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DSM-III in Ethiopia: A Feasibility Study

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Summary. A feasibility study of DSM-III on 40 Ethiopian visitors to a psychiatric outpatient clinic in Addis Ababa was carried out by a Dutch psychiatrist, with three of his Dutch colleagues. In spite of the highly idiosyncratic way in which Ethiopians present their complaints, the diagnostic criteria of DSM-III appeared to be useful to a certain extent. The outcome of an inter-rater reliability study was comparable with that of an American one. The results were congruent for the classes that are rather well-defined in the DSM-III, like the psychotic and affective disorders. This did not apply to the classes of the somatoform and factitious disorders. Possible reasons for this are discussed.

Key words: DSM-III – Ethiopia – Transcultural psychiatry

Introduction

DSM-III (American Psychiatric Association 1980) has been introduced in many countries (Spitzer et al. 1985). It provides a common language for mental health care professionals all over the world. The majority of these professionals presuppose that mental illnesses are universal human conditions (Giel and Harding 1976; Orley and Wing 1979; WHO, 1973a, b), and therefore fit into universal classification systems, such as DSM-III. American professionals have been the main group in charge of drafting the diagnostic criteria for DSM-III. Several trials have been carried out to test its feasibility in other cultures, in general with satisfactory results (Yamamoto and Kang 1983; Ngoma and Pierloot 1983; Shan-Ming et al. 1984; Ben-Tovim 1985; Meggle 1984; Makanjuola 1985). A minority in the psychiatric world is sceptical about the supposed universality of mental disorders and the use of world-wide classification systems. This group believes in the cultural specificity of mental disorders (Ebigbo 1982; Harris 1981; Prince 1983). Prince, for example, states: „African syndromes are different from European ones and should not be forced into European procrustean beds". A third group has an intermediate opinion. They welcome DSM-III, but with some reservations (Yamamoto and Kang 1983; Wig 1983; Kleinman 1982; Goodman et al. 1984; Shrinivasah and Shrinivasa Murthy 1986). According to them, western culture has put too pronounced a stamp on this classification system: all the syndromes which are less well-known in the western world are together under the heading culture-bound syndromes, whereas syndromes like agoraphobia, which appears to be absent in non-western cultures (Wig 1983), are described in detail.

The aim of this study was to test the feasibility of using the DSM-III in Ethiopia. An inter-rater reliability study was included in this investigation. Two case histories will illustrate some difficulties in the application of the criteria.

Setting

Ethiopia is a vast East African country with approximately 42 million inhabitants. It is one of the poorest countries in the world. Its mental health care system is severely under-developed compared to its neighbouring countries. In 1985, only two Ethiopian psychiatrists and five from abroad were working in the mental health care field. The only psychiatric facilities are two outdated psychiatric hospitals with a total number of about 500 beds, and three psychiatric

outpatient clinics. Training programme for the integration of mental health care into primary care, such as those propagated by WHO, (WHO 1975) for developing countries in particular, are in preparation, but have not yet been carried out. Consequently, this medical specialism is unknown to the majority of Ethiopians.

The study was undertaken by a Dutch psychiatrist (FK) who worked in Ethiopia for 2 years, and a Ethiopian medical student (BD), familiar with psychiatry. It was carried out in the outpatient clinic of St. Paul's Hospital in Addis Ababa. Of the patients coming to this hospital, 90% come on their own initiative, sometimes after travelling several days. At the gate of the hospital a nurse asks them a few questions about their problems and selects them to be sent to one of the specialists. People with "complaints above the neck" are usually sent to the ENT specialist, the eye specialist or the psychiatrist. Thus most of these patients are brought into contact with a psychiatrist by chance, and possess no prior knowledge of his profession.

Method

In 1984, 40 randomly selected visitors to the psychiatric outpatient clinic were included in the study. The following data were recorded:

- some social-demographic data;
- an extensive description of the complaints or problems of the respondent, recorded in his own words as literally as possible;
- data resulting from a complementary psychiatric history and examination;
- results of a somato-neurological examination;
- the number of prior consultations and the kind of therapeutic interventions for the present complaints in the professional, traditional and popular sector (Kleinman 1980).

A diagnosis was made according to DSM-III on 5 axes. Because half of the respondents could be seen only once, the investigator re-checked the completeness of his data by filling in a self-designed check list in which the key symptoms of the diagnostic classes on axis 1 were ranged in order of importance before dismissing the patient. Missing data could therefore be detected and be asked for while the respondent was still available. Each interview took about 3 h.

An inter-rater reliability study was carried out. All the recorded data in their original format except the check list were submitted to three Dutch psychiatrists (W vd B, RG, CS) for their independent diagnostic opinion in the format of DSM-III. Two methods of comparing the inter-rater agreement were utilized. Firstly the agreement between the original diagnoses of the interviewer and those of the three independent raters was calculated. At a later time a common principal diagnosis for each case was established upon which all four raters commonly agreed after discussion in detail. Secondly the agreement between the common principal diagnoses and the original diagnoses of each of the four independent raters was assessed.

