Graduate opticians' work and earnings

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In our previous article in the last issue of *The Ophthalmic Optician*, we looked at attitudes which appeared to show that the public underestimated optometrists' earnings, but still tended to think they were overpaid. However, almost half were happy with what they considered to be the status quo and some even thought them underpaid. This has to be seen against a background where GPs were considered fairly paid, dentists slightly overpaid and solicitors very overpaid, while several lower paid groups were seen as underpaid. In this article we will be examining the earnings of graduate opticians and describing their work patterns before discussing some of the issues.

We found that there was considerable interest in the earnings of UMIST graduates with a lively debate over what the average would be. There appeared to be no consensus over what the typical OO earned. We, therefore, decided to do our own survey and wrote to all UMIST graduates, who should have had at least one year in practice after qualifying, to find out what they earned. For some this proved difficult because names and addresses had changed. The questionnaire we sent did not ask for names so the respondents would remain anonymous. It was distributed at the end of December, 1980. Three hundred and one of our graduate appeared eligible (149 women and 152 men). We had no response from 135 students, of whom at least 19 we were unable to trace. Of the remaining 166, six were no longer practising as ophthalmic opticians (sometimes due to promotion within an optical firm); 11 had gone abroad; seven had not qualified; five were not working professionally due to motherhood; 16 were employed part-time; five were employed full-time but for only part of the year; and 111 were fully employed for the whole of the year. The median age for our group would be around 28 or 29, with half of them between 25 and 32 years old. Our overall response rate was over 60 per cent which is quite good for such a survey. A few (6 per cent) declined to give earnings figures but the rest reported their gross estimated earnings for the financial year beginning April 1980.

A histogram of the estimated earnings for those graduates who were fully employed throughout the year and who worked at least a four-day week is given in Figure 1. This is for 102 UMIST graduates, 44 men and 57 women.

As can be seen, the distribution was again positively skewed. The mean earnings figure was $\pounds 11,700$ and the median $\pounds 11,000$, but interestingly the main mode for the raw

July 18, 1981. The Ophthalmic Optician



Earnings including pre-tax value per year put on their company car by the respondents, themselves. They were counted as 'full-time' if they described themselves in this way *and* they worked at least a four-day week.

Fig 1: Earnings of full-time graduate OOs

data, before any rounding had taken place, was a relatively low one of £8,500 (the sum most frequently mentioned). Included in these estimates was an allowance for a company car where appropriate. The median annual pre-tax value put on this by our graduates was £1,500. Forty-five per cent of them reported having such a car. If we ignore the car perk we obtain a mean of £10,900 and a median of £10,000. If we assume that our UMIST group is an unbiased sample of graduates then we can say that there is a two-thirds probability that the true mean for the graduate population is between £11,300 and £12,000 and the true median between $\pounds 10.600$ and $\pounds 11.500$.

If we again ignore company cars then the corresponding ranges are £10,500 to £11,200 and £9,550 to £10,450. Actually, we suspect that the UMIST figure may be a little low for graduates as a whole, but we believe the bias, if it exists, is small. It is arguable that, in common with other workers, opticians may earn more in London and the

South East, and perhaps, because of their Northern base, our graduates may be less likely to seek employment in that region.

Comparison of the histogram with that in our previous article (French *et al*, 1981) reveals that graduate opticians earn over £1,000 more than the average person expects, although if we ignore car perks the difference is almost debatable. But it is very important to note the large variation in earnings even amongst such a homogenous group as graduate opticians. This variability would undoubtedly increase if we were to include more experienced OOs and those working part-time or not fully employed throughout the year.

Clearly, the average person would feel that some were rather generously paid, but undoubtedly they would feel that some were only modestly rewarded. Perhaps it is also to be expected that they would underestimate any group's earnings due to the high rate of inflation, but in fact we found in our previous survey that overestimation of even 473

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high earnings may be a possibility (eg. solicitors).

