A method of assessment of teaching practices and trainers by their trainees

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SUMMARY. A method of assessment is described which can be used by trainees at the end of their vocational training in general practice. The assessment allows trainees to make ratings and comments on their teaching practices that can be returned confidentially to their trainers. The results of this assessment suggest that trainees in the Northumbria vocational training scheme are reasonably satisfied with their trainers and training practices.

Introduction

THE Manchester rating scale is widely used by trainers as a method of assessment of their trainees.[1] Progress is determined by the consideration of various factors and the use of a 12-point scale for the assessment of each factor. In addition, trainers are invited to make constructive comments. Trainees may have up to six assessments from general practice and from consultant trainers during their period of vocational training and this accumulated information is of great help to scheme organizers in identifying the strengths and the weaknesses of individual trainees.

It seemed that there might be value in reversing this process, by devising parameters which enabled trainees to make an assessment of their teaching practices and to make constructive comments. Thus, the trainer would receive an accumulation of assessments over the years from which objective patterns may emerge. It is believed that this method, which has been used in the Northumbrian region for three years, has the following advantages:

1. To give trainers some feedback which may call attention to their attributes and deficiencies as seen by their trainees and encourage them to improve their performance, and provide written information about possible shortcomings in the teaching practice which may be considered by partners and staff.
2. To give trainees some generally agreed standards as to what it is fair to expect in a trainer and a teaching practice.
3. To provide course organizers with information about teaching practices in which standards are unacceptable and where the trainer may need help, advice or censure.

Method

Using the Manchester rating scale as a model, a questionnaire was devised in which trainees were invited to rate various aspects of their trainer's performance and of the teaching practice.

The factors selected for investigation in this way were: premises, staff, partners, practice organization, records, clinical knowledge, teaching ability and availability, and relationship with patients.

As with the Manchester rating scale each factor was accompanied by a positive and a negative statement to indicate characteristics which most general practitioners would consider to be acceptable or unacceptable in order to provide trainees with a yardstick against which to measure their practice (Appendix 1). A 12-point rating scale was used to grade each factor: 0 = nothing satisfactory, 12 = no improvement possible. Trainees were invited to make comments, preferably of a constructive nature, whenever they felt it appropriate to do so.

The questionnaires were sent to all the trainees in general practice in the Northumbria vocational training scheme about six weeks before the end of their six-month practice attachment. The questionnaires were accompanied by a short explanatory letter and an additional sheet requesting simple details, including name, address, age and general practice experience of the trainee and the name and address of the trainer. At this point each questionnaire carried the name of the trainer and trainee concerned. Upon return of the questionnaire, this data sheet was detached and replaced by a code number, the significance of which was known only to two coordinators.

The information was recorded in a register, not in chronological order but mixed arbitrarily. At the end of 18 months each trainer was sent a photocopy of the completed sheet concerning his practice.

The trainers were informed that they would receive feedback as to the ratings and comments of their last three trainees and that these would not be given in the order of the trainees' attachment. The overall practice rating was determined by taking a mean of the scores for the eight factors assessed, so that during the three-year period of the study a maximum of six such overall ratings was possible for each trainer. The mean overall rating was the mean of these. The numerical ratings were accompanied by the means for the Northumbria vocational training scheme as a whole, so that for each factor the trainer could compare his practice with those of his peers.

It was necessary to edit the trainees' comments as these were sometimes lengthy and it was considered pointless to send trainers factual information about their practices.

The returns were analysed by analysis of variance, supplemented where appropriate by non-parametric techniques.

The initial analysis of variance used only the mean of each trainee's eight assessments (the 'overall rating') to discover possible changes with time for each trainer or differences between trainers. An unbalanced design was necessary because the number of trainees assessing each trainer varied. The observed difference between trainers was then split further in order to determine the effect of the partnership size or list size of the practice. Individual assessments were then analysed after allowing for the differences between trainers determined by the initial analysis of variance.

Although a few trainees had one or two assessments missing (usually those in single-handed practices unable to assess partners) the overall ratings fitted the required assumptions for the analysis of variance. In contrast, the distribution of individual assessments had a larger skew so rank tests were also carried out on these and gave similar results. Means are used in the text throughout, however, for ease of interpretation.

Results

There were 41 trainers with trainees attached to their practices in the Northumbria vocational training scheme at the start of the project on 1 August 1980. Of these, 25 had ratings from six trainees and none had less than three ratings in the subsequent

three years. During the three years a further 13 trainers were appointed to the scheme and had various numbers of trainees placed in their practices. All of these new trainers were rated at least once. Three trainers retired during this period. In all 58 trainers (four course organizers also had trainees attached to their practices) had at least one rating from a trainee who had been attached to their practice.

A total of 280 questionnaires were sent out in six batches and of these 266 (95%) were returned.

Numerical ratings

The mean overall rating from all 266 returns was 9.21 — with a range of 7.00–10.86. This range corresponds to 'good' to 'excellent' on the scale and a mean overall rating of 9.21 suggests that the majority of the trainees were reasonably satisfied with their teaching practices. However, for five of the trainers the rating means were below 7.8 and this indicates that some practices were seen by their trainees as being only slightly better than 'marginal', although three of these means were from only one trainee assessment.

