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The Applicability of the Foulds and Bedford Hierarchy Model to Mania and Hypomania

By V. E. BAGSHAW and F. M. McPHERSON

SUMMARY A group of 30 manic and hypomanic patients was assessed on the Delusions-Symptoms-States Inventory and did not appear to conform well to Foulds' and Bedford's hierarchy model. Failure to fit the hierarchy was caused by lack of scores in the Neurotic Symptom Class. The relationship between delusions of Grandeur and state of Elation, which was found to be inclusive and non-reflexive, did, however, support the hierarchy model.

Introduction

Foulds and Bedford (1975) have proposed a hierarchy model of personal illness, in which there are four classes of illness, arranged in an ascending order, according to the extent to which the patient is unable to maintain mutual, personal relationships. The classes are: Class 1, Dysthymic States, which comprises the three subgroups of Anxiety, Depression and Elation; Class 2, Neurotic Symptoms, which comprises the five subgroups of Conversion, Dissociation, Phobia, Compulsion and Rumination; Class 3, Integrated Delusions, which comprises three subgroups, i.e. delusions of Grandeur, of Persecution and of Contrition; and Class 4, Delusions of Disintegration, which is not subdivided.

Foulds and Bedford postulate that the relationship between the classes is inclusive and non-reflexive. Thus, patients with Delusions of Disintegration (Class 4) would be expected also to have Integrated Delusions (Class 3), Symptoms (Class 2) and States (Class 1). On the other hand, patients with, for example, a state of Anxiety (Class 1) would not necessarily be expected to show Symptoms (Class 2) or Delusions (Class 3 and/or 4). There are therefore five patterns of signs and symptoms which are compatible with the hierarchy model. These are (where 1 indicates that the patient has, and 0 that he has not, signs or symptoms of that class).

All other patterns are incompatible with the model, e.g. 1 0 1 0 in which the patient has Integrated Delusions and a Dysthymic State but no Symptoms. Foulds and Bedford (1977) have developed a self-report questionnaire, the Delusions-Symptoms-States-Inventory (DSSI), to assess the presence of personal illness according to their model. Studies of general psychiatric in-patients and out-patients (Foulds and Bedford, 1975; McPherson *et al*, 1977) and of depressive patients (Bagshaw, 1977), employing the DSSI, found that over 90 per cent had patterns of signs and symptoms which were compatible with the model.

	Class			
Possible patterns	1	2	3	4
Pattern 1	1	1	1	1
Pattern 2	1	1	1	0
Pattern 3	1	1	0	0
Pattern 4	1	0	0	0
Pattern 5	0	0	0	0

The main aim of the present study is to test the model with a different sample—patients who had been diagnosed clinically as manic or hypomanic—to see whether a comparable proportion of them also fit the hierarchy.

A second aim of the study is to see whether the relationship between state of Elation (representing hypomania) and delusions of Grandeur (representing mania) is inclusive and non-reflexive in character, as predicted by the model. Foulds and Bedford (1977) found in

their sample of 480 general psychiatric patients that 60 per cent of those scoring above the cut-off point of 4 on delusions of Grandeur (dG) reported states of Elation (sE), whereas only 24 per cent of those scoring 4+ on state of Elation reported delusions of Grandeur. These results lend some support to their claim, but are not conclusive because Foulds and Bedford included all patients scoring 4+ on delusions of Grandeur and/or state of Elation, rather than only those whose final DSSI diagnosis was dG or sE.

Method

Subjects

The group comprised 30 in-patients from three psychiatric hospitals. (1) All patients had, in the opinion of their consultant psychiatrists, a primary diagnosis of mania (N = 6), hypomania (N = 20) or mixed affective state with hypomania predominating at the time of testing (N = 4). (2) All were aged 21 to 69 years with the exception of two adolescents aged 14 and 16 years and one patient aged 87 years. It was decided to include these three patients, who were judged to understand the questions and were capable of completing the questionnaire, because of the difficulty in finding enough patients with this diagnosis. (3) All scored 14 or more on the Mill Hill Synonyms Selection Test. (4) All were testable and co-operative. Nearly all patients were tested within one week of admission or of onset of manic/hypomanic symptoms. Patients were given the questionnaire individually and it was usually completed in the presence of the investigator.

Questionnaire

The DSSI consists of 12 sets of seven items each corresponding to the Classes and their constituent groups. Items answered 'False' always score 0, while 'True' items are assigned scores of 1, 2 or 3. For most items in Classes 1 (Dysthymic States) and 2 (Neurotic Symptoms), the score depends on severity of distress, while in the case of state of Elation items, it depends on frequency, i.e. *seldom*, *often*, or *nearly always*, since it would be inappropriate to ask how distressful it is to be 'on top of the world', etc. In the case of items in Classes 3 (Integrated Delusions) and 4 (Delusions of Disintegration), the score depends on degree of conviction, i.e. *not very sure*, *fairly sure*, *certain*. Those who score 4 or more on any set are allocated to that group, and each person is assigned to the class highest in the hierarchy of which he is a member.

