Patients' views of the ophthalmic optician

Part 2. Practitioner's work, training and valuation

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In our last article *(The Ophthalmic Optician,* October 28) we looked at patients' attitudes towards communication. We found that most people felt that oral 'instructions were quite adequate in themselves although a large minority preferred these to be augmented by written instructions. Most people wanted to ask more questions of their practitioners but were deterred. A major reason for this appeared to be the belief that practitioners were too busy. Clearly, effective literature could be a useful alternative to asking some questions. We looked at the reading ease of examples of ophthalmic literature and found that most only appeared suitable for fewer than half the population and asked whether this was good enough. In this article we look at patients' beliefs about their eyesight and the work of opticians to see whether there is a need for educational ophthalmic literature. Do patients have preconceptions or misconceptions which may affect their treatment? What expectations do they have about the success of a visit to the opticians? Do people actually know what an optician is — how she or he is trained? To answer these questions we constructed a second questionnaire which we distributed to a different set of people to our first. We also devised a quantitative and indirect method in an attempt to assess patients' overall satisfaction or otherwise with their practitioners

Ophthalmoscopy

We wanted to find out what people knew of ophthalmoscopy. The problem is that it is not easy to do this without influencing people in the process. To ask people whether disorders can be detected is to suggest to them that this can in fact be done although they may previously 'have been unaware that it was a possibility. We chose nine non-technical disorders and presented them to people asking which they thought could be detected by a careful and systematic eye examination. The results are shown in Table 1.

Sixty-nine per cent of the respondents ticked more than one disorder. Anaemia was chosen by 82 per cent and this was followed by diabetes with 50 per cent, high blood pressure 48 per cent, hardening of the arteries 27 per cent, leukaemia 22 per cent, multiple sclerosis 10 per cent, arthritis 8 per cent, asthma 5 per cent and bronchitis 2 per cent. Perhaps it can be argued that most people appear to have some awareness that the eyes can be a window on one's health as most ticked two or more disorders. However, although half thought diabetes and high blood pressure could be detected, only a quarter considered hardening of the arteries could be observed, indicating that most patients do not understand that opticians are examining the blood vessels at the back of the eye. Perhaps if ophthalmic literature gave more emphasis to this section of the eye examination it would lead to a greater 'appreciation of the need for frequent eye examinations.

History and symptoms

People tend to be suspicious when questioned about themselves. Sometimes this suspicion borders on the level of paranoia, as we found out. Although our questionnaires did not ask for a person's name and there was no way that respondents could be identified from their responses, some people took care to return them with 'none of your 'business' or something similar scrawled over the sheet. Opticians are, of course, aware of this problem and tread carefully when talking to their patients. An incautious slip could well ruin the rapport necessary for an effective eye examination and sight test. Sometimes it is necessary for practitioners to explain why they need particular information

Table 1:
Percentage ticking medical disorders in response to the question: 'Which of the following would you guess is detectable by a careful and systematic examination of the eyes?' Note that 69 per cent ticked more than 'one (n = 207)

	per cent
anaemia	82
diabetes	50
high blood pressure	48
hardening of the arteries	27
leukaemia	22
multiple sclerosis	10
arthritis	8
asthma	5
bronchitis	2

Table 2:
Percentage ticking items in response to the question: 'Which of the following would you consider it proper for an optician to ask about while he is examining and testing one's eyes?' Note that 86 per cent ticked more than one (n=221)

	per cent
general health	87
occupation	71
whether one has allergies	53
name of doctor	48
medicines	43
operations and injuries	40
hobbies	35
health of the family	25
whether one smokes	21
whether one is on the pill	17
whether one drinks	16
where one lives	16
whether one is married	6
education	3
family income	2

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before patients will give it. We wrote down a list of information which might be requested during an eye examination in order to see which questions the patients considered proper. Of 'course, it does not follow that people would necessarily object to answering questions that they do not select as 'proper'.

