\$34 212 per patient. Clearly, utilisation review is in its infancy, and should be restricted to pilot studies until methods of proven value and acceptable cost have been developed.

POSTGRADUATE ACTIVITIES

What accounts for the collective masochism of the medical profession? Are our standards low? Do we give a poor service? Do we suffer by comparison with other professional groups—dentists, lawyers, architects? While nobody would urge complacent acceptance of things as they are, must we go to the other extreme and wallow in self-criticism and public confessions, again like the Chinese at street committees, our lives being punctuated by periodical assessments? I think not. The profession should fit the framework of the country in which it works. Democratic processes are traditionally regulated by a system of checks and balances. The Queensland general practitioner, through whose door pass 40 to 60 patients a day, may not have much time for self-assessment, but his college already has a programme of continuing education, and if he is lucky enough to get a locum, or works in a group, he can get away for a week or a month each year to a refresher course. The private consultant must convince his referring doctors that he is competent. The hospital specialist, be he visiting or whole-time, is ever conscious of the critical eyes of colleagues, juniors, and paramedicals. At my own hospital there is more postgraduate activity than I have time to take part in, and though, like every other doctor, I ought to read more, I am unlikely to do so unless some philanthropist pays me for the purpose. If a Queensland country general practitioner, run off his feet most of the year, fails to attend some postgraduate activity prescribed for him by a city-based bother boy, and is delicensed, will his community

be better served by having one less doctor? Are we to increase out hospital staff by, say, 10%, especially in a time of economic constraint, in order to let the present staff have more reading time? What evidence is there that postgraduate activities, "structured" by educationalists, will develop better practitioners than we have now, when doctors select their own reading, meetings, courses, and study tours from the plethora available?

I suggest it is time for the profession to examine the claims of educationalists; see if the return in useful training is commensurate with the administrative costs of formal training and assessment programmes; and form an opinion on whether some of the money and effort spent on elaborate administrative arrangements could not be better spent on providing opportunities for doctors to make more use of present facilities—for instance, by finding locums (who better than the programme planners themselves?) to go to the country to enable country-based practitioners to attend teaching centres.

Bother boys are usually motivated by the inborn conviction that they have not only the ability but the duty to tell other people how to regulate their lives. If we are not careful, they will soon convince us, with the aid of the con-men, that this is so. We must look critically at the claims and plans of these people. Doctors of the land, unite! You have nothing to lose but the risk of chains.

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General Practice Observed

Sexual knowledge and attitudes of general practitioners in Wessex

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Summary

A survey of the sexual attitudes and knowledge of general practitioners in Wessex found that GP trainees and those in practice for less than 10 years were less conservative

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and better informed than doctors in practice for 20 years or more. The results suggest that the attitudes of the doctors are determined by their early environmental influences rather than their clinical experience.

Introduction

Masters and Johnson's publications in 1966¹ and 1970² highlighted the shortcomings in medical education about sexual behaviour. Since then growing public awareness of sexual problems and their treatment has led to an increasing demand for advice on them within the Health Service. Part of the difficulty in dealing with sexual problems is that the average practitioner has not been trained to handle these cases and, therefore, feels uncomfortable when confronted with them. In addition, many doctors need to overcome and recognise their own prejudices relating to sexuality so that an objective assessment of the couple's difficulties might be made. Indeed, this deficiency

has stimulated a series of articles in the *BMJ* on aspects of sexual medicine.³

To our knowledge, there are no published data on the sexual knowledge and attitudes of doctors in Britain, so it seemed appropriate to conduct such a survey among general practitioners attending the various postgraduate teaching programmes taking place in the Wessex Region.

Methods

We used the Sex Knowledge and Attitude Test (SKAT) designed by Harold Lief and David Reed with modification by Kurt Ebert and Neville Vines of the Center for Sex Education in Medicine, Philadelphia, USA.⁴ The questionnaire is divided into four parts: (1) attitude, (2) knowledge, (3) demographic data, and (4) personal sexual behaviour data. We report only the answers to the first two parts.