Results and Discussion

Of the 30 patients, 22 (73 per cent) had patterns of signs and symptoms which were compatible with the hierarchy model. Of the remainder, seven (23 per cent of the total and 88 per cent of those who did not conform) had similar incompatible patterns, 1 0 1 1 or 1 0 1 0; that is, they had delusions (Classes 3 and 4) and states (Class 1), but no Symptoms (Class 2).

In a previous study of depressed patients, Bagshaw (1977) found that this was also the main reason for failure to fit the model, though among the depressed patients failure was much less common (8 per cent). The much higher failure rate in the present sample might reflect the inappropriateness of the DSSI, or any other self-report inventory, when used with manic and hypomanic patients, who often lack insight and are unable to perceive accurately their own signs and symptoms (e.g. Platman *et al*, 1969; Loudon *et al*, 1977). Moreover, for a symptom (Class 2) item to be scored, the DSSI requires not only that the patient should report the abnormal behaviour patterns or thoughts but also that he should indicate that he finds them distressing. Ten (33 per cent) of the total group, including four of the seven patients who failed to conform due to lack of symptoms, had, in fact, among them reported 23 symptoms and seven states but had denied that they were distressed by them. The items were therefore not scored. If they had been, three of the four non-conformers would have conformed to the model, increasing the total number of patients doing so to 25 (83 per cent). However, this is still some 10 per cent below the proportion found in previous studies of other types of patient, and the present findings provide little support for the hierarchy model.

However, some support for the model is found in the specific relationship between state of Elation and delusions of Grandeur. In the DSSI, state of Elation items in Class 1 and delusions of Grandeur items in Class 3 are

representative of the clinical syndromes of hypomania and mania, respectively. Eight patients obtained a DSSI diagnosis of state of Elation (sE) and four obtained a diagnosis of delusions of Grandeur (dG). These 12 patients illustrate the inclusive, non-reflexive, relationship between sE and dG which the model predicts: all four of the dG patients also had sE, whereas of the 12 with sE, only four had dG.

Further, in addition to the four patients with diagnoses of delusions of Grandeur (dG), there were another five who, though their DSSI diagnosis was delusions of Disintegration (Class 4), had higher scores in dG than in any of their Class 3 subgroups; similarly, a total of 21 patients had higher scores in state of Elation than in their other Class 1 subgroups—the 8 with a diagnosis of sE and 13 others whose diagnosis was one or other of the Class 2, 3 or 4 subgroups. These nine 'dG primary' and 21 'sE primary' patients also illustrate the inclusive, non-reflective, relationship between sE and dG: whereas all nine 'dG primary' patients had sE, only nine of the 21 'sE primary' patients had dG.

Although the main aim of this study was not to compare clinical diagnosis and DSSI diagnosis, it should be noted that agreement was low. Whereas all 30 patients had a clinical diagnosis of hypomania or mania, only 12 had a *DSSI* diagnosis of sE of dG (the other DSSI diagnoses being: Delusions of Disintegration—7; delusions of Persecution—2; Ruminations—2; a further seven patients admitted to no states, symptoms or delusions). Those six patients diagnosed as 'manic' showed the greatest agreement with the DSSI diagnosis, with 67 per cent of them having final DSSI 'diagnoses' of state of Elation (sE) or delusions of Grandeur (dG); only 35 per cent and 25 per cent respectively of the 'hypomanic' and 'mixed affective states' had DSSI 'diagnoses' of sE or dG. On the other hand, as noted above, although only eight patients had a DSSI diagnosis of sE, 21 of the 23 who admitted to any Class 1 states had higher scores on sE than on either sD or sA, and all 23 of them reported at least one sE symptom. Similarly, although only four patients had a DSSI diagnosis of dG, nine of the 12 patients who admitted to any Class 3 delusions had higher scores on dG than on either dP or dC ($P < \cdot 005$), and a total of eleven patients admitted to at least one delusion of Grandeur.

In conclusion, therefore, the specific relationship between state of Elation and delusions of Grandeur is as predicted by the Foulds and Bedford model; however, the overall results, with only 73 per cent of the patients having one or other of the five predicted patterns of signs and symptoms, provide little support for the model. It may be that the model does not apply to hypomania and mania; however, the results may also reflect the inappropriateness of the DSSI, and of any other self-report questionnaire, for the assessment of hypomanic and manic patients. A further test of the model, employing more suitable methods of assessment, is clearly required.

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V. E. Bagshaw, M.A., M.Phil., *Tayside Area Clinical Psychology Department; now at Department of Psychiatry, Western General Hospital, Crewe Road, Edinburgh EH4 2XU*

F. M. McPherson, M.A., Ph.D., Dip.Clin.Psychol., *Tayside Area Clinical Psychology Department, Royal Dundee Liff Hospital, Dundee DD2 5NF, Scotland*

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