# WOMEN OPTOMETRISTS: THE WORK POTENTIAL FOR PROFESSIONAL WOMEN IN GENERAL?

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Studies of women's employment have pointed to the availability of part-time work as a major factor in their employment. For many women, the disruptions of their work for family commitments have led to a decrease in their earning power and the status of their work [1]. Professional work is relatively well paid, opportunities for part-time work are good in many areas and recruitment is restricted to qualified people only. This is particularly true of optometry where there is also little or no evidence of unemployment, providing optimal conditions for the employment of women. Leaving aside factors such as social class, a study of the working patterns of women optometrists might well point out the work potential of to-day's women.

Women's employment.

The last twenty years or so has been a period of major economic and social change, with a substantial rise in women's participation in employment in this and other countries. Summarising the position in Great Britain, Martin and Roberts [2] report that by 1980, women constituted approximately 40 per cent of the total labour force and 10 million women were economically active. In the sample of women in their survey they reported, "60 per cent were working in a paid job, 5 per cent were unemployed, 5 per cent were students and 30 per cent were out of the market... By contrast, most of the... husbands (92 per cent) were working." Although great play is often made of the proportion of women working in the UK compared with other countries, according to Mallier and Rosser [3] the US economy has assimilated far more women than the British. As the UK future is often seen in current US changes this may suggest that the trend will continue further in the United Kingdom than it has so far.

Martin and Roberts [2] identified an increasing tendency towards women remaining in the labour market. The oldest women in their sample had spent about 60 per

cent of their total working life in employment but younger women had spent proportionally more. For example, women in their early thirties had worked on average 66 per cent of their working lives. This was made possible largely by part-time working. Few working women with a young child work full time, although the proportion of full-time working increases with older women. The proportion of women in part-time working is higher in Britain than the US [3]

Martin and Roberts' study involved interviews of five and a half thousand women between the ages of 16 and 59. Women with the highest level qualifications ("A" levels or above) were most likely to return to work within 6 months of their first birth. Dex [4] examined the factors affecting the duration of time before women return to work in more detail. Unfortunately, the number of "professional" women was still too small for specific conclusions to be drawn on this group. Teachers showed a high tendency to return to work within 6 months (22 per cent) but so did some other less-qualified groups.

The present study of the optometry profession was prompted by concern over the increasing proportion of women entering optometry. Some employers reported that women who took maternity leave were taking a long time to return to anything like full-time working. As a result. they felt that the future strength of the profession was being undermined with there being too few optometrists to cope with profession workloads. Some also argued that not only were there likely to be too few optometrists in the future but that there were also too few at present and pointed to a significant number of positions with high salaries being advertised in professional journals. However, not everyone agreed with these assessments. There were those who felt that many of the advertised positions were speculative. They pointed to the demonstrable lack of waiting lists at opticians throughout the country and some even argued that there were full-time optometrists who were underutilised. All this was at a time prior to the 1988 Health and Medicines Bill, a measure thought likely to radically alter patterns of optometric practice.

# The optometry profession.

Since the mid-60s all UK optometry recruits have been required to take a three year degree course (four years in Scotland) at one of six departments. On completion of this they embark on a supervised period of practice of at least one year, at the end of which they take professional qualifying examinations. Between a quarter and a half pass these at their first sitting with the rest being required to take resits. The vast majority will have qualified within eighteen months. In order to practice as an optometrist (ophthalmic optician) they must then register with the General Optical Council. There are over 6,000 registered optometrists and around 300 enter training each year. Nationally, one in ten of these entrants fails to complete their training.

The ophthalmic optician's main activity is the General Ophthalmic Service (GOS) sight test of which around 12 million are carried out annually in the UK. The objectives of this are: (a) to detect ocular abnormality; (b) to specify functional corrections for defects of sight which should be effective and visually comfortable; and (c) to suggest or provide remedial visual training where appropriate. If an abnormality is detected then the patient's general practitioner should be notified and/or the patient referred to a hospital. Optometrists prefer the term "eye examination" to "sight test" but the latter term is used in all government statistics. Prior to implementation of the 1988 Health and Medicines Bill, practitioners were paid a fee for each test. From April 1989 the government will only pay a fee for certain exempt categories of patients. For two-thirds of the population, the sight test will be a private matter between them and their practitioner. It is conceivable that sight tests will be free with the cost being passed onto other services (further, more specialised tests) or optical appliances (contact lenses and spectacles), but most people expect that optometrists will be obliged to charge in the main a fee of £10 or more.

