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Differences Between Physically-minded and Psychologically-minded Medical Practitioners

By H. J. WALTON

Concern is now general (College of General Practitioners, 1958; Hill, 1960; School of Medicine and Human Biology, 1963) that doctors are inadequately trained for a number of the demands made on them in practice. Many doctors are not equipped to treat emotional disorders and to collaborate with psychiatrists in the treatment of psychologically ill patients. Under present conditions many young doctors graduate with a distinct antipathy to the social and emotional aspects of illness (Walton *et al.*, 1963; Walton *et al.*, 1964). Experienced general practitioners sometimes express strong dislike for the psychological component of their practice and disinclination to get any further training in psychological medicine (Rawnsley and Loudon, 1962). Even those doctors who do seek instruction in psychiatry differ widely in the type of teaching they want and in their attitudes to patients (Walton, 1965). Many of those selecting themselves for training are unsuitable (Balint *et al.*, 1966).

Little is known about the influence of personality factors in determining psychological interest. In a study of medical students now in progress in this Department, two dimensions of personality were found related to this professional orientation. The first is the degree of capacity to tolerate conditions of uncertainty. The second personality attribute that may be of importance in determining psychological interest is a reflective tendency, characterized by a liking for abstract ideas.

This investigation explored the two personality factors in three groups of doctors varying in their degree of psychological interest. Its aim was to discover if physical orientation is related to impatience with ambiguities, or to a practical rather than an abstract mental tendency, or to a combination of both traits.

Method

Subjects

Three categories of medical practitioners were studied. All 82 doctors attended post-graduate courses at Edinburgh University, and were thus similar in that they felt the need to continue their professional education.

1. *Group 1* doctors, 35 in number, were manifestly interested in psychological aspects of illness, demonstrating this by attending a full-time course in psychiatry lasting a week.

2. *Group 2* doctors were practitioners on a post-graduate course in general medicine who specified in answer to a questionnaire item that they were as interested in the psychological and social aspects of patients as they were in somatic aspects. They numbered 30. It cannot be assumed that the psychological interest these doctors expressed was always reflected in their clinical practice.

3. *Group 3* doctors were 17 practitioners on the same general medicine course who were relatively negative in psychological orientation. At the beginning of their general medicine course they specified that they were more interested in physical aspects of illness than in psychological factors.

Test Procedures: All tests were applied before the course started.

1. *Personality Factors:* Personality tests were administered, to evaluate in each doctor two traits likely to influence the degree of psychological orientation. The tests used were the Complexity and the Thinking-introversion Scales (Centre for the Study of Higher Education, 1962).

(a) *Complexity* is measured by a scale of 27 items. Examples of items rejected by the complex person are:

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i. Usually I prefer known ways of doing things, rather than trying out new ways.

ii. For most questions there is just one right answer, once a person is able to get all the facts.

iii. I don't like to undertake any project unless I have a pretty good idea how it will turn out.

The person scoring high on this test (i.e. rejecting items such as the above) is flexible, experimental and comfortable in ambiguous situations. Those who obtain low scores prefer conditions of sameness, and are not comfortable under conditions of uncertainty. Such conditions are not always avoidable in practice, the doctor often having to advise patients or initiate treatment before the basis of an illness can be diagnosed with certainty. The mean Complexity score of the practitioners was 10·5, standard deviation 6·0. The doctors resembled classes of senior medical students whose mean score was 11·8.

(b) *Thinking-introversion* was the other personality dimension measured in the practitioners. It is evaluated by an inventory of 67 items. A person who obtains a high score will agree with items such as these:

i. I study and analyse my own motives and reactions.

ii. When I go to a strange city I visit museums and galleries.

Among the items he rejects is this: "I am more realistic than idealistic, that is, more occupied with things as they are than with things as they should be."

A high scorer, therefore, has a liking for reflective thought, particularly of a more abstract nature. In contrast, the thinking-extravert, a low scorer on the dimension, shows preference for practical ideas, and a liking for overt action. He adheres more to generally-accepted ideas than the introvert. The mean score of the practitioners was 33·7, standard deviation 9·4. On this second personality dimension also the doctors resembled senior medical students, whose mean score was 35·8.

2. *Attitudes and Professional Values:* A questionnaire of 31 items was administered. Doctors were asked about the psychiatry teaching they had at medical school, the type of postgraduate training in psychological medicine they would favour, their response to various types of non-organic patients, their use and opinion of psychiatrists, and their own preferred psychological treatment approaches. Many of these items had been used in investigations of medical students and distinguished usefully among them.

3. *Length of Time in Practice* was recorded, as was the sex of the doctor, because these factors seemed likely to have some influence on psychological orientation. The doctors had qualified on an average 18½ years previously, most having graduated between 10 and 27 years earlier.

