Brief Report:

Undergraduate psychiatry students' attitudes towards teaching methods at an Irish university.

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Abstract

Background At University College Dublin, teaching in psychiatry includes clinical electives, lectures, small-group and problem-based teaching, consistent with international trends.

Aims To determine final-year psychiatry students' attitudes towards teaching methods.

Methods We distributed questionnaires to all final-year medical students in two classes (2008 and 2009), after final psychiatry examination (before results). All participated (n=111).

Results Students' interest in psychiatry as a career increased during psychiatry teaching. Students rated objective structured clinical examination (OSCE) as the most useful element of teaching and examination. The most common learning style was "reflector"; least common was "pragmatist". Two-thirds believed teaching could be improved (increased patient contact) and 89% reported that experience of psychiatry changed attitudes towards mental illness (increased understanding).

Conclusions Students' preference for OSCEs may reflect the closeness of OSCE as a form of learning to OSCE a form of assessment: OSCEs both focus on specific clinical skills and help prepare for examinations. Future research could usefully examine the extent to which these findings are university-specific or instructor-dependent. Information on the consistency of various teaching, examination and modularisation methods would also be useful.

Key-words

Education, medical, undergraduate; schools, medical; models, educational; problem-based learning; psychiatry

Introduction

At University College Dublin (UCD), teaching in psychiatry includes clinical electives, lectures, small-group and problem-based teaching, consistent with international trends [1,2]. Assessment methods include objective structured clinical examination (OSCE), which involves a circuit of 'stations' where students perform tasks, designed for objective assessment of clinical skills; summative assessments of competence (multiple-choice questions [MCQs], extended matching items [EMIs], OSCEs); and formative assessments, including log-books (in which students record learning objectives, clinical activities, reflections).

Modularisation at UCD involved re-structuring curricula into "modules" for subject areas. A module is "a self-contained entity, which comprises a defined volume of learning activity, expressed in terms of learning outcomes, which are in turn linked to assessment tasks" [3]. This study was performed after the modularisation of psychiatry teaching had been completed at UCD so the students in this study had been taught psychiatry in two six-week modules, one in fourth year and one in fifth (final) year. The first module comprised orientation, non-clinical tutorials and history-taking. The second module comprised clinically-oriented tutorials (two weeks) and two two-week clinical electives (clinics, ward rounds, home-visits) with psychiatry teams in a range of specialities. Each student had one urban and one rural elective, which were assigned.

The aim of this study was to examine final-year psychiatry students' attitudes towards teaching methods and modularisation, and determine self-rated learning styles, in order to better inform continual reviews of teaching methods. We performed the study after the students' final psychiatry examination and before they received their results.

We used the learning styles categorisation presented by Honey and Mumford [4], which includes four key learning styles:

- *Activists*, who respond best to learning situations which involve challenges, excitement and freedom;

- *Reflectors*, who respond best to structured learning, reflection and detailed observation;
- *Theorists*, who respond best to rational, logical structure, allied with methodological exploration and questioning;
- *Pragmatists*, who respond best to practically-based learning opportunities, which offer scope for practical use of theories.

In the present study, we focussed on student's views of their own relationships with these four key learning styles, in the context of medical under-graduate education and, more specifically, teaching in psychiatry. Rather than using a specific instrument designed to provide an 'objective' rating of learning styles, we asked students to rate their own learning styles, in order to better unearth students' *own* assessments of learning styles. Our interest in preferred learning styles reflects the fact that differing combinations of approaches may work better in different circumstances and a combination of styles can optimise learning under different circumstances [4].

Seeking students' views in this fashion is now firmly established as standard educational practice in medical schools and forms a key component in ensuring the appropriateness and quality of teaching. This point was highlighted by the General Medical Council in its seminal *Tomorrow's Doctors* [2]:

> "There must be procedures in place to check the quality of teaching, learning and assessment, including that in clinical/vocational placements, and to ensure that standards are being maintained. These must be monitored through a number of different systems, including student and patient feedback, and reviews of teaching by peers. Appraisals should cover teaching responsibilities for all relevant consultant, academic and other staff, whether or not employed by the university" (p. 39).