Family Practitioner Committees and Health Boards list just under 1,000 ophthalmic medical practitioners in the UK. These are medical graduates qualified in ophthalmology who may have the Diploma in Ophthalmology, Diploma in Ophthalmic Medicine and Surgery or Fellowship of the Royal College of Surgeons. These are the only other professional group in the UK who are allowed to carry out GOS sight tests. Despite their medical qualifications, they too are required to refer a patient to their GP or a hospital ophthalmologist when an abnormality is detected. In most other countries, ophthalmologists play a greater role in sight testing but then there are more of them [5]. As well as sight testing, optometrists may be involved in screening, industrial vision work, contact lens practice, dispensing spectacles and practice management. These last three activities are also carried out by over 3,000 dispensing opticians who are also registered with the GOC. Since December 1984, registration is no longer mandatory for those who sell spectacles to adults against a recent prescription.

In the past, ophthalmic opticians tended to be selfemployed and even to-day 58 per cent of men and 23 per cent of women are partners or own their own practice. But it is generally assumed that over recent decades there has been a large growth in multiples with owners selling out to these on retirement rather than to individual practitioners with fewer new optometrists setting up on their own. Most of the youngest optometrists work for multiples. In some practices, opticians also take on a managing role but there is an increasing tendency for this responsibility to be assumed by a dispensing optician. Thus, to-day most new graduates are employees and as most women optometrist are recent recruits this is one reason that far fewer of them are practice owners. Twenty one per cent of men and 41 per cent of women are self-employed but work as locums, most of these work part-time. This may be for a multiple or an independent optometrist. A small number of ophthalmic opticians (not many more than 100 or so of these are full-time) work in hospitals.

There are significant national variations in the public demand for sight tests (from 14 tests per 100 population in Northern Ireland to 23 for Metropolitan and Southern England) and some parts of the United Kingdom (e.g. Greater London) have more practitioners per head of population than others [6]. But retail outlets are widely distributed and there does not appear to be anywhere far from a source of potential employment. Thus, there is little need for anyone to move to find employment.

#### The 1986 survey.

At the end of July 1986, questionnaires were sent to every optometrist on the GOC Register. In June 1986 there were 6,176 registered optometrists. By the end of December, 2,070 replies had been received - a 34 per cent response rate.

Previous experience [7, 8] has shown that one obtains a higher response rate from the younger practitioners with such surveys. They have a greater investment in and concern for the future and are more active. Despite exhortations directed at those near to retirement or inactive (some practitioners remain on the GOC Register after retirement), the pattern was confirmed with this study. The age distribution of registered optometrists is known and the replies can therefore be weighted to compensate for any age and sex bias.

A further external check is provided by comparing respondents' answers on the number of sight tests they have carried out over the previous twelve months with the official totals. The result was an 11 per cent overestimate of sight testing over and above that due to age or sex bias. Eighty per cent of practitioners only estimated their sight test totals and it was hypothesised that their tendency to round their sight test totals upwards might be the main factor in the overestimation. When this and lower response rates from practitioners in Scotland, Wales and Northern Ireland were taken into account the overestimation was reduced to 4 per cent. This is only a little larger than can be accounted for by random sampling error, suggesting that a small source of bias of at least a couple of per cent remains uncorrected. It would appear that there is a small tendency over and above that due to age for the more active practitioners to return their questionnaires and suggests that actual levels of activity are probably a few per cent lower than our finally adjusted figures would indicate.

