SELECTION OF STUDENTS IN THE UNITED KINGDOM*

BY

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The devices for selecting medical students in the United Kingdom are probably little different from those employed in many other parts of the world; but to give a fair picture it is necessary to sketch the background which has influenced this primary activity of our medical schools over the past few years. The salient features of this background are: (1) the overriding insistence on autonomy of choice; (2) a steadily increasing interest in the procedures of selection; and (3) the number and quality of the applicants. There is a further feature of the background which has perhaps not yet concerned the authorities in this country so much as it should—that is, (4) the general relationship of the national intake of students to the national need for doctors.

After discussing these four aspects of the background I want to consider the relatively simple procedures we use. I should make it clear at the outset that, though I have been concerned with selection in one of our London schools until a short time ago, these responsibilities have now ceased. I do not represent any school or university at this Conference. All opinions here stated are my own.

1. The Overriding Insistence on Autonomy of Choice

The colleges and schools of our universities have always jealously guarded the privilege of selecting for themselves their undergraduate members. Although no serious attempt has ever been made to have selection transferred to a central authority, tentative suggestions that such a plan might solve any of our present problems has produced a storm of resistance more than once in recent years. Quite apart from the certainty that this attitude will not be changed, I am convinced that it is right. Some may think that we in this country pay too much attention to tradition, but the traditions of each unit of a university determine the character, not only of the part, but of the whole. Absolute power of accepting or rejecting any candidate who seeks admission is a basic necessity for preserving the individuality of a school, and ultimately of the university of which the school is a part. When the annual number of applicants greatly exceeds the number of vacancies, when many applying are unsuitable, and particularly when many applicants simultaneously apply to two or more schools, the advantage of a central clearing-house for applications is obvious. These circumstances have existed for a number of years in London; yet the twelve medical schools of the University of London have preferred to shoulder the considerable additional burden imposed by decentralized selection than to have their task made easier at the expense of their privilege. They have found their attitude supported by their university.

2. The Increasing Interest in Selection Procedures

Since the end of the second world war the heads of the colleges and schools of the universities have been compelled for two main reasons to take an increasing interest in methods of selection. The first of these is the vastly increased number of applications for entry, and the second the undoubted success of modern procedures, typified for us by the activities of the War Office Selection Boards constituted during the war for selecting officers from other ranks.

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The causes of the flood of applications need not here be analysed. What must be stressed is that these causes appear to be permanent and that, because many applicants for too few vacancies inevitably means disappointment, an inescapable sequel is multiple applications—that is, a tendency for each candidate to apply at the same time to more than one appropriate school or college. The nuisance of multiple applications has been held by Harris (1948) to be mainly a local one, but it probably reaches its zenith in the twelve medical schools concentrated in London University. It is not unknown for a single candidate to apply to all schools, though most applicants are more optimistic, or less obsessional, in their approach. Because the least able candidates meet with the greatest difficulty, it is they who apply to the largest number of schools. In consequence there is a large circulating group of relatively unsuitable persons encumbering the machinery of selection in every school. It follows, too, that these multiple applications make an exact national calculation of the ratio of applicants to annual vacancies a matter of extreme difficulty. The aggregate of the applications for all the London schools, for example, will be considerably greater than the number of applicants. Yet, if the problem of selection is to be wisely handled, the number of persons applying for the available vacancies throughout the country should be accurately known. The Conference of Deans of the Undergraduate Medical Schools of London University has instituted an inquiry into this question of multiple applications. If it is largely a local matter, such piecemeal private investigations will probably help, but it is to be hoped that other geographically linked schools may take similar steps.

The War Office Selection Boards of the British Army quickly revealed that they had a better capacity for selecting officers than the older, more haphazard methods. But the essence of their ability, in the opinion of many, lay not in the employment of psychiatrists or psychologists, nor even perhaps in more appropriate tests, but in prolonging the period of testing over two or three days and causing a number of selectors to live with a few candidates during the whole of this time. The stage was deliberately set for a much longer period of much closer observation. Other bodies, notably the Civil Service, have successfully copied this plan, but it unfortunately cannot be applied to the medical schools. In each of these, ten times as many candidates may apply each year as there are vacancies; the selectors are teachers fully occupied with other duties; and most of the candidates are with difficulty allowed so long as a day from their school duties to enable them to attend the selection procedure. Nevertheless a study of the War Office Selection Boards underlines the importance of an adequate interview, and suggests that useful information can be gained from special methods such as intelligence tests and small discussion groups.