The analysis of variance showed that there are significant differences between trainers, which account for 41% of the variability in the overall ratings given by individual trainees ($P < 0.001$).

Table 1 shows the mean score for each of the eight factors given by all trainees over the three-year period and, while these means are reasonably satisfactory, varying between 8.38 and 9.77, it should be noted that they were each derived from a wide spread of scores. Collectively, trainees used the full extent of the scale. Clearly a trainee might be dissatisfied with his trainer and teaching practice for a variety of reasons, but when high or low scores are given by successive trainees their significance becomes much greater.

It should also be noted that although all of the eight mean scores are quite close together on the scale, and the differences between them are small, these differences are highly significant in both the analysis of variance and the non-parametric Wilcoxon paired sample test except in three instances. For example, in every six-month period 'clinical knowledge' always has the highest score while 'records' always has the lowest.

The list size and the number of partners affect certain factors but not the overall rating. One other point to emerge is that in general recently appointed trainers received lower scores than more established trainers, but there were notable exceptions.

It was hoped that trainers might improve their performance and the attributes of their practices as a result of the feedback at the end of 18 months and that the scores they received would be higher in the second period. However, there was no significant change (in either direction) in the overall rating or for any of the eight factors studied with the exception of 'records', which although always receiving the lowest mean score did show consistent improvement throughout the three years.

Comments

While considering the trainees' comments, it was borne in mind that remarks reflect not only the conditions in practice but also the abilities, weaknesses and prejudices of the trainees just as much as those of the trainers. Indeed, comments often seemed to reveal more about the writer than the trainer in question. A great deal can be learnt about the trainees' expectations, attitudes, enthusiasms and anxieties from their comments.

The word 'enjoyable' was commonly used by trainees to describe their experience. Some practices were busy while in others trainees gained little experience of working under pressure because of a small list. In some practices trainees were 'thrown in at the deep end' with not enough supervision on home visits or out-of-hours calls. On the other hand, other trainees did not feel used and a criticism from this group was that sometimes a trainer was a little reluctant to delegate responsibility to his trainee.

Table 1. Mean scores and ranges of scores given for the three year period.

Factor	Mean score	Range of scores given	*n*
Clinical knowledge	9.77	5–12	265
Partners	9.47	2–12	250
Relationship with patients	9.42	4–12	257
Staff	9.32	5–12	265
Practice organization	9.25	4–12	264
Premises	9.06	1–12	261
Teaching ability and availability	9.03	1–12	264
Records	8.38	3–12	261
Mean overall score	9.21		265

Discussion

This paper describes a method by which the standards in teaching practices may be measured, but it should be emphasized that this is only one method and it should be supplemented by as many other forms of assessment as possible.

However, this system does have a number of advantages:

1. It is simple and therefore economical of time and resources.
2. It encourages trainees to think critically and constructively about the standards which they find in their teaching practice.
3. It provides continuous assessment by a succession of different observers whose findings may be compared, and thus it allows the trainer to monitor his performance and to compare his own standards (as seen by trainees) with those of his peers.
4. It allows problem areas in the practice to be identified and the trainer can then use this written information to persuade partners to make any changes which he may feel to be necessary in order to raise practice standards.
5. It demonstrates that trainers are prepared to examine their own standards critically and this must surely encourage trainees to do the same.

One essential requirement, however, is the agreement of the trainers to submit to this type of surveillance and it is greatly to the credit of the trainers in the Northumbria vocational training scheme that not only did they agree to this for a three-year trial period but they have since voted for its continuation.

At the start of this project doubts were expressed as to the competence of trainees to pass valid judgement on teaching practices because of their limited experience in this field. The results from the project demonstrate that these fears were without foundation.

Both the numerical ratings and the comments are of value and would seem to complement each other. The former provide the statistical data by which the significance of results can be determined while the latter give more precise information about what is actually happening in the practice.

The expectations expressed by trainees were impressive. They expected to have a personal and well-equipped consulting room, the whole practice to be involved in the training programme and the practice to be reasonably well organized with well-kept records. The average trainer's clinical knowledge was rated surprisingly highly, although admission of ignorance in any particular area was not an admission of failure in the eyes of the trainees. Trainees were less happy about the time devoted to teaching, interruptions and the comparative lack of formal or seminar teaching. On the whole it is reassuring that so few trainees complained of being exploited, but more expressions of commitment by the trainees to their practices would have been

welcome. Is it a good thing, for example, that a trainee should comment that his trainer was always available to take over a difficult case?

Older and more experienced trainers are often involved in other medical activities. Their teaching may be of high quality but it can be seen from the comments of the trainees that they often fail to provide enough time for teaching. Younger trainers, on the other hand, have fewer commitments and more time but are less likely to have the knowledge and experience which tells them what and how to teach. Courses for trainers might provide the answer to this problem.

The results of this work suggest that trainees are reasonably satisfied with the Northumbria vocational training scheme, although other forms of assessment are desirable to confirm that this satisfaction is soundly based.