If we examine our graduate opticians in detail we can see what factors affect their earnings. Perhaps the most striking discovery for us was that even if we exclude part-time OOs we still find that women earn £3,000 per annum less than their male counterparts. This large differential does not appear to be wholly explainable by 'experience' or the type of ophthalmic employment undertaken. It occurs to us that this might not be the unacceptable face of male chauvinism at work, but might simply reflect the practice of most couples to seek the most ideal employment for the male before looking for a suitable post for the female. Thus, for example, job acquisition for the man may well involve a move to a new area to improve his family's prospects, but not usually for the woman unless she is single. The discrepancy is one which occurs in many professions.

For secondary school teachers the difference between the sexes' salaries is round 15 per cent, and we would expect the true difference between the sexes in optics to be substantially less than the £3,000 we have quoted. Sex is an important issue, particularly when it is coupled with money. We have looked at the subject before — in the context of possible examiner bias (French and Tomlinson, 1972) and patient preferences (French and Monk, 1976).

Not unexpectedly, some types of job were apparently better paid than others. A breakdown for three groups is given in Table 1 where it can be seen that those who own their own practice earn more than those who work for a multiple or small group. It is interesting to note that the sex difference appears to be least for the multiple group, and indeed this difference is not statistically significant.

It is to be expected that the more experienced optician will earn more. A graph of earnings against years of post-registration experience is given in Figure 2 and the change is supported by an analysis of variance (F=2.2; df = 11, 10; P<0.05). The lines indicate the approximate standard errors of the means for each year — the range within which there is a two-thirds probability that each 'real' population mean should lie. The vertical lines for 10, 11 and 12 years are particularly long and this is mainly because these samples are very small. Although we do not give the figures, it should be noted that for each year group women again earned less than men. Close scrutiny reveals one apparent factor in the increase.

In our sample 80 per cent of the multiple employees had five years or less experience while 82 per cent of those with their own practices had five or more years' experience. In other words there was an apparent shift away from multiples towards people owning their own practices with a consequent rise in average earnings. This point is also made by the figures on average experience given in 474

 Table 1: Mean earnings of full-time graduate opticians broken down by sex for three types of employment, along with their corresponding years of post-registration experience

Type of employment	Male	Female	Both
Multiple practice	£11,3003.1 years (n=7)	£10,600 2.9 years (n=20)	£1 0,800 (n^27)
Small group practice: non-partner	£11,400 3.2 years (n=10)	£9,800 4.8 years (n= 12)	£10,400(n=23)
Small group practice: partner	£13,200 6.7 years (n=6)	(n=1)	£1 2,500 (n=7)
Own practice:	£14,300 7.3 years (n=21)	£9,200 6.0 years (n=3)	£1 3,600 (n=24)
All	£1 3,000 (n=58)	£1 0,000 (n=45)	£11,700(n=104)

The sex difference for small group practices is the only one to reach statistical significance.

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Fig 2: Earnings against experience for full-time graduate OOs



This diagram gives the sample mean earnings for graduate opticians against the number of years of post-registration experience. The vertical lines give an indication of the confidence limits for the means, being the limits within which there is a two-thirds probability that the true means will lie. But shifts in employment and the very small numbers for the more experienced opticians mean that this diagram should be treated with caution.

There is some evidence of an increase in earnings with experience for those working in a small group practice but we believe that the major part of the increase is accounted for by changes in patterns of employment.

Table 1. We cannot be more precise about the effects of employment, sex and experience on earnings because once our sample is broken down into its sub-samples the numbers become too small for confident assertions.

In an attempt to extend our earnings curve beyond the 12 years of Figure 2, we modified our questionnaire and sent it to 100 ophthalmic opticians who had qualified before 1968. These were selected at random from the 1979 GOC Register. Not surprisingly, in view of the current siege mentality amongst opticians in this country, the response rate was very poor. Indeed, even at the best of times, bank managers say that earnings are as sensitive an issue as sex. It should be added that while three-quarters of our graduates had known one of us personally it was unlikely that our knew us from non-graduates Adam Trevor-Roper. Only a third replied and of these a fifth declined to reveal their earnings. This means that it is unlikely that the small sample we obtained was representative of pre-degree opticians.² The median earnings figure for the full-timers in this very small