The attitude section is designed to quantify responses to a series of statements. It contains four groups of questions relating to heterosexual relations, sexual myths, abortion, and autoeroticism, there being 35 questions in all. In replying to each question the interviewee may strongly agree (SA), agree (A), remain undecided (U), disagree (D), or strongly disagree (SD). The scoring system is specifically designed for analysis of group data. The scale is non-linear: equal score differences at various points on the scale do not carry similar significance. It should be emphasised that the statements are put for the purpose of obtaining a response. There is no correct or incorrect answer—it is certainly not suggested that we could decide which attitudes are acceptable and which are not.

The scores have been related to those of an initial study group of over 1000 North American students. For example, in terms of heterosexual relations a score above 60 regards premarital relations as totally acceptable or even desirable for both men and women. Scores below 40 imply a conservative or disapproving attitude towards pre- and extramarital relations. For sexual myths, scores above 60 imply a rejection of popular misconceptions such as "the possession of contraceptive information is often an incitement to promiscuity," and scores below 40 indicate acceptance of such falsely held ideas. For abortion, scores above 60 imply a view that abortion on demand is acceptable, scores below 40 regard therapeutic abortion, unless on strongly indicated medical grounds, as unjustifiable. Finally, for autoeroticism, scores of 60 or above indicate that the acceptance of autoerotic stimulation is healthy, scores below 40 regard masturbation as unhealthy and harmful.

Similarly, the knowledge part of the test consists of 71 questions covering a wide range of normal and abnormal sexual physiology and behaviour. Of these 71 questions, 50 are to assess sexual knowledge; the remaining 21 were inserted for teaching purposes and are not included in this analysis.

A total of 175 general practitioners took part, and they were divided into the following groups: GP trainees (30), GPs in practice less than 10 years after qualification (42), GPs in practice 11-20 years after qualification (35), GPs in practice more than 20 years after qualification (24), and teachers in general practice (44). The last group consisted of experienced GPs, some of whom are trainers for doctors entering general practice and others teach primary medical care to undergraduates. Most had been in practice over 10 years.

Results

ATTITUDES

The overall scores for the group are shown in table I.

These findings suggest that GPs in practice for the longest length of time have more conservative attitudes than their shorter-serving

TABLE I—Overall mean scores ($\pm$ SD) of GPs in Sex Knowledge Attitude Test

	Heterosexual relations	Sexual myths	Abortion	Autoeroticism
GP trainees	43.8 $\pm$ 11.5	46.3 $\pm$ 9.8	37.4 $\pm$ 7.7	38.8 $\pm$ 8.6
GP <10 yrs	45.9 $\pm$ 11.7	49.2 $\pm$ 9.6	41.6 $\pm$ 10.5	51.2 $\pm$ 9.8
GP 11-20 yrs	42.2 $\pm$ 10.5	45.3 $\pm$ 7.3	41.2 $\pm$ 8.3	48.2 $\pm$ 7.6
GP >20 yrs	38.2 $\pm$ 9.9	35.4 $\pm$ 12.8	40.2 $\pm$ 9.2	41.8 $\pm$ 13.3
GP teachers	41.1 $\pm$ 11.0	44.6 $\pm$ 8.4	41.9 $\pm$ 8.8	48.8 $\pm$ 7.1

colleagues. Many of these scores fell within the range 40-60, which is the norm for North American students. There were outstanding exceptions, however. The trainees showed a difference with regard to their attitudes towards abortion and autoeroticism. The established GPs had overall low scores and in particular seemed to have retained some misconceptions concerning sexual behaviour.

In their responses to individual statements the groups showed some areas of uniform agreement. All five groups rejected the sexual myths "Experience of seeing family members in the nude arouses undue curiosity in children," "Strong legal measures should be taken against homosexuals," and "The lower class male has a higher sex drive than others." On extramarital intercourse very similar responses were obtained to the two statements widely separated in the questionnaire: "Women should have coital experience before marriage" and "Men should have coital experience before marriage," about half of all groups disagreeing with the statements, one-quarter agreeing, and the remainder being undecided.