Eighty-six per cent ticked two or more topics which they considered proper (see Table 2). The most 'proper' question would appear to be an enquiry about one's health which was ticked by 87 per cent. This was followed by occupation with 71 per cent, allergies 53 per cent, name of doctor 48 per cent, medicines 43 per cent, operations and injuries 40 per cent, hobbies 35 per cent, health of the family 25 per cent, smoking 21 per cent, the pill 17 per cent, drinking 16 per cent, where one lives 16 per cent, whether one is married 6 per cent, one's education 3 per cent and family income 2 per cent. No doubt this paints a more open picture than one would expect to find normally, although only one person ticked all the items. The type of person who would object to these questions is the type of person who would have refused to complete our questionnaire in the first place, and we can expect a more conservative response from the general public than that indicated by Table 2. Nevertheless, it probably does give us an indication of the relative degree of relevance that patients see in different history and symptom questions.

Knowledge of eyesight

How ignorant are people on the question of their own and other people's eyesight? They may realise that they have one eye better than the other or that close or distant objects appear blurred but it does not necessarily follow that they will consider such problems important or indicative of a need to visit an optician.

Certainly some assessment of people's state of knowledge would seem to be essential before health literature can be written. Some such research has been carried out in the medical area (eg Ley, 1975) with unexpected results—ignorance is not always predictable. Surprisingly large proportions of people do not know the location of the major organs, do not know which foods contain starch, or which medicines contain aspirin.

We took 10 ophthalmic terms and asked Whether or not they applied to the patient's own eyes or spectacles. We could have asked for definitions of the words but we thought this might deter people from answering altogether. When people answered by ticking the 'don't know' boxes, we took this to indicate ignorance of the term's meaning or ignorance of their own eyesight. Of course a few who ticked 'yes' or 'no' will have done so in error and this means that our percentage of 'don't knows' is a conservative index of ignorance. A further factor likely to reduce the number of 'don't knows' is the bias within our sample as it contained a surplus of social group AB respondents. Even so, the figures are still likely to give us a relative idea of ignorance for the 10 ophthalmic terms.

Table 3:
Percentage of spectacle wearers indicating their ignorance by ticking 'don't know' in answer to these questions. Twenty-three per cent of the respondents contradicted themselves and by taking this into account we calculated revised estimates of ignorance which are given in parentheses (n=173).

	per cent	
'Are your spectacles bifocals?'	4	
'Are your spectacle lenses tinted?'	4	
'Do you have a squint?'	5	
'Are you short-sighted?'	9	(<21 per cent)
'Are you long-sighted?'	9	(<27 per cent)
'Do you have a lazy eye?'	10	
'Are you astigmatic?'	40	
'Are you myopic?'	43	(<54 per cent)
'Are you hypermetropic?'	58	(<73 per cent)
'Are you amblyopic?'	71	

The figures presented in Table 3 are for spectacle wearers only. If we consider the responses of non-spectacle wearers in our 'sample we find an identical ordering of terms, but we decided not to report these results in detail as the group is too small. Patients found most difficulty with the word 'amblyopic'. Seventy-one per cent ticked 'don't know' when asked whether they were amblyopic. This was followed by 58 per cent for 'hypermetropic', 43 per cent 'myopic', 40 per cent 'astigmatic', 10 per cent 'lazy eye', 9 per cent 'long-sighted', 9 per cent 'short-sighted', 5 per cent 'squint', 4 per cent 'tinted lenses' and 4 per cent 'bifocals'. It is interesting that the technical language words astigmatism, myopia, hypermetropia and amblyopia caused at least four times as much difficulty as the other words.

As we said, the percentage of 'don't knows' gives us a conservative index of ignorance. For this reason we also looked at the number of people who unknowingly contradicted themselves by indicating that they were short- *and* long-sighted or short-sighted hypermetropes, etc. Twenty-three per cent made such errors and revised figures taking into account these 'hypermytripes' *(sic)* are given in parentheses in Table 3.

Preconceptions

Eye care is not an area particularly renowned for old wives' tales or popular myths. Few people probably believe in the eyesight enhancing properties of carrots, and even the saying 'Boys don't make passes at girls who wear glasses' would appear to have not many adherents these days. But a number of beliefs exist which, while not demonstrably untrue, do persist without obvious proof.