sample was of the order of £15,000 with a much greater spread than amongst our graduates. The central tendency would appear to be compatible with BBC Nationwide's assertion in November, 1980 that the average OO earns between £12,000 and £15,000. Despite our strong reservations on this non-graduate sample, it would appear that graduate OOs earn substantially less than their older colleagues. The difference is probably accounted for, in part at least, by two main factors: (i) older opticians are much more likely to own their own practice (half v. quarter in our samples) and (ii) older opticians are more likely to be male (100 per cent v. 56 per cent). Whether any other factors are likely to be involved is a moot point which we are unable to settle.

Of course, we do not know what the future employment pattern amongst opticians will

²Unfortunately, it became apparent to us that some opticians believed that they had something to hide. Such an attitude on the part of a minority of the profession can hardly be expected to engender an attitude of trust amongst members of the general public.

July 18, 1981. The Ophthalmic Optician



Fig 3: Time normally allowed for sight test and examination by araduates

be. Fewer may own their own practices. A higher proportion will certainly be women. Thus, future average earnings of our graduates may not come to emulate those of their predecessors. Undoubtedly, the higher earnings of those who own their own practice will be in part a consequence of their own financial investment in equipment and property.

The attitudes of our graduate sample to their earnings were interesting. Fifteen per cent thought they were underpaid, 83 per cent thought they were fairly paid, but only one (<1per cent) thought they were overpaid. Our unrepresentative, more experienced group was within sampling range of this with fewer sitting on the fence. Those who felt they were underpaid earned of the order of £500 per annum less than the rest. We did not ask about attitudes to National Health Service fees but as you would expect many still volunteered their contempt for these.

Graduate opticians at work

It is perhaps worth remembering that Nationwide opined that it was not that opticians earned too much (they considered $\pounds 12,000$ to $\pounds 15,000$ not unreasonable in this day and age), but that they were in some way inefficient. The reasons for this belief were not too clear to us, but we thought, therefore, it might be useful to look at the work graduate OOs do.

Our full-time graduates who did not work in a hospital allowed 27 minutes on average for a sight test and examination. The modal time allowed was 30 minutes (51 per cent of our sample) with a secondary mode at 20 minutes (27 per cent). When dispensing was included the average time allowed was 40 minutes. The mode was at 45 minutes (48 per cent) with a further mode at 30 minutes (22 per cent). These times are shown graphically July 18, 1981. The Ophthalmic Optician

in Figures 3 and 4. Most of our graduates (71 per cent) worked a five day week, but a high proportion of those who had not been fully employed throughout the year worked less than this. A histogram of days worked is given in Figure 5.

If we exclude hospital opticians and those who work part-time we obtain the histograms given in Figure 6 for the number of sight tests and examinations carried out per week. The upper histogram represents

Number of days worked by graduate



Dark area indicates graduates who were not fully employed throughout the year (n=25, 19 per cent).



Fig 4: Time normally allowed for sight test and examination plus dispensing

Figs, 3 and 4 relate to all full-time graduate opticians excluding those who work in hospitals or only do contact lens work.

> those who say they normally do the dispensings while the lower one contains those who say the normally do not. The average difference in number of sight tests and examinations carried out per week by these two groups is 13 with those who normally do the dispensing doing fewer. Clearly, some opticians appear to see very few patients although they are 'fully-employed', but perhaps too much should not be read into this. Some opticians will also be involved in management, supervision of trainees or other activities. Still, it does emphasise the heterogeneous nature of an optician's employment.

> Of our full-time graduates, around a third (34 per cent) do not do contact lens work at all while a few more (42 per cent) carry out only between one and five consultations per week. From the histogram in Figure 6 it can be seen that only one in twenty of our sample carries out more than 25 consultations. This particular question was not posed as clearly as we would have wished and it may be that people interpreted 'consultations' in different ways.

> There were some modest correlations between earnings and the number of tests carried out (+0.34) and the time allowed for sight tests and examinations (-0.23 to -0.28). Not surprisingly, there was a negative correlation between the number of sight tests and the time allowed (-0.33 to -0.35).