#### Optometrist attendance times.

The questionnaire mainly concerned professional work as an optometrist and asked people about their attendance hours. Thus, those people who worked entirely in management or teaching or another profession would come out as inactive. It would be naive to expect that people always answer questions as accurately as they might. This was one reason questions on attendance time in our survey were asked in more than one way. Although the question on Weekly Hours of attendance included the underlined phrase "averaged for a single week" it was clear from examination of the answers to other questions that this averaging had not always taken place with people tending to give "typical" (modal) responses rather than an arithmetic mean. A brief series of questions elsewhere on length of holidays, weeks worked full-time and part-time, and corresponding weekly hours of attendance permitted the calculation of estimated Annual Hours and Annual Days of Attendance to give two further indices of Full-Time Equivalence.

Two major factors effecting professional activity rates are age and sex. Figure 1 shows the percentage of active optometrists for one of the measures of activity as a function of age and sex. According to all three attendance measures and the annual sight test figures, virtually all registered men under 25 years of age are active and there is a gradual decline of perhaps a little less than a per cent a year so that by the age of 55 only one in twenty has carried out no optometric work for 12 months. For those in their late 60s, 15 per cent are inactive while for those in their 70s the figure is between 20 and 25 per cent. Each measure gives similar results.

This bar graph shows the proportion of optometrists on

the GOC Register who were active at the time of the survey in that they reported working more than one day in the previous 12 month period. Three other criteria - annual hours and weekly hours in attendance, and number of sight tests in a year - gave similar results. All four gave aggregate estimates of 93 or 94 per cent.

For women, the increase in inactivity with age is at first only slightly greater, but by their early 40s one in 12 of registered women are professionally inactive compared with one in 30 of the men. There is the suggestion of a recovery among late 40s women but the proportion of active women in their 50s is still ten per cent less than amongst men.

All these figures are for practitioners on the GOC Register as all studies have assumed that the vast majority of people remain on the Register while inactive - rather than leave it and return later. The difference between the sexes in the proportion who are active lends some support to this view and this also appears to be the practice amongst women dentists, despite the high cost of their annual retention fee [9] The optometry survey suggests that four per cent of optometrists have left and re-joined the Register with the proportion amongst women over 30 higher at 7 per cent.

Figure 2 shows the mean attendance times reported by practitioners as a function of their age and sex. Men aged 20 to 55 put in most annual days. Women in their





early 20s put in just as much time as men and the big drop for them occurs with the 30-34 year olds, although there is the suggestion of an increase in days for the late 40s and early 50s. All measures of attendance show similar although not identical patterns. Unfortunately, one can talk with little confidence of the older women optometrists. There are currently only 39 women on the GOC Register born before 1925 and only five in this category re-plied so it is clear that it would not be safe to generalise about their work patterns. This bar graph shows the average number of days worked in the previous year reported registered by practitioners as a function of their age and sex. Similar are patterns obtained for annual hours and weekly hours of attendance.

Strength of the optometry profession.

Straight attendance statistics do not allow for the fact that older optometrists work less intensely. This is highlighted by the data concerning sight testing where, particularly after age 65, testing rates fall off more quickly than do attendance times. One reason for the fall off may be that

FTE es	stimates (per o	ent) of thr	Table 1 ee groups o age and se	of professiona ex	Is by prac	titioner's
age	optometrists French (1987)	Men dentists DHSS (1983)	vets Min Agr <sup>1</sup> (1985)	optometrists French (1987)	Women dentists DHSS (1983)	vets Min. Agr <sup>1</sup> (1985)
< 25 25-29 30-34 35-39 40-44 45-49 50-54 55-59 60-64 65	85 94 100 94 99 92 96 89 86 41	92 97 96 94 93 91 88 67 20	90 <sup>2</sup> 90 <sup>2</sup> 93 92 91 90 86 82 47 9	84 81 57 59 62 69 71 58 60 <sup>3</sup> 29 <sup>3</sup>	70 76 59 55 54 60 61 60 42 13	77 <sup>2</sup> 77 <sup>2</sup> 58 61 62 64 45 34 13 9
The agg: Veterin 'those f Figure of male	regated FTEs fo nary age scales For dentistry a s are guestimat and female opt	r optometris appear to nd optometry es based up ometrists i	sts, dentists be displaced y. Figures pon correspon n their 50s	and vets are 7 upwards one ye are for 30 yea ding male FTE f which gives a r	8, 81 and 7 ar in compa rs of age of figures and atio of 100	4 per cent. rison with c less. a comparison :70.