In the presentation of this study only the diagnoses on axis 1 are included. The ratings on axes 2, 4 and 5 were too speculative because the raters lacked sufficient knowledge of the cultural background of the respondents as will be illustrated in two examples. Some of the problems in communication in this Ethiopian transcultural psychiatric study have been discussed in a separate paper (Kortmann 1987).

Results

We examined 24 male and 16 female respondents; 61% of the respondents were 30 years old or younger. Almost half of them came from outside Addis Ababa, from distances as far as 600 miles away. Half of the group had unskilled work, such as engagement as a daily labourer, factory worker or cleaner. Their familiarity with western concepts varied. No one ever visited a psychiatric service. One-fifth of the respondents were illiterate. Our samples did not differ significantly with respect to these characteristics from 720 consecutive patients who visited this psychiatric outpatient clinic in the previous year. The common principal diagnoses after discussion, clustered in nine classes, are presented in Table 1. It shows that 31 respondents were suffering from a mental disorder and 9 were not. The latter received a V code or an Additional code (American Psychiatric Association 1980). The most frequent common principal diagnosis was that of an affective disorder. One patient within this class suffered from a major depression with psychotic features. Five other patients were also psychotic (class 1 and 2), three of them on an organic and two on a non-organic basis.

The simultaneous inter-rater agreement for the original independent diagnoses of the four raters in the five-digit code, expressed in the kappa coefficient, an index in which a correction is made for agreement by chance, attained a value of 0.40. The correspondence between the diagnostic opinions of each of the four raters and the common principal diagnoses after discussion reached a kappa value of 0.69. The simultaneous inter-rater agreement of the four raters on the nine classes of common principal

Table 1. Common principal diagnoses in DSM-III codes, clustered in nine classes, and the simultaneous agreement of each of the four raters on these classes

Class	*n*	Kappa
1. Organic psychoses 293.81; 293.82; 298.30	3	0.50
2. Non-organic, non-affective psychoses 298.30; 295.14	2	0.53
3. Affective disorders 296.22 (3×); 296.23 (4×); 296.24; 296.26; 300.40 (4×)	13	0.78
4. Somatoform disorders 307.80 (3×); 300.11 (2×); 300.81; 300.70 (2×)	8	0.14
5. Factitious disorders 301.51 (2×)	2	0.00
6. Other disorders 300.60; 309.24; 309.81	3	0.57
7. Malingering V65.20 (2×)	2	0.00
8. Other conditions V62.30 (3×); V62.89	4	0.00
9. No diagnoses V71.09 (3×)	3	0.00 0.00

diagnoses is also presented in Table 1. It shows that there was no inter-rater agreement in the classes of conditions that do not represent mental illness. The same was true for the class of factitious disorders. The agreement for the other classes was moderate or substantial (Landis and Koch 1977) except for the somatoform disorders.

Examples

This trial of DSM-III was carried out in a non-western culture by a western psychiatrist, assisted by an Ethiopian medical student. Unfortunately neither of the two Ethiopian psychiatrists participated. It is difficult for a Dutch psychiatrist to diagnose Ethiopian patients because of the gap between their idiosyncratic complaints and the symptoms of illness in which a western trained clinician is interested. The following examples may illustrate this.

- "A 37-year-old farmer's wife suffered from itching sensations in her head. She felt as if flies were flying in her head. The patient attributed her illness to bats, which had fluttered around her head while she was gathering wood – according to the traditional beliefs in her neighbourhood, a definite cause of an illness above the neck. Sometimes the itching sensations were so terrible that she scratched her head and face until it became severely swollen. She had also cauterized her head and neck several times to get rid of this itching. She showed us several scars from the burns. She sometimes also heard a murmuring of voices. She tried in vain to discover where these voices came from. They did not bother her too much, however, because this had already been going on for 10 years. She assured us that she did not have any other problem. The itching sensations were her reason for coming to the clinic."

Later on in the interview, when we inquired more specifically about symptoms with which we were more familiar, we learned that for quite some time this woman stayed in bed almost all day, hardly ate, awoke too early in the morning and could not get back to sleep and felt worthless. Applying DSM-III, we made the diagnosis dysthymic disorder (300.40), but we had to ignore almost all the spontaneous complaints. What those overwhelming itching sensations should contribute to our diagnostic work is still an open question. We prescribed antidepressants and asked her to come back in 1 week. When she returned, she looked visibly relieved and stated that this was so. In answer to our open-ended question as to exactly what had improved in her, she said that the itching sensations had disappeared almost completely. She did not, however, spontaneously mention anything about relief of the symptoms we detected. The question thus once more arises concerning the extent to which mental illnesses are universal phenomena and the extent to which they are culture-bound. In other words, is DSM-III universally applicable or does it need cultural adjustment?
Another example shows some other difficulties in the application of DSM-III criteria in the Ethiopian culture.