One of these beliefs is that television is bad for your eyes. Indeed, recently a National Union of Journalists report contained a warning of potential hazards from video display units (devices which also contain cathode ray tubes — see Weale, 1978, for a fuller discussion). Among other things, the journalists were concerned about eye strain, intensified problems for those who already suffer from eyesight disabilities, and radiation problems. It could be argued that these attitudes reflect a Luddite mentality as video devices in the form of television have been around for over 40 years without noticeable harmful effects on eyes. On the other hand, they could be 'said to reflect an intelligent and cautious response to new technology as video display units are not identical to televisions and are used differently. Either way, there is an absence of hard evidence and we are dealing with beliefs without proof.

We wondered what beliefs the general public currently had about the effects of watching television. We also asked questions on the effects of dim lights, bright lights, sunglasses, and spectacles themselves. They are all questions where evidence is hard to come by. The questions and breakdowns of the responses are given in Table 4.

Reading in a dim light and not wearing spectacles when you need them were considered bad for your eyesight by almost 90 per cent of our sample. Wearing sunglasses all the time and very bright un-shaded lights were both thought to be bad by almost 80 per cent. Not unlike the journalists, almost 50 per cent thought watching television all the time was bad

Table 4:
Percentage ticking 'bad', 'none', 'good' or 'don't know' in answer to the question: 'What long-term effect over the years are the following likely to have on one's eyesight?' (n = 220)

	bad per cent	none per cent	good per cent	don't know per cent	per cent
'reading in a dim light'	88	8	1	3	100
'not wearing specs when you need them' ...	87	7	1	5	100
'wearing sunglasses all the time'	79	9	1	11	100
'very bright unshaded lamps in the home' ...	78	11	2	9	100
'watching television all the time'	49	32	1	18	100
'wearing spectacles all the time'	20	28	25	27	100