In attitudes to abortion, there was also a remarkable uniformity of views in the experienced; but here, perhaps surprisingly, the trainees seemed to have a less liberal attitude than their GP teachers.

Differences in attitudes occurred to relatively few statements, mainly those associated with the so-called sexual myths. Thus, in response to the statement "The possession of contraceptive information is often an incitement to promiscuity," the response was as in table II.

TABLE II—Response to statement "The possession of contraceptive information is often an incitement to promiscuity"

	Strongly agree %	Agree %	Undecided %	Disagree %	Strongly disagree %
GP trainees		20.0	16.7	46.2*	16.7
GP <10 yrs		16.7	9.5	42.9	31.0
GP 11-20 yrs		20.0	20.0	48.6	11.4
GP >20 yrs	16.7	33.3	20.8	29.2*	
GP teachers	2.3	18.8	15.9	47.7	15.9

* $\chi^2 = 6.23$. $0.02 > P > 0.01$.

Thus three-quarters of the GPs in practice for less than 10 years and two-thirds of the GP trainees either disagreed or strongly disagreed with this statement, which contrasted significantly with the responses of the older GPs.

In response to the statement: "Oral genital sex play is indicative of an excessive desire for physical pleasure," the results were as in table III.

TABLE III—Response to statement "Oral genital sex play is indicative of an excessive desire for physical pleasure"

	Strongly agree %	Agree %	Undecided %	Disagree %	Strongly disagree %
GP trainees	3.3	13.3	6.7	66.6*	10.0
GP <10 yrs	4.8	7.1	11.1	52.3	23.8
GP 11-20 yrs		34.2	11.4	48.5	5.7
GP >20 yrs	8.3	45.9	8.3	37.5*	
GP teachers		15.0	18.1	56.9	9.0

* $\chi^2 = 8.472$. $0.01 > P > 0.001$.

In this instance, the response of the GP trainees and those in practice for under 10 years contrasted even more significantly with that of those who have been in practice for more than 20 years. This probably illustrates the difference in attitude that might be expected between people of different generations.

All the experienced doctors studied showed evidence of a tolerant attitude to statements relating to autoeroticism. Indeed, in answer to the statement "Masturbation is generally unhealthy," 152 out of the 175 either disagreed or strongly disagreed.

KNOWLEDGE

The overall scores, marked out of 50 test questions, for the groups are shown in table IV. The placing between the groups of GPs showed close similarity in the scores with the possible exception of those GPs

in practice over 20 years, who scored at a lower level than their younger colleagues, but the difference was well within the tolerance limits for statistical errors.

The responses to questions relating to contraception were answered with a high degree of accuracy, there being an 80% or above correct score to all questions from all the groups of doctors. Questions related to sexual physiology were less accurately answered. Responses to the

TABLE IV—Overall mean scores for correct answers to 50 test questions

	GP trainee	<10 yrs	11-20 yrs	>20 yrs	GP teachers
Mean score ± SD	35.1 ± 6.5	36.9 ± 7.2	32.6 ± 5.2	32.6 ± 6.8	36.5 ± 6.2

false statement⁵ "There is no difference between men and women with regard to the age of maximal sex drive" varied from 63% correct in the trainees to 42.8% correct in GPs of 11-20 years experience. There was a wide range of sexual knowledge about homosexuals and homosexual behaviour. The response to the true statement⁶: "The body build of most homosexuals lacks any distinguishing features"—varied from 90.4% correct in GPs of less than 10 years' experience to 58.3% in those of over 20 years' experience.

All groups did badly (50-58% correct replies) in their response to the false statement,⁷ "Transvestitism (a form of cross dressing) is usually linked with homosexual behaviour."

The answers to questions dealing with knowledge relating to sexual offences were varied. The trainees did worst—43% correct—in reply to the statement that was judged to be true⁸: "A high percentage of those who commit sexual offences against children is made up of the children's friends and relatives." GPs with 20 years experience scored 62.5% correct answers.

A further statement⁹ "The emotionally damaging consequences of a sexual offence against a child are often attributable to the attitudes of the adults who deal with the child rather than the experience itself," judged to be true, was answered correctly by only 54% of the most senior doctors but by 70% of trainees.