other work activities, supervising trainees, managing and so on, come more to the fore, but this is less likely to apply to the oldest practitioners. For this reason, when one is interested in deriving a productivity- orientated statistic, one attempts to compensate for age effects. One conservative approach is to use attendance measures up to retirement age expressed as a percentage of maximum attendance (1,824 annual hours, 235 annual days or 40 hours per week). And take the average of this and the sight test measure for those over retirement age. In these circumstances one is normally concerned with national contributions and it is desirable therefore to take the mean attendance statistic rather than the median. Table I gives the resulting Full-time Equivalent values for optometrists arrived at in this way.

From this data it is estimated that the average male optometrist currently has a professional working life of 36 full- time years, while the average female working life is 72 per cent of this or 26 full-time years.

### Time women optometrists take off work for giving birth.

Perhaps the most "visible" index of the fact that women do not work as long as men is provided by the time they take off at the birth or adoption of children. Informal

# Retirement and lifetime contributions of optometrists.

To estimate the relative lifetime contribution of men and women to the national total of professional work one needs further information. There are a few optometrists who have temporarily left the GOC Register but will be returning later. One needs to take into account ages at recruitment, net losses from the professional Register due to emigration, immigration and so on, and the ages at retirement. Analysis of the 1986 questionnaire [10] and statistics for the GOC permit us to obtain the missing information.

Comparison of the annual GOC statistics enables us to assess the losses to the Register [7]. There is, of course, a marked increase in the region of 65 years of age for men but the lack of older women amongst optome-

	function	of mother's	s age in 1980	6 and child	s birth order	
	months off	1st child	months off	2nd child	months off	3rd child
age	Median	Valid N	Median	Valid N	Median	Valid N
<25		4		1	1	1
25-29	4	43	6	13		1
30-34	6	118	6	67	7	14
35-39	6	57	5	49	5	10
40-44	6	35	13	32	21	10
45-49	6	31	12	28	-	6
50-54	3	12	2	11		3
55-59	18	11	+	7	-	5
65-74		2		1	-	1
all age	s 6	313	6	209	8	51

observations of such withdrawals have led some people to argue that the contribution of women to optometric work has been overestimated. This confirms the need here for a formal analysis.

The systematic estimation of these withdrawal periods adds nothing to the Full-time Equivalents already calculated, but it also permits us to compare women optometrists directly with other occupational groups. Table II shows the median time off work in months for first, second and third children as a function of the current age of the mother. The overall median time off work for all births is 6 months amongst registered women with 57 per cent of women in the survey taking 6 months or less. For their first child, 6 per cent of women took off two weeks or less, 34 per cent three months or less, 61 per cent 6 months or less and 75 per cent one year or less. Sixteen per cent had not returned to work before the birth of their next child or the time of the survey and their time off was treated as a long time and included in the calculations they were not excluded. The existence of respondents who were still off work at the time of the survey means that for younger women these figures may if anything overestimate the actual time taken off work for the birth of a child. The median for the fourth child is 6 months (n=14).

trists leaves a question mark over their likely retirement age. They might tend to retire at the same age as men. It has been suggested that on average a woman optometrist's working life could be longer than a man's because not only do they live longer but on average they are younger when they begin their course [8]. Against this, they might be expected to retire a couple of years earlier because of their younger husbands (2.1 years on average according to the questionnaire results) or five years earlier because of the long-term statutory retirement age differential (60 for women as against 65 for men). Table 3 (overleaf) shows the median,

quartile and 5 percentile expectations for retirement as a function of age and sex. The differences between medians for each sex revealed here are generally zero or 5 years.

Parallel data on the end of full-time working shows that there are significant numbers of men (as well as women) who anticipate ceasing full time practice at age 55 or earlier. Table 3 shows there are a few who expect to retire completely from the profession by 50 or 55. The 5 percentile point for all age and sex groups was 50 years of age or over. Only three out of 647 men and one out of 508 women indicated a retirement age of less than 45.