Analysis of Results

A number of analyses were then carried out to explore each of the questions raised.

In What Respects does a Psychological Orientation Differ from a Physical Orientation?

Doctors' scores were inspected for each variable in turn, using the Analysis of Variance which tests the significance of the differences among the groups of doctors. Only five out of the 35 variables were found to distinguish among the three groups of general practitioners, one personality factor and four professional attitudes.

1. *Thinking-introversion:* The psychologically-oriented doctors (Groups 1 and 2) are more reflective and responsive to abstract ideas ($F_{2,79}=7·42$; $p < 0·005$). The physically-oriented doctors are extraverted in their mode of thinking, and interested in ideas that have practical application. The mean scores for Groups, 1, 2 and 3 were 35, 36 and 26 respectively.

2. *Self-judgment about suitability to be a psychiatrist:* Most important was the doctor's self-assessment of his suitability as a psychiatrist. Doctors who were psychologically oriented—both those attending the psychiatry course and also the theoretically-interested group—said that psychiatry as a speciality would have suited

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them as an alternative to general practice ($F_{2,79}=13\cdot73$; $p < 0\cdot001$). The finding demonstrates that doctors who described themselves as somatic in their clinical orientation at the same time described themselves as unsuited to do the work of psychiatrists. The highly significant finding thus provides a check on the validity of the questionnaire item by which the general medicine doctors were sub-divided.

3. *Quality of Psychiatry Teaching at Medical School:* The doctors most critical of their undergraduate training were Group 2, i.e. the practitioners with a theoretical psychological interest ($F_{2,78}=7\cdot14$; $p < 0\cdot005$). This finding is in line with other evidence (Walton, 1965) that students interested in psychiatry, but badly taught at medical school, retain their positive psychological orientation, but they may be deterred by their adverse undergraduate experience from seeking post-graduate psychiatric experience.

4. *Interest in Non-organic Patients:* Group 1 doctors have most interest in psychologically-disturbed patients, Group 2 doctors an intermediate degree and Group 3 doctors least interest in such patients ($F_{2,75}=4\cdot74$; $p < 0\cdot025$). Self-description of their attitude to patients thus discriminates the three groups of practitioner significantly, ranking the different types of doctor in the expected order, and confirming that the sub-division of the sample is correct.

5. *Wish to Undertake more Psychological Work in Practice:* The three groups when asked if they would favour instruction to equip them for treating more psychologically-ill patients in their practice. The theoretically-motivated group were most in favour of extending their psychological work, and the physically-oriented least prepared to do so ($F_{2,77}=4\cdot67$; $p < 0\cdot025$). This is in line with evidence (Walton, 1965) previously obtained that doctors who actually come for psychiatric instruction (Group 1) want to manage better the patients they already have in their care, rather than take on additional cases of non-organic illness. The Group 3 doctors disclaim firmly any inclination to do more psychiatric work in their practice; presumably they will be averse to extending the psychological care they provide for their present non-organic patients and also disinclined to accept the additional cases appearing in their practice.

Are there Three Kinds of Doctor, only Two, or is the Sample Homogeneous?

To investigate the doctors themselves, now that the important variables had been singled out, seven variables were selected (Table I) and a composite position for each doctor was plotted.

A multivariate statistical procedure, the Analysis of Dispersion (Rao, 1952), tests whether the three groups of doctors differ significantly. Pairs of groups are compared with each other in respect of their multivariate (7-variable) means. The value of distances between pairs of groups in the 7-dimensional test space is shown in Table II. Group 1 and Group 2 practitioners are seen to be similar. That is to say, no difference has been demonstrated between doctors who express their psychological orientation in appropriate action (by attending a post-graduate psychiatry course) and those who merely describe themselves as psychologically-oriented.

On the other hand, Group 1 doctors proved significantly different from Group 3 doctors on their mean composite 7-dimension score; Group 2 doctors were still more distant from Group 3 doctors.

The conclusion is that two kinds of practitioner can be differentiated, not three: those who are psychologically-oriented (be this orientation expressed as overt behaviour or merely as a professional attitude) and those who are somatically oriented.

These differences between the two groups of practitioners who are psychologically-oriented on the one hand and the group of physically-oriented doctors on the other were largely accounted for by two variables. In both cases the contribution of Thinking-introversion and psychiatric role perception were very much more conspicuous than the contributions of the other variables.

