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Learning preferences and learning styles: a study of Wessex general practice registrars

I read this paper with interest.¹ Sadly, the authors make the mistake of taking a very complex area of educational theory and applying it in an over-simplistic way, and thereby reach unjustifiable conclusions.

Learning styles, as measured by Honey and Mumford's learning style questionnaire,² represent at best a snapshot of a student's preferred learning style at a given instant in time. Research assessing the validity of this tool is far from conclusive. Further, there is little evidence that a learning style will remain the same for a given learner a year or even a few months on.³ It seems likely that many factors influence an individual's learning style questionnaire classification; internal (for example intelligence, motivation or anxiety levels) and external (such as time available for learning, available learning resources, and the reason for learning). On reflection, most of us will be aware of having changed our preferred learning style in response to different circumstances during our careers.

It is therefore futile for GP educationalists to simplistically try and match their teaching style to that of an individual registrar's initial learning style questionnaire score. Further, it is unrealistic to expect course organisers on a day release course to match each registrar's assessed learning preferences. A more realistic approach perhaps, is to regularly use a range of diverse educational methods, to allow a group of young doctors with a variety of learning styles to benefit from their course.

The situation is complicated further by research from Australia,⁴ which identifies a tendency for experts in certain academic subjects to have a preference for a given learning style. It is suggested that students perform better when they change their style to match it. Perhaps

we should not be afraid to allow registrars to model their learning approach on that used by experienced general practitioners, rather than vice versa?

BILL IRISH

Course organiser, Department of General Practice, Royal United Hospital, Bath, BA1 3NG.

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The study of learning styles by Lesmes-Anel and colleagues addresses some interesting issues for a general practice.

Like Lewis and Bolden's¹ sample of trainers and general practice tutors, I am a reflector theorist, as have most of the general practice registrars at our practice for the past five years.

Difficulties arise when the preferred learning style is dramatically opposed. The authors suggest that trainers should develop style repertoires to deliver teaching in all four learner styles. Practical experience tells me that this is quite difficult to achieve, and I would suggest that most trainers would require training themselves to develop those skills.

A completely separate point is that the authors suggest in the text that several general practice registrars have not experienced video analysis of consultations. This is at variance to their results in Table 2, that suggests that all responders have experience of the video component of summative assessment, or at least have stated a preference as to whether they find it useful or unhelpful.

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ALEXANDER WILLIAMS

St Thomas Medical Group Research Unit, Cowick Street, Exeter.

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Author's response

Learning style is a cognitive style, and is influenced by underlying personality traits and states resulting in variation over time. Learning style assessed by the much researched Myers-Briggs Type Inventory show high test-retest correlations over a 30-month period of 0.62 to 0.83.¹ The Honey and Mumford learning style questionnaire, unlike the Myers-Briggs Type Inventory, does not need a trained psychometric assessor approved by the British Psychological Society to administer it, and has the further advantages of relative simplicity and a straightforward guide to developing the four learning styles suitable for trainers and registrars.² More research is needed to underpin its reliability and validity within general practice.

Given the limited resources available to the day release course, Dr Irish is justified in stating that provision of a diversity of educational methods is the optimal way to engage learners. Interactive learning produced mainly positive experiences in our sample. One-to-one learning is best achieved through the trainer and registrar partnership.

Many registrars found the summative assessment components unhelpful for their learning, and not all aspects of the day-release course and training within the teaching practice were helpful for all registrars. A view about the helpfulness to their learning of video consultation analysis was held by all of the sample, although not all had experience of it in general practice.

Registrars who are malleable can

adapt to a given teaching style. Difficulties arise when a registrar cannot flex their learning style to match a teaching style or the diverse learning environment of general practice. The Honey and Mumford learning style questionnaire presents the trainer with a vehicle to diagnose learning problems and develop other learning styles, addressing arresting development. For some problems access to more specialised career development may be a valid option.³

While this area of learning is potentially complex, it holds many opportunities for learning development, as our conclusions state.

GEOFF ROBINSON

Dr G Robinson, The Lake Road Research and Development Practice, Nutfield Place, Portsmouth, Hampshire PO1 4JT. E-mail: Geoff.Robinson@btinternet.com

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Measuring work in general practice

A recent *BJGP* editorial¹ highlights the problems inherent in measuring performance within general practice.

We recently conducted a retrospective cohort study within an inner-city general practice. We suggest that our findings illustrate the difficulty in devising appropriate performance indicators. Neither measurement of the numbers who were given anti-smoking advice, nor of the numbers who reported having stopped smoking in pregnancy, appeared to be good indicators of the quality of work involved in attempting to reduce the percentage of women who smoke during pregnancy.