Assuming that a student goes straight from school to join an optometry course and then qualifies a year after graduation, they would normally expect to have a potential professional working life of 43 years to take them to 65 years of age. Each optometrist was asked to estimate their past and futurte full- time and part-time working, excluding time off work, and the mean estimates are given in Table 4 (overleaf). The youngest men estimated their working life at 36 full-time equivalent (FTE) years on average - less than the theoretical 43 available between ages 22 and 65. There was a small increase in working life es-

			Table	3 Actual or a retirement	anticipated age		
		age	5%-ile	r 25%-ile	etirement ag Median	e 75%-ile	N
	Men	< 25	55	60	60	65	71
		25-29	50	60	60	65	215
		30-34	55	60	64	65	202
		35-39	55	60	60	65	160
		40-44	55	60	63	65	147
		45-49	60	60	65	65	116
		50-54	57	65	65	67	99
		55-59	60	63	65	65	88
		60-64	62	65	65	70	72
		65-69	64	67	70	70	63
		70-74	63	70	73	75	52
		75-79	-	76	80	80	19
	Women	< 25	50	55	60	60	65
		25-29	50	60	60	60	195
		30-34	50	60	65	60	178
		35-39	55	60	60	63	72
1		40-44	50	60	60	63	41
		45-49	50	60	60	65	36
		50-54		60	65	65	15
1		55-59	and the second second	60	60	65	13

Table 4 Self-estimates of professional life in
FTE years

age	mean	Men SEmean	mean	Women SEmean
< 25	36	1	31	1
25-29	36	1	28	1
30-34	36	1	26	1
35-39	35	1	25	2
40-44	36	1	22	2
45-49	38	1	26	2
50-54	40	1	-	
55-59	38	1	-	-
60-64	37	1	-	
65-69	38	1		
70-74	37	3		-
 The mi	nimum sar	nple size is na	> 10 for FTE	estimates.

timates by people as they approached retirement age which can be accounted for by the loss of people from the Register with plans for retiring early.

The youngest women (those under 25 years of age) estimated their working lives at 31 or 32 FTE years - 5 years less than that of the corresponding men. But the estimates for older women instead of increasing (as the men's had done) decreased to a minimum of 22 to 25 FTE years for those in their late 30s and early 40s. There is more than one interpretation of the lower estimates given by older women. There may be a tendency amongst the youngest women to underestimate the time they will take off due to family commitments and for the older women to make more realistic assessments, or it could be that younger women will make their career a more full-time one and further continue the modern trend.

Table 5 (overleaf) shows clearly that 93 per cent of women optometrists have married by the time they reach their 30s. It is interesting to note the increase in proportion of single women from the 40s onwards suggesting perhaps a greater tendency towards retirement amongst those married, widowed, separated or divorced.

The GOC's annual statistics give the number of men and women optometrists born in 5year periods and have been used as the basis for calculating withdrawal rates from the profession [11, 7]. Using the Register totals and average

withdrawal rates for 5 year periods a computer model was constructed. The accuracy of this model was tested over a 20 year period. Given annual recruitment figures, the model predicted the 1986 totals to within 13 people from the Register totals for 1960.

This model permits us to analyse the working lives of men and women optometrists using the withdrawal rates found in the last five years, taking into account those who temporarily leave the Register. This suggests a median elapsed time between initial registration and full professional retirement for both men and women of 43 years with a lower quartile of 37 years and upper quartile of 49. Using the FTE values described earlier (Table I) they also suggest recent average (arithmetic mean) working lives of 36.2 FTE years for men and 26.1 for women.