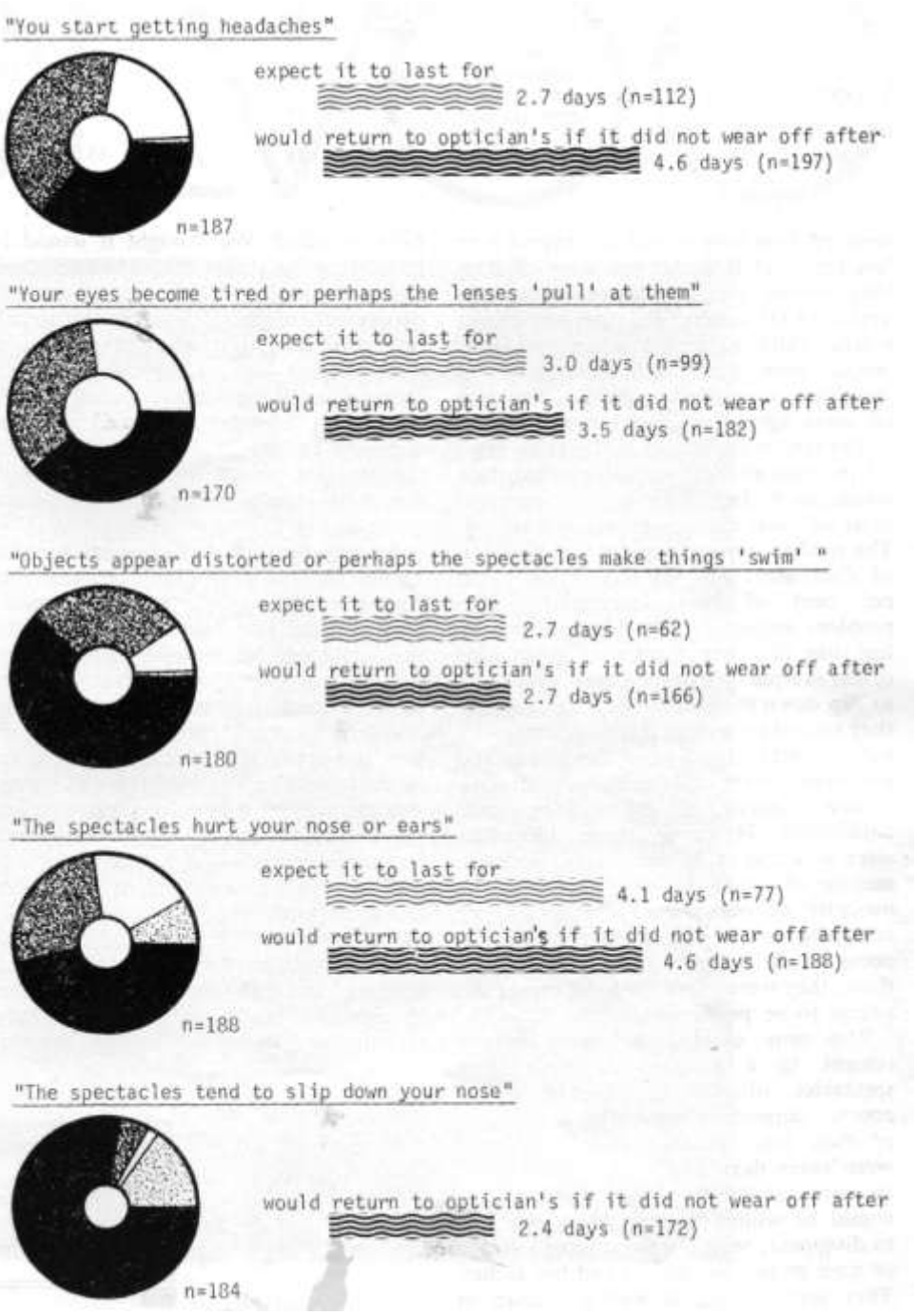
for your eyesight, although 32 per cent thought it had no effect and 18 per cent just did not know. The most varied answers, however, resulted from the question 'What effect does wearing spectacles all the time have?' Twenty-four per cent thought the likely effects beneficial in strong contrast to all the other questions, but 27 per cent said they didn't know while 28 per cent thought there would be no effect. Interestingly 20 per cent thought the effects would be bad. We have no evidence that the answers to the last question were affected by whether or not the respondents wore spectacles. It is possible that some people resist going to the opticians because they fear their eyes will become "lazy' and deteriorate once (they begin wearing spectacles, whilst if they persevere without then their eyes will make more effort and Stay better longer. It is perhaps this belief that we see reflected in the 'bad' replies to the last question. Alternatively we cannot rule out the possibility that these replies stem from the belief that wearing spectacles *all the time* would be inappropriate behaviour.

Appearance is obviously a major consideration for patients, so we also asked questions about the effects on this of spectacles and contact lenses (see Table 5). Sixty-nine to 68 per cent thought the wearing of spectacles made either no difference to one's appearance or was beneficial irrespective of whether they were 'talking about themselves or other people. However, it was interesting to note that people were more likely to say that glasses were good for *other* people's appearance or bad for their *own* rather than vice-versa. Only 4 per cent thought that contact lenses had 'a bad effect on appearance, and 39 per cent thought their effects were good.

Spectacles

As far as most patients are concerned we would guess that the main end 'product of a visit to the optician is not so much a clean bill of health for their eyes as a chance of getting a new pair of spectacles or lenses. Obviously if the spectacles do not fit or are uncomfortable the patients will be dissatisfied. We wondered what expectations people had about the success of their new glasses. Do they expect a perfect fit? Or are they resigned to some short-lived discomfort? Perhaps experience has taught them to be a little cynical? We asked people to imagine five types of difficulty experienced with new glasses and then asked four questions on each of these problems, (i) Would you expect this to happen? (ii) If this did happen would you expect it to wear off? (iii) If you expect it to

Fig 1



Key to Fig 1: The above areas give the proportions with the following expectations