3. The Number and Quality of the Applicants

For a year or two immediately after the end of the second world war there was a steep rise in the number of applicants, but their quality was high. In the last two years numbers remain large, but quality is manifestly diminishing in both academic standing and perhaps particularly in the personal traits required for the medical profession. The reason for the success of the ex-Service applicants was no doubt the gradual concentration of several annual groups of applicants in the armed Forces during the war, and the much faster release of these more responsible, mature potential students when the Services rapidly disbanded. In the main we saw a group of men and women whose keenness to embrace the career of medicine had survived the frustrations and tedium of war service and whose enforced delay in beginning the medical course made them determined workers once they were accepted.

But the recent decline in quality probably represents more than a mere return to the ordinary pre-war type of applicant. There are to-day certain powerful but undistinguished motives for becoming a doctor. For example, many parents

see that there is now no bar to a child's qualifying for a medical school, provided only that he has succeeded in his school-leaving examinations. For a number of these parents a professional status for their children may represent a social advance. Again, the terms and conditions of the National Health Service have, rightly or wrongly, increased the sense of security felt by parents for a son or daughter who means to make medicine a career. Moreover, to be enrolled as a medical student is one of the few ways left to a boy of postponing his period of National Service (conscription) and of directly entering one of the armed Forces of the Crown as an officer. As motives decline, a poorer class of applicant will be attracted to the medical schools. It is certain that a much higher proportion of applicants may to-day be safely thrown into discard without interview than, say, in 1946.

4. The Relationship of the National Annual Intake of Medical Students to the National Need for Doctors

Not long ago I was asked in one or two places abroad for my comments on the proposal to found a new medical school. In these environments it seemed obvious that, before any such proposal could be considered by those in authority, a strong case would have to be elaborated for a local need for doctors, or at any rate for an ability to export doctors. In this country, with its concentrated population and many medical schools, no effort has yet been made, so far as I know, to discover whether the number of persons annually qualifying as doctors exceeds, is equal to, or falls short of, the number of doctors who cease to practise each year by reason of death or retirement. Already there are ill-informed rumours of the difficulties of some of our newly qualified men and women in obtaining employment. Certainly we still receive as imports a significant number of qualified men from our Dominions and Colonies, some of whom remain to practise in these islands. As surely, certain services, such as the Indian Medical Service, have ceased to be available for men who qualify in the United Kingdom, and the opportunities in other services are for various reasons diminishing. On the other hand, now that the National Health Service has been in operation for five years, the pattern of the medical personnel needed, *and able to be afforded*, by the nation has never been more open to analysis. It is as important to avoid making too many doctors as it is essential to see that enough qualify each year to balance the inevitable wastage. If doctors become unemployed, the present glut of applicants for the medical schools may by the swing of public opinion be turned into a lasting deficit almost overnight. If the Health Service goes short of the medical personnel it can afford it will be a poorer service.

The balancing of the intake of medical students with the nation's need for doctors is a matter of far too great importance to leave to chance. A university or a medical school is too small and too specialized a unit to think and plan on national lines. The Ministry of Health in this country has or can obtain all the data concerning the national need for doctors, but is totally unfitted for dealing with the universities. The University Grants Committee, which already has great experience and enjoys the confidence of the medical schools, should be entrusted with the duty of discovering the facts on each side of this interesting equation.

The Selection Procedure

The procedure of selection in the United Kingdom is conveniently divided into three stages. The first stage involves the careful perusal of the application form and confidential report of each candidate, and acts as the filter which retains for interview only those from whom the final choice of successful candidates is to be made. The second stage is the interview and any modifications of this that may be used in a given school; for example, Aitken and Johnson's (1952) experiments. The third stage includes the whole of the student's first year in the school.