We identified all mothers with a child aged under 18 months who had attended the practice for routine antenatal care. We administered a semi-structured questionnaire to 113 women, aged 18 to 43 years: 52 (46%) reported smoking immediately prior to their last pregnancy. Twenty others were identified as eligible for inclusion in the study; however,

repeated attempts to contact them failed. Difficulties included changed telephone numbers, addresses, and different names of child, mother, and father. However, information gained in attempts to contact indicated no difference in age, economic activity or living conditions between these mothers and the participants.

Only 12 reported stopping smoking during pregnancy: (40/113 [35%]) continued smoking despite many (30/40 [75%]) reporting that they believed smoking was harmful to both mother and unborn child. The majority of smokers recalled having been given anti-smoking advice by their GP (43/52 [83%]) and/or hospital (50/52 [96%]).

A prevalence of 46% smoking at the start of pregnancy is higher than that of the general population, but is in keeping with that of a largely economically inactive female population who live in an area of socioeconomic deprivation.² No measure of biochemical validation was included in the study: inaccuracies in self-report of smoking are more likely to underestimate than overestimate the size of the problem.

Merely measuring numbers does not reflect the practical difficulties encountered in trying to deliver quality care, or engage target groups, particularly in preventive care in general practice. General population data do not reflect the challenges existing within specific situations.

The high proportion of mothers who continued smoking despite admitting having received anti-smoking advice, and reporting a belief that cigarettes were harmful, indicates how measuring outcomes fails to take account of problems encountered in the process of translating knowledge into behavioural change.³

We agree with Roland and Marshall¹ that GPs must not allow their discipline to be reduced to one or two summary figures. It is to be hoped that with the current emphasis on accountability, the aspects of general practice work that are difficult to measure will not be forgotten, but will be appropriately valued and rewarded.

MARGARET E CUPPLES

Department of General Practice, Queen's University, Belfast BT9 7HR.

SANDRA GAWLEY

Senior House Officer, Antrim Area Hospital, Antrim BT41 2RL.

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Patients certainly do want their general practice to be accountable and offer a high quality of provision, and they welcome opportunities to make this clear. Aspects of care that are important to patients, such as the communications skills of clinicians and the ease with which they can obtain an appointment, can be more tricky to quantify than, for example, data on prescribing patterns and hospital admissions. To ensure continuing improvement, however, the discussion must be moved on from questions about the most effective means of measuring service, to practical methods of obtaining the patient perspective and using this patient input to enhance standards of care.

A pilot study in North & East Devon Health Authority recently capitalised on the results of systematic patient feedback from 8600 patients about the quality of care offered by their local general practice ($n = 42$), and by individual clinicians ($n = 206$). Two general practices were supported in establishing a 'Critical Friends Group', comprising equal numbers of patients and practice staff. Together, the group scrutinised the practice results of the improving practice questionnaire, which was designed and implemented by the Client-Focused Evaluations Programme in Exeter. The group developed a number of strategies for dealing with issues of concern. In both cases access and continuity of care were key considerations. The group became a lively and inclusive forum for reviewing the effects of practice attempts to strike a balance between fast, 'advanced' access developments, and the needs of many vulnerable patients requiring ongoing personal care from a familiar clinician.

The Critical Friends Group concept is currently being rolled out to other general practices in the Health Authority, and is now linked with the new NHS Patient Advocacy and Liaison Service (PALS). Critical Friends Groups are expected to

provide a practical and effective means of ensuring ongoing dialogue and partnership between general practices and patients which, in many cases, begins with the measurement of patient satisfaction.

Quality improvement will only be perceived as such by patients if they continue to have opportunities to share perspectives and concerns with the professionals responsible for their care, as constructive and respected partners.

MARY CARTER
MICHAEL GRECO

Exeter & North Devon NHS Research & Development Support Unit, University of Exeter.

Patients as poets

Taking
perfectly good
normal speech and chopping it,
up at,
random
into staccato intervals,
.....
still does
not transform it
into poetry.

PETER DAVIES

GP, Mixenden Stones Surgery, Halifax,
West Yorkshire HX2 8RQ.

Condom compliance failure in Africa: limitations of the biomedical approach

Whether or not the resolutions of the recent Catholic Bishops Conference in South Africa (July 2000) will have a bearing on condom use in South Africa, or indeed the rest of Africa, is very hard to tell. The main resolution of the conference was to abandon the current efforts, which promote the use of condoms, since the condom campaigns encourage pre-marital sexual intercourse. The almost complete dominance of the biomedical or medical engineering model on the subject of HIV and AIDS in medical journals over the past 20 years appears to satisfy what qualitative researchers term 'face validity'. Many researchers on the subject of condom use appear to remain prisoners of biomedicine.