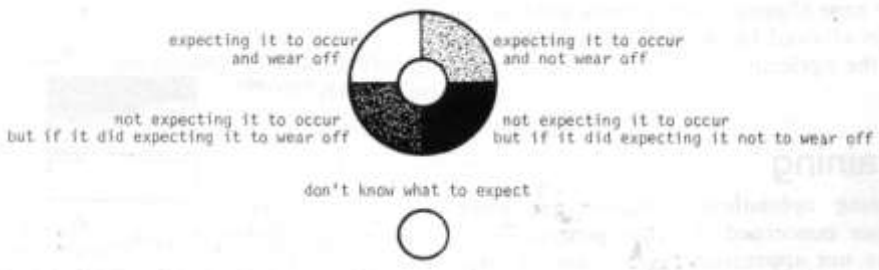


Table 5:
Percentage ticking 'bad', 'none', 'good' or 'don't know' in answer to the question: 'What effect do you believe that ... See below for remainder of questions (n=224)

	bad per cent	none per cent	good per cent	don't know per cent	per cent
'... spectacles (would) have on *your* appearance?'	17	51	17	15	100
'... spectacles usually have on other's appearance?'	8	45	24	23	100
'... contact lenses instead of spectacles usually have on other's appearance?'	4	38	39	19	100

wear off how long would you expect it to last for? (iv) If it did not wear off how long before you would return to the optician? Of course, one does not expect totally valid responses when one asks people how they will behave in an imaginary situation but there is likely to be some agreement between the two.

The results are shown in Fig 1. Twenty-six per cent of our sample expected their spectacles to hurt their nose or ears but most of them did not expect this to last. The median expectation for the duration of discomfort was 4.1 days. That is 50 per cent of those anticipating this problem expected it to have ceased by less than this time. Fewer — 16 per cent of the sample — expected their spectacles to slip down their noses. Not surprisingly they tended to believe this problem would not go away. Tired eyes, headaches and distortion were all problems that a sizable minority of 23 to 9 per cent anticipated. However, these difficulties were expected to be temporary, lasting a median of 3.0 to 2.7 days. Happily, the majority of our sample (81 to 51 per cent) did not expect these problems to occur at all. Asked, however, to imagine them, they were more likely to expect the effects to be permanent.

The time elapsed before a person returns to a practice to have their spectacles adjusted or checked is, of course, dependent upon the constraints of their job. Intervals most mentioned were 'seven days' and 'two to three days'. In terms of the time they thought they would be willing to wait for a problem to disappear, people seemed most tolerant of nose or ear discomfort and headaches. They were willing to wait a median of 4.6 days, but this may reflect people's belief in the likely duration of the difficulty rather than its severity. Perhaps the least 'tolerance' seemed to be shown for nose-slippage with a mere median 2.4 days allowed before an anticipated return to the optician.

Training

Young ophthalmic opticians are sometimes concerned that the general public may not appreciate the amount of training they have undergone before becoming fully qualified. We (thought it would be interesting to find out whether these anxieties are justified or not. We asked people where they thought ophthalmic opticians Who test and examine eyes were trained — providing them with six alternatives of university, special college, opticians, hospital, polytechnic and technical college. We also asked whether the training was full-time or part-time •and how long it lasted. The results are given in Fig 2.

Seventy per cent ticked more than one centre for training either because they considered these as alternatives or because they thought that more than one centre was involved. Nearly two-thirds (63 per cent) thought that ophthalmic opticians were trained in universities, and the majority of these thought this training was full-time. The median estimate for its duration was 3.6 years. Special college was the next most popular suggestion and was chosen by 47 per cent of our sample land again mostly for full-time training with a median duration of 3.2 years. Opticians and hospitals were chosen by 44 per cent and 39 per cent of people and, although most of these thought this training was full-time, a large number thought it would be part-time. Polytechnic and technical college training centres were only suggested by 14 per cent and 10 per cent.

If we look at 'ideal case' answers ('ideal' because they indicate the shortest route to qualification for the student) we find 21 per cent suggesting three years full-time at university, 6 per cent saying one year full-time at an opticians, and 5 per cent saying one year full-time at a hospital.