The future

Having completed the project, the question arose of the use of this method of assessment in the future. It was the opinion of the trainers in the Northumbria vocational training scheme that the ratings were a useful indicator of problem areas and that the information should be made available to the scheme organizer as a tool that could be used in the process of reselecting trainers. This scheme is now in operation.

Appendix 1

Factors and rating scale for the assessment of trainers and training practices.

Rating scale

1 2 3	4 5 6	7 8 9	10 11 12
Poor	Marginal	Good	Excellent

1. *Premises*

The acceptable trainer operates from surgery premises which are fully adequate both for the conduct of good general practice and for vocational training purposes. They are equipped to a standard necessary for these ends.

The unacceptable trainer operates from premises which are unsatisfactory either in their construction, deployment, or both, with inadequate facilities for waiting, consultation, examination, treatment or case discussion. Essential equipment is inadequate either in quantity or quality.

2. *Staff*

The surgery premises are serviced by an efficient and well-trained staff who display sympathy and understanding in dealing with the needs of patients and of medical staff (including trainees). Their overall performance demonstrates the importance of team work in primary care.

Practice staff are ill-trained, inefficient and disorganized. They have little understanding of the needs and problems of patients or doctors, and consequently have a poor rapport with both parties. They are unable to assess priorities and tend to display inappropriate attitudes. Team work among staff is conspicuous by its absence.

3. *Partners*

The acceptable trainer has adequate support by competent partners who are sympathetic to the commitment of having a trainee in the practice. When appropriate, and especially in the trainer's absence, his partners will contribute to the teaching programme with efficiency and enthusiasm. They will endeavour to make the trainee feel a welcome and important member of the practice team.

The unacceptable trainer's partners show no commitment to the concept of being part of a training practice. They give no support to either trainer or trainee, and fail to contribute to the teaching or supervision required even in the absence of the trainer. They tend to regard the trainee merely as an additional pair of hands rather than as a person with specific educational needs.

4. *Practice organization*

The acceptable trainer's administrative competence is demonstrated by the efficient operation of his staff who have a clear understanding of each others roles, and the capacity to blend their skills as the situation requires. His system of patient reception (including appointments, visits and repeat prescriptions) is both orderly and sensitive. Bookkeeping is clear and methodical.

The unacceptable trainer is uninterested in practice organization, and in consequence patient reception and practice administration are characterized by inefficiency.

5. *Records*

The acceptable trainer attempts to maintain his medical records carefully, legibly and to a standard which is fully adequate both for teaching and for audit. His filing system is efficient and carefully controlled, for example hospital letters and other patient data are easily identifiable and accessible. Audit tools, for example age–sex, at risk and morbidity registers, are accurately maintained, well used and accessible to the trainee.

The unacceptable trainer has little concept of the importance of medical records, which are in consequence poor in quality, often illegible and inadequate in content — especially with regard to drug therapy. Records are frequently inaccessible when required and consequently their value as teaching or audit tools is minimal.

6. *Clinical knowledge*

The acceptable trainer is well informed medically, socially and educationally. When an area is exposed in which is knowledge is inadequate he is able to admit to his shortcomings and rectify the matter as quickly as possible by the method most appropriate to his needs.

The unacceptable trainer is poorly informed medically and educationally, while his knowledge of his patients and their problems is minimal. He is complacent in his ignorance and endeavours to avoid the many areas in which he is unable to conceal his shortcomings. He makes little attempt to remedy his deficiencies, and is intolerant of any form of criticism — especially from his trainee.

7. *Teaching ability and availability*

The acceptable trainer understands and appreciates his responsibilities as a teacher and organizes his practice in such a way as to allow adequate resources of time and effort to this end. He demonstrates interest and understanding in the trainee and his problems and, within the limits of his other commitments, endeavours to make himself available when his guidance is needed. He stimulates the trainee by his attitude and enthusiasm.

The unacceptable trainer has little understanding of his responsibilities as a teacher and fails to make the necessary allowances of time and effort required, the demands of teaching being always secondary to those of practice routine. He is often inaccessible or too busy with his own problems to attend to those of his trainee. His attitudes and behaviour provide little stimulus or encouragement to the trainee in whom his interest is very limited.

8. *Relationship with patients*

The acceptable trainer gives patients confidence, affords cooperation and relieves their anxiety. While patients appreciate his interest in their well-being he himself does not become emotionally involved. He is honest with patients and their families. Patients like him and feel he is an easy person of whom to ask questions, or with whom they may discuss problems.

The unacceptable trainer does not relate well to patients either through aloofness, discourtesy, indifference or pressure of work. He has difficulty in understanding his patients' needs. He fails to give patients confidence and may even unnecessarily alarm them. He reacts poorly to a patient's hostile or emotional behaviour. He does not exhibit sympathy or compassion in dealing with patients.

Reference

1. Byrne PS, Long BEL. *Learning to care, person to person.* London: Churchill Livingstone, 1973.

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This article is an abridged version of a more detailed unpublished paper, copies of which may be obtained from the authors on request. Copies of Appendix 1 are also available.