Methods

We distributed anonymous questionnaires to all final-year medical students in two classes (2008 and 2009), after final psychiatry examination (before results). All participated (n=111). Questions related to:

- Interest in psychiatry as a career, before and after studying the psychiatry modules
- Knowledge of modularisation
- Rating of specific elements of teaching
- Personal learning styles
- Overall rating of teaching
- Rating of usefulness of examination modalities
- Rating of tutorial quality
- Whether students' learning experience changed their attitude towards mental illness
- Suggested improvements

This survey was administered at one point only, after the final psychiatry examination (before results), so students' assessments of their interest in psychiatry as a career before the psychiatry modules were retrospective. This project was exempt from formal ethical review as it involved "standard educational practices", a term which includes "research conducted in established educational settings that involve normal educational practices"; e.g. "studies of educational instructional strategies, the effectiveness of or comparison of instructional techniques, curriculum, or classroom management methods" [5].

Data were stored, described and analysed using IBM SPSS Statistics (Version 20). We used paired samples t-tests to compare students' scores for interest in psychiatry as a career before and after studying psychiatry, and ratings of urban versus rural clinical attachments; ANOVA to compare students' ratings of various elements of teaching and examination; and the one-sample Kolmogorov-Smirnov test for analysis of self-rated personal learning styles. Data were stored on a password-protected research computer in a locked research office. Relevant data protection legislation was complied with throughout this project.

Results

Mean score for interest in psychiatry as a career prior to studying psychiatry was 5.77 (standard deviation [SD] 2.19) (0: “not useful at all”; 10: “very useful”) and mean score after studying psychiatry was 6.49 (SD 2.23) (paired samples t = 2.896, p=0.005).

Students rated practicing OSCEs as the most useful element of teaching (mean 9.30, SD 1.06) (0: “not useful at all”;10: “very useful”), followed by tutorials (mean 8.96; SD 1.32), small-group teaching (mean 8.62, SD 1.68), workshops (mean 8.44, SD 1.72), clinical elective (mean 7.92, SD 1.98), lectures (mean 7.16, SD 1.79), large-group teaching (mean 6.72, SD 2.07) and video presentations (mean 6.71, SD 2.28) (F=40.287; p<0.001).

The most common self-rated personal learning style was reflector (stands back, observes before deciding) (28.8%), followed by activist (involved fully, enthusiastic) (21.6%), theorist (analytic, perfectionist) (20.7%) and pragmatist (keen to try new ideas, impatient) (4.5%) (one-sample Kolmogorov-Smirnov test: p<0.001). Among those who stated that their style was a “combination” (24.3%), the most common dominant style was activist (42.9%).

Students rated OSCEs as the most appropriate examination modality (mean 8.81, SD 1.43) (0: “not at all appropriate”; 10: “very appropriate”), followed by case-presentations (mean 7.77, SD 2.13), written examination (mean 7.22, SD 2.07), attendance 7.03, SD 2.35), clinical elective (mean 6.70, SD 2.48) and log-book (mean 5.55, SD 2.63) (F=30.282; p<0.001).

At the end of their second psychiatry module, students’ mean rating of teaching in psychiatry was 7.95 (SD 1.36) (0: “very weak”; 10: “very strong”). Mean rating of quality of tutorials was 8.73 (SD 1.34) (0: “poor”; 10: “excellent”). Clinical electives in rural services were rated higher than urban (mean 8.20, SD 2.06, and mean 7.34, SD 2.00, respectively; paired samples t=-2.110, p=0.039) (0: “not good at all”; 10: “excellent”).