It is interesting to compare these estimates of working lives based upon past changes in the Register with the future plans of optometrists revealed by the questionnaire. According to these, men expect to work professionally for a median of 41 years and women 38 years before retiring completely. These figures are shorter than those obtained from the computer model. But when optometrists' plans for full and part-time working are examined we obtain an arithmetic mean of 36.8 full-time years for men and 27.2 full-time years for women (weighted values of the data summarised in Table 4). These FTE working lives are marginally longer than those suggested by the computer simulation and this may be of note. But it is more interesting that these figures are not only very close to the computer simulation but that they show a very similar sex ratio of just less than three-quarters, despite being derived from an independent source.

	and sex							
	aterate in	Men			de alte	Women		
age	single m	arried	Divorced separated	sample	single	married	Divorced separated	sample size
< 25	82	18	0	73	63	37	0	67
25-29	35	64	1	224	26	74	1	200
30-34	16	82	2	217	7	91	2	184
35-39	9	87	4	165	6	91	3	80
40-44	4	92	4	152	7	89	4	45
45-49	3	94	3	119	10	85	5	40
50-54	3	93	4	105	25	63	13	16
55-59	3	90	7	96	21	57	21	14
60-64	0	97	3	78				-
65-69	1	91	7	68		-		1.7
70-74	3	83	14	65				-
75-79	0	88	12	25	-			-

If the youngest women's plans are realistic and reflect the longitudinal evidence of Martin and Roberts [2] then the lifetime attachment of women is likely to improve further. Coupled with the national male trend towards earlier retirement, this could see a further increase in the work contribution of women professionals relative to men.

It needs to be emphasised that all the figures from this study exclude non-optician work and thus underestimate the total work carried out by registered optometrists. Nine per cent of men and five per cent of women report significant involvement in work as administrators, teachers or research workers, but only four per cent of men and three per cent of women report that this work is full-time.

## Growth of women in the professions.

Traditionally, the professions are male preserves. Even as late as 1964, only one in four of new graduates in optometry was a woman [7, 8]. In 1988 over 60 per cent of home graduates were women. Similar trends have been observed in a number of professions [12].

The current interest in the professions involving a university degree amongst women is apparent from an examination of the annual statistics published by the Universities Central Council on Admissions. Forty-three per cent of home entrants to university courses are now women [13]. The Department of Education and Science's [14] paper on the projection of demand for higher education up to the year 2000 suggests in one of its projections a faster rise in participation in higher education amongst women than men with a further narrowing in the gap between the sexes."... within education girls overtook boys in their 0 level attainments in the early 1970s and by the mid 1980s had almost reached parity in the proportions gaining two or more A-levels. Policies to encourage more women to study science and technology may also provide more opportunities for them. At present there is a gross under-representation of women studying these subjects in higher education." This DES paper projects that by the year 2000 between 46 per cent (projection P)

and 48 per cent (projection Q) of home entrants to higher education would be women.

Growth of women in the professions is not restricted to the UK. For example, in the United States the proportion of women entering optometry programmes has increased 52 per cent since 1980 and they now represent almost 40 per cent of recruits [15]. Practising female optometrists there are predicted to increase from 8 per cent in 1984 to 23 per cent by the end of the century.

# Professional work and child birth.

Joshi [1] commenting on a further analysis of the 1980 DE/OPCS Women and Employment Survey [2] reports that the typical effect of child-bearing is to interrupt rather than terminate women's working lives and this often involves lower hourly pay and lower occupational status. Women in some jobs are obliged to change their occupations on return.

Women in the professions are in a slightly different position. Where their profession offers good opportunities for part-time work there will be no need to change occupation, but positions held tend to be of lower status and there have been reports of employment discrimination by male colleagues. Dentistry in this country is now reported to have a degree of overmanning. Although the problem is described as one of "underemployment" in some quarters rather than "unemployment", a 1985 survey found that 20 per cent of women [9] reported difficulty in finding employment with consequent periods of unemployment. On occasions, men were given interviews for which women had been told the job was filled. In 1988 the University Grants Committee announced plans to reduce recruitment by ten per cent.