The First Stage.—When the number of applicants to a school becomes large it is impossible to submit each candi-

date to an interview. It is already doubtful whether this is strictly necessary, since a great many of the applicants can be judged to be unsuitable merely from application forms and confidential reports. Perhaps two or three times as many candidates as there are vacancies will be allowed to pass to the second stage; but two-thirds of the total number of applicants will have been rejected outright.

The Second Stage.—To-day in nearly all schools the main instrument of selection for candidates who survive the first stage is the interview. In the past a few schools added an entrance examination in appropriate subjects; but the large numbers of applicants have made this an impossible burden on the teaching staff, and it is probable that sufficient information on the academic status of a candidate can be gained from his documents. For some years at my medical school each candidate was required, during the hour immediately succeeding his interview, to write an essay on a subject chosen at random. This had the advantage of frankly revealing the illiterate; but it was so rare for the essay to make any difference between acceptance and rejection that the not inconsiderable work of its correction did not seem to be justified. We now use the time taken for the essay for an appropriately devised intelligence test. As others have found, the results in this test cannot be correlated with performance in subsequent examinations; but it probably has the value of excluding most candidates who lack the intelligence to benefit from a university education. Intelligence tests, however carefully devised, cannot hope to predict later academic performance, since such proficiency demands many other qualities besides basic intelligence; for example, persistence, interest, equanimity—character traits which tests of intelligence do not endeavour to examine.

The Interview.—Although the form of the interview varies considerably, its aim is to assess each candidate from the viewpoint of personality. Not a few trained psychologists have been critical of the value of such interviews, since as tests they are incapable of standardization and control and may clearly be vitiated by the prejudices of the interviewers. But as yet there are no scientific ways of measuring personality, in the sense that pure intelligence can be measured by standardized intelligence tests, nor any method that does not in the end depend upon human judgment. Moreover, some interviewers do undoubtedly develop the capacity to judge the suitability of a candidate, although they are usually unable to state the mental processes involved in such a judgment. Other men, however expert in their particular academic fields, never learn how to select. It follows that interviewers must be carefully chosen, and that a choice is difficult unless a selector is observed at the job of selecting. A school is therefore wise to establish some means whereby each new selector serves in a temporary provisional capacity with other men of proved ability before he is permanently appointed to the panel of selectors. A board of selectors is the obvious answer to this and some other problems of interviewing.

There is much variation from school to school in the size of selection boards. In my medical school we have found that a board composed of three selectors is the most useful. It is not too large to frighten the nervous candidate into dumbness, nor too small to provide training for new selectors. We have employed up to six of these three-men boards to sift the short-listed year's applicants.

From place to place the time spent on an interview widely varies. There is virtually nothing to be said in favour of the two-minute interview, in which the candidate has only just time to sit down before he is dismissed. I would almost as soon choose from an application form and confidential report alone without any interview. On the other hand, pressure of work with the present numbers has made it impossible for us to allow an average time of more than 20 minutes for the interview, with prolongation to 30 minutes in some difficult cases. We add perhaps five minutes after the candidate has left the room for the board to come to a decision. But even an interview of this duration is clearly

far from being a perfect instrument for assessing personality and traits of character. A number of nervous candidates may fail to do themselves justice; and a few who will make bad doctors because of emotional hardness or aggressiveness or a simple inability to play their part in the pupil-teacher relationship may manage to conceal these undesirable traits in the 20 minutes during which they are before the board. To overcome these difficulties Johnson (1952), of University College, London, has suggested adding group discussions to the interview. I have no personal experience of this method, but it appears to be an attractive supplement and not to absorb an impossible amount of time.

The Third Stage.—The third stage of selection is more open to controversy, and yet it seems to me to play a not less important part in the procedure than the rest. This stage of prolonged observation may be said to occupy the whole of the first year and to culminate in the university examination taken at the end of that time in the elementary sciences—chemistry, physics, and biology. In the medical schools of the University of London it therefore involves only those students who have entered at what is called the premedical or First M.B. level. These are nearly always students who have joined direct from school—a group peculiarly apt to be thrown off balance by the easier discipline of a university curriculum and the unaccustomed distractions of living in a great city without supervision except during the hours of work. On joining as students they are informed that, although a failure in any part of the examination at the end of their first year will automatically mean that they cease to be members of the school, freshmen so often have difficulty with the change of academic discipline that the lecturers are ready to give special individual help throughout the year to any who request it. They are also told that preliminary class examinations will be held in the three subjects half-way through the year, to enable progress to be judged, and that these examinations are just as compulsory as the public university examination at the end of the year.