Isolated areas of expertise were noticed in the group of GP teachers, and these were found to be related to their recent viewing of an excellent film on aspects of psychosexual function based on the Masters and Johnson concepts, *Sexuality and Communication*, by the Chernicks.¹⁰

Discussion

Our study aimed at evaluating the attitudes of doctors to various topics related to sexual medicine and their knowledge of

such matters. The results in the section on attitudes suggest that GPs have rather conservative views, but there is no study for comparison from this country. The longest-serving GPs seem to have the most conservative attitudes overall, as might be expected. Nevertheless, the GP trainees were those with the most conservative attitudes to the abortion and autoeroticism sections. This may reflect their youth but may also suggest that their education in these respects has been incomplete. For example, the more restrictive attitude of trainees to abortion may reflect their lack of personal experience in assessing the multifactorial aspects of a request for termination.

The knowledge section of the questionnaire illustrates the extent of deficiencies; indeed, we suspect there may be similar gaps among many specialists in obstetrics and gynaecology. Nevertheless, many GPs in Wessex are interested and enthusiastic, as evidenced by their attendance in large numbers at family planning and psychosexual courses and their willingness to take part in this study.

We thank the general practitioners of Wessex who kindly agreed to complete the SKAT questionnaire; Dr George Swift, postgraduate adviser in general practice, University of Southampton, and Dr Ralph Moore, regional postgraduate dean of medical studies, University of Southampton for their support; and Dr J G Andrews, head of theoretical studies, Marchwood Engineering Laboratories, and visiting lecturer in mathematics, University of Southampton, who kindly advised on statistical analysis. We are grateful for the constructive comments of Dr Harold Lief and his computer analysis of the questionnaire.

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ONE HUNDRED YEARS AGO The great drawback to respirators is their unsightliness. The black patch across the mouth cannot be rendered becoming by any artifice, and there are but few persons with whom it does not distinctly constitute a species of disfigurement. It is very unfortunate that such should be the case, for the respirator is an exceedingly useful little instrument. It is also unfortunate that respirators are associated in the minds of many with phthisis; and there exists with most people a strong objection to be thought the subject of that grave affection. Such are the two chief objections to the respirator; and they are both based on an aesthetic foundation.

The respirator must be worn to be appreciated. It will then be found to be a great protection against affections of the respiratory apparatus. The inference, that if it be desirable as furnishing some protection to lungs no longer in their integrity, therefore it will be useful in protecting delicate organs from becoming the subject of disease, is not a difficult one to draw. Nevertheless, many prefer to run the risk of bronchitis, and to take their chance of escape, rather than to resort to this ingenious but unsightly preventive agent. In the writer's own experience, the respirator has been the means of avoiding the persistent winter cough, with expectoration, which used to come on with the cold weather and stayed till the more genial temperature of spring. It was originally purchased during the course of a trouble-

some visitation of bronchitis in a subacute form, and in very severe weather. The relief experienced was immediate and pronounced. It was soon found, too, that resort to it very often kept off the exacerbations from transient causes, which would otherwise have been produced. For instance, on cold evenings, after leaving a warm fireside to take the train along a cold river side in order to reach home, an exacerbation very frequently was induced. The rapid change of temperature from the warm room to the cold outer air and the chilly railway carriage, caused a hyperaemia of the lining membrane of the airtubes, which gave rise to an abnormal production of mucus, and this again to a series of expulsive movements to get rid of it. The respirator obviated all this by making the change of temperature less pronounced. The warm expired air heats the metal plate and the wires of the respirator, and on the inspiration of the cold air it becomes warmed by taking up this heat from the metal; and thus the extreme variation of temperature in the air inspired is obviated. This is one very important matter in the avoidance of winter bronchitis, as well as in the treatment of an established bronchitis.

Doubtless it will be objected to this, that it is not necessary to breathe through the mouth; that respiration should be conducted by the nose; but nevertheless it is a fact, that a great deal of respiration is carried on by the mouth, especially during conversation. (*British Medical Journal*, 1877.)