The present position in optometry appears better than in dentistry. Locum work may be considered by some to be of lower status and there are fewer women in management positions in corporate bodies and fewer women are partners or own their own practices, but locum work is still relatively well paid [16, 17, 18]. Apparently, unemployment does not exist. There are few obstacles to a woman returning to part-time work after the birth of her child with little need for retraining over and above that which might be required by any professional from time-to-time throughout their career. All in all, with the opportunities for well paid, part-time work, one might expect employment amongst women optometrists to be as high or higher than any other occupational group. Thus, one would expect the 1980 Women in Employment Survey [2] to underestimate the employment activity of women optometrists. However, one cannot completely pre-judge the issue, because there are other factors. For example, it is reasonable to expect that women ophthalmic opticians will show a greater tendency to be married to other, well paid professionals, and Newell and Joshi [19] have suggested this will tend to increase time off from work.

Martin and Roberts [2] reported as many as 26 per cent of one group ("other intermediate non-manual") taking 6 months or less off work, but the average for women in general was 14 per cent and even with teachers the proportion was only 22 per cent. This contrasts with the findings for optometry (Table 2) which indicate 57 per cent take 6 months or less time off work and supports the expectations created by the ample opportunity for part time work. Despite the "underemployment" position in dentistry, the statistics for women dentists appear quite similar with those taking 6 months or less amounting to 51 per cent for the first break, almost 60 per cent for their second break and 57 per cent for their third [9]. Seventy per cent of women optometrists had periods off work of less than 12 months compared with 75 per cent of women dentists. Martin and Roberts [2] observation of longer withdrawals for second and third children, and older women is not contradicted by the optometrist data, but the differences shown do not appear very great.

## Professional working lives.

Although a woman was first admitted to the Institute of Chartered Accountants in 1920 (she had submitted her first application in 1891 [20]), in 1969 the number of women attempting to become chartered accountants still only amounted to two per cent. In more recent years the intake of women students has increased markedly from 15 per cent in 1976 to 32 per cent in 1985 [21]. In 1979, 30 per cent of all women accountants worked part-time with a higher proportion amongst those with children.

In 1972, 23 per cent of pharmacists on the home register were women [22]. By 1985 this had risen to 36 per cent. Currently, 60 per cent of the intake to the profession are women. Just over half of women pharmacists aged 35 to 49 are employed part-time. Younger women, and older ones up to the age of 60, are more likely to be employed full-time. A survey of the attitudes of students [23] showed that 38 per cent of women would wish to work full-time as the children grow up. The proportion of women pharmacists employed "not at all" has fallen from 20 per cent in 1978 to 15 per cent in 1985 [22].

It has been suggested that in the year 2000, women will constitute about 40 per cent of the total of British born

doctors [24] or 37 per cent of doctors active in medicine [25]. In 1979, 86 per cent of women doctors were working in medicine to some degree, compared with 88 per cent of men [24]. The difference is small and not dissimilar to that indicated in Figure 1 for optometrists. The 1978 DHSS Medical Manpower report [26] had suggested that by the year 2000, women doctors would on average be active for 39 years (30 years whole time). These should be compared with the plans of women optometrists for a median working period of 38 years and working life of 27 FTE years. It is interesting to note the longer estimated working life for women doctors despite the fact that they spend more time in training and despite reports in recent years of significant unemployment amongst those medically qualified.

The 1985 survey [9] reported that 43 per cent of the 1985 intake to dental schools were women and found that 48 per cent of women dentists were practising full-time, 40 per cent part-time and 12 per cent (including retired people) not at all. The British Dental Association in 1986 [26] suggested under 65 activity rates of 95 per cent for men and 80 per cent for women. It was suggested by the DHSS [27] that by the year 2020 between 35 and 45 per cent of registered dentists under the age of 65 would be women but just three years later these estimates were being revised upwards to 42 per cent by the year 2015 [28]. Seward and McEwen [9] report that 57 per cent of working women dentists are in practice for 31 hours or more and 39 per cent work for 36 hours or more, but the age distribution of women in dentistry differs from that in other professions and Seward and McEwen give no breakdown with age.

The study of optometrists had suggested that few had plans to retire early from the profession. The picture in dentistry appears similar. Out of over three thousand women dentists in their survey, Seward and McEwen [9] found amongst those who had left the profession and declared they would never return only 11 who had found another job outside dentistry, four who had ceased to practice on marriage, six who had left because of pregnancy, and five who had no desire to work at all. When age was taken into account they found all told only 27 fit, working age women - less than one per cent of their respondents - who had deserted that profession for good.