- "A 27-year-old soldier was strongly convinced that he suffered from a serious illness in his abdomen, supposedly due to the presence of grasshoppers in his body. He heard them making noises very clearly. The patient had consulted traditional healers twice. One had affirmed the grasshopper diagnosis by removing some of these animals from his stool".

Strictly according to DSM-III he suffered from a mono-symptomatic delusion that fits into the class of atypical psychosis (298.90). Arguing against the psychotic character of the illness was the fact that his parents and brothers, all illiterate farmers, believed that the patient was right in his diagnostic opinion. Thus his conviction looked more like a traditional superstition than a psychotic condition. However, some of his fellow soldiers laughed at him; they knew that traditional healers sometimes misled their clients by putting these animals in the stools before "find-

ing" them. The patient was also familiar with this opinion but in doubt about its applicability to him. We finally decided that the diagnosis hypochondriasis (300.70) was the most appropriate, because of the overwhelming extent to which the patient worried about his physical condition. We do realize, however, that this patient did not meet completely the DSM-III criteria for this class, because the manual says that the unrealistic belief persists despite medical reassurance. In this case the proof of the traditional healer did not reassure the patient but severely increased his fear. He worried that some of the grasshoppers may have failed to come out. Additionally, he had visited two western doctors who gave him a double-bind message. On the one hand they had tried to reassure him, but on the other hand they had prescribed some medicine. The latter did not reassure him. It confirmed his belief that there still must be something wrong in his body – otherwise they would not have given him the drugs.

Discussion

The results of our study show that DSM-III is a feasible instrument for western psychiatrists to be used in the Ethiopian culture. We encountered some difficulties but these did not appear to be insuperable. This conclusion would be more valid if the two Ethiopian psychiatrists and several foreign psychiatrists, practicing in Ethiopia, had examined the same patients independently. Lack of manpower prevented us carrying out such a design. The simultaneous inter-rater agreement on the original five-digit diagnosis of each of the four raters on axis 1 reached an overall kappa coefficient of 0.40, the correspondence between the diagnostic opinions of each of them and the common agreed principal diagnoses reached a kappa coefficient of 0.69. These values were rather low compared to an American reliability study on DSM-III (Spitzer et al. 1979) which reached an overall value of 0.78 in a joint interview and 0.66 in a test-retest method. Some differences in the set-up of the studies may have contributed to the difference in the coefficients of agreement. In the American study the agreement was calculated for major three-digit classes, encompassing several diagnoses, whereas highly elaborated five-digit ones were compared in our investigation. In the American study, a pair-wise agreement between only two judges was calculated, whereas in the Ethiopian study a simultaneous agreement was assessed among four raters, of whom three could only rely upon written reports of the interviews. And finally, patient and raters in the latter study had entirely divergent cultural backgrounds. After clustering the individual diagnoses into broader classes, the kappa coefficients of the first three classes of our study rose to values comparable to those of the American study, especially if all our ratings of the psychotic disorders (class 1 and 2) were compared simultaneously (kappa 0.87) with the ratings of Spitzer.

For the classes of somatoform and factitious disorders in our study there was hardly any or no inter-rater agreement. The same was true for the conditions that are not considered to be a mental disorder. A reason for this absence on the conditions not classified as mental illnesses may be due to their lack of well-defined criteria in DSM-III. Almost one-fourth of our respondents belonged to these conditions another probable reason for the low value of the overall kappacoefficient. To a lesser extent, the absence of well-defined criteria may also account for the lower agreement in the class of the factitious disorders. A reason for the low inter-rater agreement for the somatoform disorders is not so obvious. It may be due to the broad variety of somatic complaints that Ethiopians usually present when seeing a doctor. In the discussion on the common diagnosis it appeared that some raters had been impressed by the large number of somatic complaints, while others had attached little significance to them – regarding them as merely a culturally determined way of seeking help.

In conclusion, this study shows that DSM-III is a feasible instrument in Ethiopia for use by professionals with training in psychiatry. The difference between the idiosyncratic complaints of many Ethiopian patients and the symptoms that psychiatrists consider to be significant may severely confuse these medical specialists. But the gap between these two participants in the process of diagnosing appears to be bridgeable, even though adjustments are highly recommanded (Wig 1983). We did not face any case that ultimately could not be classified in DSM-III. The results of this study support the criticism that the diagnostic descriptions of DSM-III are western culture-specific, especially for the non-psychotic and non-affective disorders. It illustrates the limits of the usefulness of a classification system of mental disorders based upon western concepts applied in a non-western culture.

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