of the third WHO seminar as the basis for developing an adequate classification. In no sense were they intended to constitute a full coverage of the psychiatric disorders met with in childhood. Rather, they were seen as a skeleton to build on. Ten overall categories were provided, only three of them being subdivided (see Annex 1). It was expected that more subdivisions would be added later in the light of further experience and testing (9).

Aims and objectives

The multi-axial scheme for classifying child psychiatric disorders was therefore new in two respects—the provision of categories specifically for children's disorders and the provision of a multi-axial framework. Both elements needed to be systematically evaluated.

With any model of classification there are a series of criteria which must be applied in order to assess its value. These may be summarized as follows:

1. Reliability

Any scheme that is to be useful must be reliable in the sense that different people will use the system to produce the same codings for the same patients, and that any rater will code the same way when confronted with the same material on different occasions. The case-history exercise developed during the seminars (6) has proved to be a valuable method of testing reliability.