(a) *Thinking-introversion:* The two psychologically-oriented groups of doctors were differ-

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TABLE I

Seven Variables Chosen for Detailed Analysis

Variable	Categories
1. Thinking-introversion Test	Mean score 33·7
2. Complexity Test	Mean score 10·5
3. Time at which interest in psychiatry occurred ..	1. At medical school 2. At medical school but increased with experience in practice 3. Became interested only with experience in practice 4. Not interested
4. Degree of interest in patients with psychological disorder	1. Especially interested 2. No more interested than in any other patient
5. Self-judgment about suitability to be a psychiatrist	1. Definitely suited 2. Suited 3. Not altogether 4. Definitely not suited
6. Interest in tuition about descriptive psychiatry ..	Six-point scale: 1 = marked preference; 6 = little preference
7. Interest in tuition about interviewing techniques..	Six-point scale: 1 = marked preference; 6 = little preference

TABLE II

Distances Between Pairs of Groups in Test Space

(*Mahalanobis' D_2*)

Groups	2	3
1	0·31	3·07*
2		3·47*

*Variance ratio of associated analysis of dispersion is significant, $p < \cdot 001$.

ent from the physically-oriented doctors in their greater reflectiveness and preference for abstract ideas. The physically-oriented doctors were thinking-extraverts.

(b) *Psychiatric role preference:* Both Group 1 and Group 2 doctors differ from Group 3 doctors in considering that psychiatry would have suited them as an alternative career to general practice. The physically-oriented doctors cannot perceive themselves in a psychiatrist role.

Mapping the Groups of Doctors

Having proved where the differentiation within the sample of practitioners lies, the next stage of analysis set out to map the relations among the three groups of doctors, and to determine the relative importance of the various personality and attitude variables in distinguishing them.

The procedure used was a canonical variate analysis (Rao and Slater, 1949) applied to the same seven variables as in the preceding analysis. With three groups this yields two dimensions, the first shown in the ordinate and the second in the abscissa of Fig. 1. The scatter of the three groups of practitioners is illustrated.

The main dispersion can be seen to lie along the first dimension (canonical variate 1), group 3 being distant from the other two groups, which lie close together. Along the horizontal dimension (canonical variate 2) there is little dispersion, group 3 doctors being in a position intermediate between the two psychologically-oriented groups.

Canonical variate 1 accounted for 94 per cent. of the difference among the three groups of doctors. This composite factor proved to derive greatest weight, 75 per cent., from self-assessed suitability as a psychiatrist, and secondary emphasis, 25 per cent., from Thinking-introversion. None of the other five variables contributed appreciably to this dimension.

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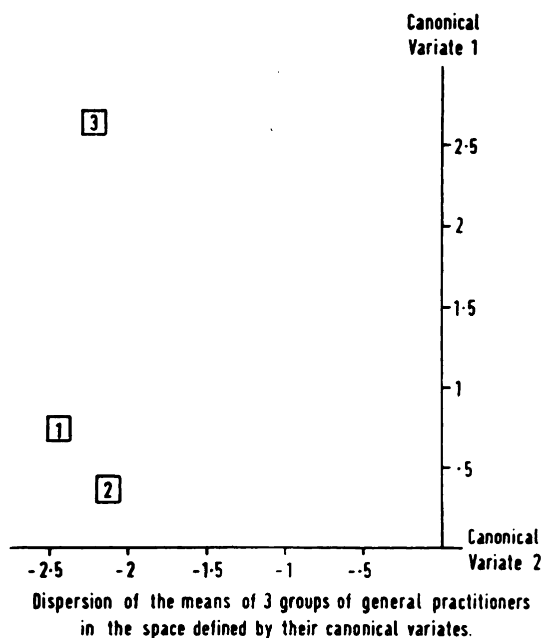

FIG. 1.

The conclusion emerges now that Group 1 and 2 doctors are both distinguished from the physically-oriented doctors by a combination of two variables, one a self-description and the other a measurable dimension of personality. The former, self-judgment of suitability as a psychiatrist, is more important than the latter, thinking-introversion. The physically-oriented doctors are by temperament extraverted in their mode of thought.

SUMMARY

1. A difference was demonstrated between psychologically-oriented and physically-oriented doctors on post-graduate courses.

2. The personality dimension that differentiates the two types of doctor is Thinking-introversion. The doctors more interested in physical aspects of illness are less reflective and less interested in abstract ideas.

3. No difference of personality or attitude was demonstrated between psychologically-oriented doctors who gave evidence in their actions of psychological interest by attending a psychiatry course and those doctors who merely professed psychological interest.

4. A second personality dimension, flexibility of outlook with the capacity to accept conditions of uncertainty, did not discriminate among the three groups of doctors.

5. Only four professional attitude items in a questionnaire of 31 items were related to psychological orientation: i. a professional role-perception factor (self-assessment of suitability to be a psychiatrist); ii. quality of under-graduate teaching; iii. degree of interest in psychiatric patients; iv. willingness to treat more cases of psychological disorder in practice.

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