Assuming that the use of condoms would be very effective in preventing the spread of AIDS, why is the message failing to get across? The engineering model of medicine has been shown to fail patients in many respects. I would suggest that the zeal associated with condom promotion should be re-examined in the light of its limitations. There should be an emphasis on non-selective patient education and participation ('patient centredness'). Fear, stigma, and scare-stories should form no part of this education and participation. Patients need to know that contraceptive methods, including condom use, reduce the likelihood of unwanted pregnancies and serious sexually transmitted diseases such as gonorrhoea, syphilis, and chlamydia. Any discussion around HIV/AIDS should include a discussion on all other sexually transmitted diseases, most of which are treatable. This message must form the basis of a prevention strategy.

A recent paper in the *BMJ* by Shelton and Johnston¹ represents an example of the biomedical approach in the fight against AIDS. The opening remarks by those authors appear to be critical of other approaches on the subject for prevention, but paradoxically they offer nothing new or revolutionary. They conclude that, 'in Africa, providing condoms is cheap and cost-effective ... a first priority must be prevention'. Promoting the use of condoms or other contraceptive methods must be seen in terms of compliance or concordance with medication, which requires patient co-operation.² Condoms cannot be treated differently from say, anti-hypertensive or diabetic drug therapy. Regardless of social class, race or colour, patient compliance with anti-hypertensive therapy appears to decrease with the passage of time.^{3,4} It is perhaps because of similar trends that we witness contraceptive/condom use failure universally. In addition, the lay beliefs of the patient or would be condom user need to be addressed.⁵

Reto Nuesch *et al* concluded in their anti-hypertensive treatment compliance study that 'other factors independent of a patient's willingness to adhere to a treatment regimen are more relevant in explaining resistance in most patients'.⁶ Other such factors should include:

1. An understanding of the patient as a person — i.e. the patient's autonomy and self-determination.⁶

2. An understanding of the patient's daily physical environment — and, where possible, the health professional should share the same habitat.⁷ (Of the multitude of authors on the subject of HIV/AIDS in Africa, only a paltry pittance have lived among Africans.)
3. An understanding of regional and/or tribal culture, and noting that like Europe or Asia, African people cannot be assumed to be homogeneous.

In conclusion, I suggest that biomedicine, i.e. the engineering model of health care, needs several non-selective inputs, e.g. social science, public health and education.⁸ There has to be an equal and dynamic equilibrium between biomedicine and societal needs with the full participation of all stakeholders. The prescription of billions of condoms or medications with little or no participation of the population (patients) will almost certainly fail. The participation of family physicians and other health professionals in primary health care settings in many parts of Africa would be of great importance in any prevention project.

S W P MHLONGO

Head, Department of Family Medicine and Primary Health Care, Medical University of Southern Africa, Medunsa, 0204, South Africa.

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Sacral decubiti, the median sacral artery, fluorescein, and acts of God

Sacral decubiti are typically mid-line, bilaterally similar, deep, do not bleed, pass abruptly through stages 1 to 4, and heal poorly. This suggests an arterial cause. The median sacral artery is like an end-artery coursing mid-line from the aorta along the sacrum inner surface to the coccyx, having lumbar branches passing with veins and nerves through the sacral foramina to serve the surface skin and subcutaneous structures.¹

Occlusion of the median sacral artery can cause an infarct resulting in a sacral decubitus ulcer. Occlusion can be by thrombosis, embolism or artery wall thickening anywhere from its aorta orifice to the terminations of its lumbar branches. Such occlusion is an illness, and not owing to poor care, and is, therefore, an act of God.^{2,3} This is important in litigation.

A fluorescein study using a video camera with a Kodak #12 yellow filter and ultraviolet lighting can delineate viable skin for bilateral flaps to eliminate the ulcer. This gives a permanent record for review at will. The fluorescein technique

is identical to that used for eye examination; the fluorescence will appear in the sacral skin in about 9 seconds. Localised non-appearance signifies an arterial deficit and intra-arterial obstruction must be considered.

Pathologists doing autopsies should examine the median sacral artery when a sacral decubitus is present. Protein C and coagulation studies may be important clinically.

Physicians in any specialty seeing patients with sacral decubiti should consider a median sacral artery occlusion as a cause for a sacral decubitus. Decubiti at other sites are not included in these remarks.

ROBERT M WEBSTER

Retired pathologist/general practitioner,
Jasper, Georgia, USA. E-mail: rmwebster@ellijay.com

THOMAS J SCHERMERHORN

Retired ophthalmologist, Atlanta,
Georgia, USA.

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Correction

The authors of 'Symptoms, signs, and prescribing for acute lower respiratory tract illness,' (Holmes *et al*, March 2001 *BJGP*) wish to point out an error which appeared in Table 4 (page 180) of their paper. The line of data for 'Temperature >38°C' should have read '0.39 (0.06 to 2.53)'. The figure for the lower confidence interval was given incorrectly as '0.6'. The authors apologise for any confusion this may have caused.