A majority of students (88.2%) were aware of UCDs modularisation programme. A majority (65.8%) believed there were ways in which psychiatry teaching could be improved, through administrative changes and increased patient contact. A majority (89.1%) reported their experience of psychiatry changed their attitude towards mental illness, through increased understanding and tolerance (Table 1).

Discussion

The importance that psychiatry students at UCD accord to OSCEs is interesting and merits further study. This form of teaching and assessment is especially useful for identifying specific performance-related deficits (e.g. clinical reasoning, communication, etc.) [6]. At UCD, typical OSCE stations include explaining anti-depressant medication to a patient or calculating the QTc interval on an electrocardiogram. Students' preference for OSCEs may reflect the closeness of OSCE as a form of learning to OSCE a form of assessment: OSCEs both focus on specific clinical skills *and* help prepare for examinations.

Students' ratings of personal learning styles [4] were generally consistent with the diversity of styles outlined in the existing literature, with almost one third of students self-rating as "reflector", one quarter self-rating as "combination", one fifth self-rating as "activist" and a further fifth self-rating as "theorist". Overall, these findings reflect strong emphases on both reflective and activist learning styles, suggesting that both styles should be adequately catered for in future development of teaching programmes and educational initiatives at the school.

The variety of preferred learning styles highlighted in this study reflects the fact that differing combinations of approaches may work better in different circumstances and a combination of styles can optimise learning under different circumstances [4]. It is recommended that curriculum review processes take greater account of this finding in future recommendations: a diversity of teaching approaches is likely to offer the most benefits to such a diverse group of learners, with emphases on both reflective and active teaching methods, to reflect preferred learning styles.

Study strengths include a focus on important themes in medical education; the 100% participation rate; the anonymity of responses, minimizing bias; and the diversity of learning experiences among students.

Limitations of the present study include significant limits to the generalizability of certain findings: the details of modularisation and re-structuring programmes, for example, may vary between universities, so certain results may be less generalizable to universities with different models of modularisation. In addition, all students in the present study were drawn from a single university, possibly also limiting generalizability in relation to learning styles and other results. Notwithstanding this point, all modularisation programmes share certain features, and modularisation at UCD is not an atypical example [3]. Nonetheless, it is notable that this study did not include evaluation of individual teachers, and there remains the possibility that the skill, enthusiasm and teaching atmosphere in this particular medical school has a positive impact on findings, possibly further affecting generalizability. Further studies in other universities are required. Finally, our survey was administered at one point only, after the final psychiatry examination (before results), so students' assessments of their interest in psychiatry as a career before the psychiatry modules were retrospective; a prospective methodology would have been preferable.

Conclusions

Students' interest in psychiatry as a career increases during psychiatry teaching and students rate OSCE as the most useful element of teaching and examination. The most common learning style is "reflector"; two-third of students believe teaching could be improved further (increased patient contact); and 89% report that experience of psychiatry changes attitudes towards mental illness (e.g. increased understanding).

Future research could usefully examine the extent to which these findings are university-specific or instructor-dependent, as many students are heavily influenced by the instructors with whom they work. Information on the consistency of various teaching, examination and modularisation methods would also be useful, as it is possible that, for example, the quality of OSCEs varies across medical schools.

Finally, it would be interesting in future studies to look more at learning style and any correlation between it and satisfaction with the various teaching methods.

Conflict of interest

None

Acknowledgements

The authors are very grateful to the staff and students of the School of Medicine and Medical Science at UCD for their participation in this study. The authors are very grateful to the peer-reviewers for their helpful comments and suggestions.

Table 1 : Students' free-text comments on their psychiatry learning experience at University College Dublin (representative selection)

"Discussion and dealing with real case scenarios was excellent"
"Modularisation and learning experience was very good"
"Clinical attachment could have more patient/doctor contact"
"Not enough experience with the patient"
"Obtained a deeper understanding of the symptoms and treatment"
"Reinforced that how common mental illness is"
"Very interesting field and worth taking it as career"
"Now I really respect psychiatry as a profession"

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