To get at the total amount of time thought to be required for training we also asked how long after leaving school before an optician would be fully qualified. We also asked this question about dentists and doctors so that we would see how people viewed the relative amount of training for the three professions. The results are presented in Fig 3. The median figures obtained were 4.7 years to train an optician, 5.2 years for a dentist and 6.4 for a GP. These three medians are only slightly longer than the ideal case times. We would expect a more representative sample of the general population to be less well informed because our sample had proportionately too many upper-middle and middle class representatives. A glance at Fig 3 shows that there is no evidence that the general public tend to underestimate the training of any practitioners let alone opticians, but it should be noted that small but significant proportions have little idea of the training involved.

Valuation of practitioners

We will now return to the final questions asked in our first questionnaire. In this, discussed in our earlier article, we were careful to pose parallel questions of all three professional services. We asked about the frequency of visits

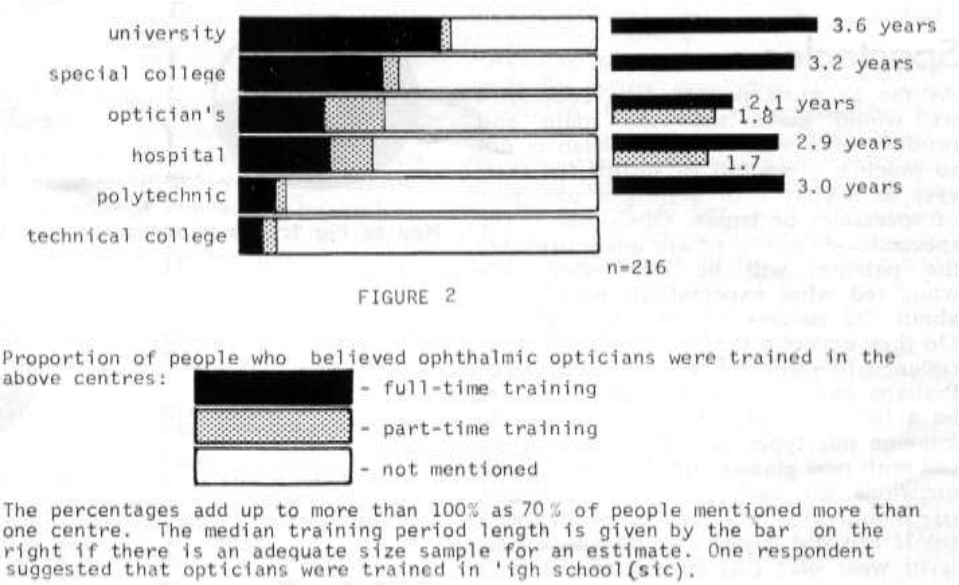


FIGURE 2

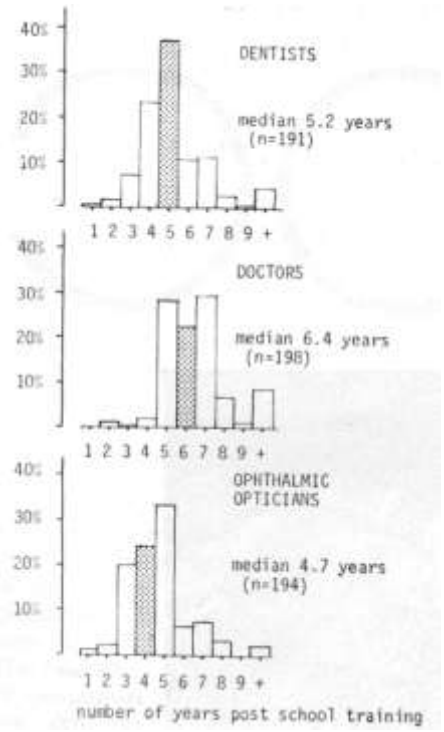


Fig 3: Estimates of the number of years after leaving school before a practitioner becomes fully qualified. Columns represent the percentage of people giving that response while the shaded columns indicate the 'ideal case' answers. Most GPs take longer than six years to become fully qualified and in 1980 the three years' general practice training programme will become mandatory making the minimum number of years of post-school training nine