Discussion

If we are correct in our deduction (French et al, 1981) that public attitudes towards the optician do not appear to be that severe, then why have they been subjected to so much abuse of late? There can be no smoke without fire but, as we know, all that is required is a spark, some dry tinder and someone to fan the flames! At a time of depression there is plenty of dry tinder around with people more easily frustrated







30% (n=107) 20% 10% 0% This histogram should be treated with caution as the respondents may have interpreted 'consultations' differently.

Fig 7: Normal number of contact lens consultations per week for full-time graduate OOs

and disturbed. And the people with the bellows are well known to opticians. What about the spark then? In this report we have concentrated on central tendencies or averages (means, medians and modes), and drawn attention to the spread or variability of the data. These are the important facts, but of course the media and general public are more interested in exceptions and extremes.

Obviously, a few opticians will be inefficient, a few opticians, will provide a poor service, a few opticians will overcharge. Equally obviously, on occasions even an excellent optician will make mistakes. The problem is that in the present climate that is all that is required, with a little help and encouragement from some external source, to fuel a sensational item in a newspaper or a one-sided, anecdotal report on television. We, too, could have sensationalised our report, and concentrated on the question of how it is possible for a very few opticians to earn so much. As it happens, our questionnaire was not sufficiently probing to answer this question.

A parallel, but less interesting, question might be how is it that a full-time optician can only earn £3,000 p.a. Perhaps our high earner works a six-day week in Mayfair, supplying 'solid gold' frames to rich Arabs; or perhaps he or she has a large investment in high technology which enables him to be very efficient? Our £3,000 person might be starting up a practice in an area of high unemployment — not an easy task at present. Some opticians allow fifteen minutes for a sight test and examination perhaps because they have special help from assistants or technology? Some opticians do very few tests - perhaps because they are heavily into management? We do not know.

The average picture is less sensational and consequently of less interest to the media. 476

Our typical graduate optician is in the late 20s and has been qualified for five or six years. He or she earns around £11,700 p.a. before tax, which figure includes an allowance of around £1,500 for a company car, and works a five-day week doing 55 refractions for which they allow 30 minutes each. They also carry out-a few contact lens consultations.

40%

Conclusions

If we consider our sample unbiased then there is a two-thirds probability that the median earnings figure for graduate opticians is between £11,300 and £12,000 including an allowance for a company car. Probably half of them earn between £9,000 and £13,000. Opticians' remuneration increases according to their age and experience. There are at least two reasons for this - (i) more experienced opticians are more likely to be men who earn more than women, and (ii) there is a shift towards greater practice ownership with earnings for such opticians being higher in line with their investments.

We are unable to say how much non-graduate opticians earn, but it is likely to be substantially more than their younger counterparts. We are also unable to put too precise a figure on the financial advantage being a man gives an optician. In both cases we do not have sufficient data.

From our previous article (French et a/, 1981), it was apparent that almost half of the general public feel that opticians are fairly paid, but slightly more feel they are overpaid than feel they are underpaid. Our hypothesis, for which there was circumstantial support, was that this represents a general deterioration in public attitudes towards similar health sector

professionals and is due to the economic climate. Depending upon whether one takes into account the usual perk of a company car it can be argued that the general public's guess as to how much the average optician earns is not too much out of line with real graduate earnings.

While some of this may be reassuring, it should not lull opticians into a false sense of security. In common with many other groups of professionals they are most definitely under attack. At such a time it is particularly important that *all* opticians should question themselves: 'What is a fair earnings figure for the work I do?' 'Am I making excessive profits?' Virtually all the graduates who answered our survey felt that they were not overpaid, but opticians should appreciate that if we take the profession as a whole it is probably true to say that they earn more than the public would guess.

Here we have concentrated on earnings and pay, ignoring the questions associated with economics, investment, gross-profit margins and the like. These should not be ignored, and close attention was paid to them in the 1976 report of the Price Commission, but we felt it was time that incomes were scrutinised because it is these which appear to mean most to the man and woman in the street.

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