The manpower review of the veterinary profession [29] estimated that male veterinary surgeons were on average equivalent to 0.77 Full-time Veterinary Equivalents (FTVE) - one FTVE equalling 7.5 hours per practice on 254 days making 1905 hours per year. The activity rate of women was estimated at 0.62 FTVE. In 1979, 12 per cent of the profession were women. By 1984 this proportion had reached 19 per cent and the manpower review suggests that the intake to veterinary courses was likely to consist of 50 per cent men and 50 per cent women with the latter showing a 93 per cent pass rate - two per cent higher than their male colleagues. The plans of those veterinary surgeons anticipating retirement in the next ten years followed the traditional difference of five years common in the optometric data (Table 3). The expected retirement age for men was 63 and for women 57 [29]. As

a result of this study, recruitment has recently been reduced.

Table 1 summarises the Full-time Equivalent estimates for three groups of professionals - optometrists [10, 30, 31, 32], dentists [27] and vets [29]. The corresponding aggregate professional strengths are 78, 81 and 74 per cent but this comparison is not too meaningful with each profession having different age distributions. Inspection of the figures for women at different ages suggests that the professional work contribution of optometrists is as high if not higher than the other two groups.

Bearing in mind that reductions in recruitment are in the pipeline for both the other professions as a result of perceived over-production, this is not surprising. Unfortunately, similar estimates do appear to be available for medical practitioners where the DHSS [25] had projected the longest working lives for women. Thus with the possible exception of the medically qualified, United Kingdom optometrists appear to have greater working lives than other professionals for which information is available. This is to-day's position, but it needs to be emphasised that it may not be to-morrow's. The government's Health and Medicine Bill means that optometrists will no longer be paid for carrying out sight tests on the majority of people.

It appears likely that two-thirds of patients will be charged for this service. As a result one would expect to see a decline in national sight test numbers which have increased at three per cent per annum over a long period (substantially more than this in the last few years particularly as the public became more aware of the "end of free testing"). A sudden drop is expected in 1989 followed by a slow recovery, but with recruitment to the profession at an all-time high and its registered strength still set to increase at over two per cent per annum, it may not be long before there will be calls for cuts in recruitment; cuts which if they were implemented would then still not take effect for four or five years. In the meantime, it is to be expected that part-time opportunities may be substantially reduced and unemployment may become a reality. The present position in optometry only shows what is possible given good pay and employment opportunities. It will be very interesting to see how these changes will affect patterns of employment amongst both men and women.

## Summary and Conclusions.

In recent years there has been an absence of unemployment amongst optometrists and opportunities for parttime employment are good and relatively well-paid. Thus, the potential for employment appears optimal. For the birth of a child 57 per cent of women optometrists take 6 months or less off work before returning. This is similar to the pattern amongst women dentists and far greater than that reported for non-professional women.

There is little retirement pressure on optometrists. Women recruits tend to be younger than men, but retire earlier. As a consequence the number of years between registration and eventual professional retirement for both men and women in recent years is estimated at 43 with a lower quartile of 37 and upper quartile of 49. The plans of optometrists suggest shorter future median professional working periods of 38 years for women and 41 for men. Analysis of GOG registration data and reported attendance times suggest recent full-time equivalent lives for women 72 per cent of those of men - 26 as against 36 FTE years. The independent plans of to-day's optometrists for the future suggest a very similar ratio of 74 per cent - 27 as against 37 FTE years. The total working lives of both groups is likely to be a little greater than these figures when non-optician employment in teaching, research and administration is taken into account. The working lives of women optometrists appear as long if not longer than other professional groups which have been examined, with the possible exception of women doctors. As with all groups, this potential for work will not be fulfilled if public demand for optometric services fails to keep pace with growth in professional numbers.

If, as has been suggested, good pay and employment opportunities are the key factors in women's employment then this could even reflect the potential for all women, not just the professionals.

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