to practitioners, how busy they were, and how well they communicated. It is possible that we were building up a 'set' within each patient - a way of thinking about their practitioner. If we had asked about training in that questionnaire then we might have produced a different set. Still, the important thing is that we treated the three professions the same. It was clear from the responses that there was little evidence of major dissatisfaction. Equally, there was no evidence that improvements could not be made. We wanted an overall, quantified index of satisfaction. We could simply have asked direct questions, but we wanted to take particular care not to lead people. For this reason we took a slightly devious line and asked people two sets of questions: (i) What do you think the average dentist / doctor / optician earns? (ii) What do you think they ought to earn? It was hoped this would persuade people to quantify their feelings about the merits of practitioners in general.

The questions 'nonplussed' quite a few people and 'haven't a clue' was a common response, but analysis of the majority's responses seems to reveal an interesting pattern. Certainly if ""people thought the reasons for the high cost of health services —• 'expensive' spectacles, extractions or medical treatment—lay in the too high remuneration of practitioners then this should be reflected in their responses, as should other dissatisfactions. Satisfaction, we thought, should be reflected in acceptance of the guessed-earnings by matched ought-to-earn figures. Obviously we wanted an 'average' response—no two people will respond in an identical fashion —» but mean, median and modal measures of central tendency give us slightly different figures. Thankfully, a discussion of the relative validity of the different •statistics in this particular context is not necessary as the relationship between these is consistent. The means and standard deviations are given in Table 6. The differences between ought-to and guessed earnings for dentists and 'opticians were not statistically significant (p>5 per cent). Thus there was no evidence of dissatisfaction from this point of view. A higher valuation was placed on the dentist than the optician — £7,400 as against £6,900. It is interesting that doctors were most highly valued at £9,400, and were unique in that their ought-to-earn figure was significantly 'higher than their guessed earnings (p<0.1 per cent on a matched pairs t-test). For a discussion of occupational prestige see Coxon and Jones, 1978.

Table 6:
Estimates of average earnings (mean ± standard deviation) for dentists, general practitioners and ophthalmic opticians deduced from answers to the questions: (i) 'How much would you guess that the average dentist/doctor/optician/concerned with/general dentistry/general practice/who examines and test your eyes/earns each year?' (ii) 'How much do you think the average dentist/doctor/optician ought to earn each year?'. These questions were asked during the summer of 1977 prior to the firemen's dispute and prior to renewed controversy over phase three of the incomes policy. Figures are given to the nearest £100.

earnings estimates	*dentists*	*doctors*	*opticians*
'guessed earnings' (i)	£7,800±£3,300	£8,300±£2,800	£7,000±£2,700
'ought to earn' (ii)	£7,400±£2,500	£9,400±£3,500	£6,900±£2,300
survey of *Which?* readers ...	£9,700	£9,100[1]	£7,900
Department of Employment ...	—	£7,500[2]	—

[1]The *Which?* survey of its readers was carried out in December 1976. Its 'doctors' figure relates to 'doctors/surgeons' and not GPs,

[2]We were unable to find any figures giving the distribution of earnings for opticians or dentists, but the New Earnings Survey gives figures for medical practitioners in April 1977: lowest decile — £4,800; lowest quartile — £6,000; median — £7,500; upper quartile — £9,800; upper decile — £11,800.

In the above table all differences amongst the 'ought to earn' figures are statistically significant, as are all differences amongst the 'guessed earnings'. The only significant difference between a 'guessed' and 'ought to' mean is that for doctors (p < 0.1 per cent)

Conclusions

The valuation technique did not reveal any overall dissatisfaction with opticians or their work. Most people in our 'sample did not harbour gross misconceptions on an optician's training. Whether or not you are satisfied with people's expectations on the success of their new glasses will depend upon your own aspirations, but we believe our findings do not allow for complacency. The results of our questions on ophthalmoscopy, preconceptions and knowledge seem to us to augment the conclusions of our earlier article in emphasising that there *is* a need for ophthalmic literature and it has a useful educational role to play.

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