Experience has shown that a student who fails the premedical examination seldom avoids worse trouble with the later preclinical and clinical examinations, whereas those who have obtained exemption from the premedical examination and who enter at preclinical level (anatomy and physiology) usually pass their subsequent examinations without difficulty. If a student has to leave the school on academic grounds, it is proper that this should be done at the first available opportunity—that is, at the end of his first year—and that his place should be taken by one of the many other applicants to-day desiring to receive training as doctors. The objection that in accepting a student the school owes him the duty of getting him through his examinations takes no account of the fact that it is impossible to make more than an informed guess at the academic suitability of any candidate, even with the most painstaking selection procedure. Moreover, an accepted student must to-day be deemed to be aware of the need to show that he is worthy of keeping the place which he has won in the face of great competition. Elimination during the third stage may perhaps account for 15 to 20% of the premedical entry.

REFERENCES

- Aitken, J. T., and Johnson, M. L. (1952). *Lancet*, 2, 409.
Harris, A. D. (1948). *Ibid.*, 2, 317.
Johnson, M. L. (1952). *Ibid.*, 2, 876.

Regular visits to the homes of patients are the basis of a course of social and environmental medicine required of all students at the Vanderbilt University School of Medicine, Nashville, U.S.A. The idea is to impress on the students the importance of social and emotional factors in medicine, and the need to understand people as well as acquire scientific knowledge. The course is described in the August issue of the *Journal of Medical Education* by Dr. JOHN B. YOUNG, the dean, and MARIAN E. RUSSELL, professor of medical social service at the school. The student acts as family health adviser to selected families during his four years' course.

SELECTION OF STUDENTS IN CANADA*

BY

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The entrance requirements of the twelve Faculties of Medicine in Canada are quite uniform and are much the same as those in the United States. Applicants for admission must have completed the twelve elementary grades and, in addition, must have obtained credit for at least three years of work in a college or university.† In certain Canadian institutions two of the three "pre-medical" years are completed while the student is registered in the faculty of medicine.

Premedical Requirements

The premedical curriculum at the University of British Columbia was developed before the establishment of a medical school in Vancouver. Since it was designed in such a manner that those who completed it successfully could meet the entrance requirements of any faculty of medicine in Canada its content may be examined with interest. Included in the course of study are two years of English, one year of mathematics, three years of chemistry, two years of physics, and three years of biology and zoology.

It will be noted that about one-half of the basic or minimal premedical course thus outlined is devoted to the natural sciences. The required courses in English and mathematics reduce the student's options somewhat further. It is usually advised that elective premedical courses be selected to conform with the language and other requirements for a bachelor degree; this is in case the student is not accepted by a medical school. When this advice is followed, two years of a language other than English will usually be added to the premedical student's curriculum.

Such a preparation for the study of medicine cannot produce the "variety of educational backgrounds" which might be advantageous when the future of the profession is considered. The medical schools in Canada believe that a broad general education should underlie the medical course, but none feels that this can be provided in the time which a goodly proportion of the premedical students are prepared to devote to this phase of their education. It is to some extent a corrective measure that Canadian medical schools give preference, within the limits of good scholarship, to the applicant who possesses a bachelor's degree. Such candidates for admission will have at least four years of preparation beyond junior matriculation, or three years of college work beyond senior matriculation.

Where a premedical student is judged to have sufficient ability to complete the medical course successfully, and he elects or is required to spend a fourth year in the Faculty of Arts and Sciences, experience has shown that he must be warned emphatically not to anticipate medical-school courses in bacteriology, biochemistry, histology, or physiology. Such counselling carries with it a serious responsibility, because it is not the intention to discourage the students with more outstanding ability from pursuing honours courses in the sciences.

Most of the medical schools in Canada require a premedical average of 65% (second-class honours). Contrary to the situation in the immediate post-war years, there is not at present any observable surplus of applicants with such an average. Increasingly, the screening committees in our medical schools find themselves concerned with the "borderline

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†Senior matriculation may count as one of these premedical years.