Optometrists Employed in Health Services
United States-1968

Statistics are presented for both active and inactive optometrists by demographic characteristics, education and training, and general exposition of professional activities. Data are based on information obtained from the National Vision and Eye Care Manpower Surveys conducted in 1968 and 1969 and from a mail survey of all optometrists conducted between September and December 1968.

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In accordance with specifications established by the National Center for Health Statistics, the Bureau of the Census, under a contractual arrangement, participated in planning the survey and collecting the data.

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OPTOMETRISTS EMPLOYED IN HEALTH SERVICES

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INTRODUCTION

This is the fourth report in the series designed to present statistics based on data collected from the National Vision and Eye Care Manpower Surveys conducted in 1968-69. The data were collected by the U.S. Bureau of the Census under contract to the Division of Health Resources Statistics of the National Center for Health Statistics. The earlier reports in this series provide statistical data on opticians and ophthalmologists. The present report contains statistics about optometrists derived from data collected through a mail survey of all optometrists conducted between September and December 1968.

Data obtained from the Vision and Eye Care Surveys were intended to serve two purposes: first, to obtain needed information about the personnel providing health care to persons with vision and eye care problems; and second, to obtain information concerning the characteristics of persons in three health manpower occupations—ophthalmologists, optometrists, and dispensing opticians.

Information supplied in this report is designed to present statistics about the demographic characteristics of optometrists, the education and training they have received, and a general exposition of their professional activities. Statistics are presented for both active and inactive optometrists. Most of the questionnaire was concerned with the professional activities of practicing optometrists, termed "active" optometrists. Only a limited set of questions was applicable to inactive persons. The report therefore presents information primarily about the active optometrists.

Future reports, based on data obtained from optometrists, will examine in greater detail the kinds and amounts of their professional activities and the numbers and types of support personnel that assist them.

Findings from the survey are discussed in the text. The bulk of the statistical data is contained in the detailed tables 1-16. Technical information about the methodology employed in the survey is found in appendix I. Demographic and optometric terms used in the report are defined in appendix II, and the optometrist questionnaire used in the survey is reproduced in appendix III.

ACTIVITY STATUS

In 1968 there were 20,301 civilian optometrists in the United States. Active optometrists numbered 18,427, or 91 percent of the total. Inactive optometrists were almost evenly divided between those who were neither active nor retired (termed "inactive but not retired"), and those who were retired. The respective numbers were 951 and 922 for the inactive but not retired and the retired.

Primarily, it is men who practice optometry. Women represented only 3 percent of all optometrists in the United States (table A). In terms of the active optometrists, they represented only 2 percent. The decrease in the percentage was due

Table A. Number and percent distribution of optometrists by sex, age at time of survey, and age at graduation, according to activity status: United States, 1968

Sex, age at time of survey, and age at graduation	Total	Activity status		
		Active	Inactive but not retired	Retired
	Number of optometrists			
Total	20,301	18,427	951	922
	Percent distribution			
Total, both sexes	100.0	100.0	100.0	100.0
Male	97.1	97.9	86.2	93.0
Female	2.9	2.1	13.8	7.0
Total, all ages at time of survey	100.0	100.0	100.0	100.0
Under 25 years	0.4	0.4	0.6	0.2
25-34 years	10.2	11.0	4.5	0.1
35-44 years	27.8	29.5	22.3	0.6
45-54 years	34.4	36.2	31.1	2.9
55-64 years	14.1	14.2	15.6	9.8
65-74 years	8.8	6.6	14.9	46.1
75 years and over	4.4	2.2	11.1	40.3
Total, all ages at graduation	100.0	100.0	100.0	100.0
Under 23 years	18.0	17.2	28.6	24.2
23-24 years	24.4	24.7	24.3	18.0
25-26 years	19.3	19.7	13.2	16.8
27-29 years	19.5	20.0	12.7	16.6
30-34 years	12.8	12.7	12.4	14.4
35 years and over	6.1	5.8	8.8	10.1

to the fact that 33 percent of all female optometrists were either retired members of the profession or inactive but not retired.

Females, while representing only 3 percent of all optometrists, represented 14 percent of the inactive but not retired and 7 percent of the retired. It is not difficult to explain the large percentage of inactive but not retired females. They well may have removed themselves–temporarily or permanently–from active participation in the profession in favor of full-time participation in family activities. What is not as easy to explain, however, is the large percentage of retired females. Some of these women may have classified themselves as "retired" instead of as "inactive but not retired." They may have done this because they do not plan to become active in optometry.

As would be expected, the vast majority of retired optometrists was 65 years of age or over—86.4 percent in 1968 (table A). An additional 9.8 percent were between the ages of 55 and 64.

The age distributions of the active and inactive optometrists were different in several significant details (table A). Active optometrists were more concentrated in the younger groups (under 55 years of age). This is as would be expected.

There was a large concentration of inactive optometrists among persons 65 years of age and over. At least some of these could be classifying themselves as "inactive but not retired" when in fact they should be classifying themselves as "retired." Twenty-six percent of the inactive but not retired group were 65 years of age or over. We do not know precisely why members of this group identified themselves as "inactive but not retired" instead of as "retired." It will require a special study to determine if they failed to identify themselves as retired for significant reasons.

There also appears to be a heavier concentration of inactive but not retired optometrists among persons graduating at the earlier ages, compared with active or retired optometrists (table A). Among both the retired and active groups, 42 percent graduated before age 25. Among the inactive but not retired group, 53 percent graduated before age 25. A part of this difference is undoubtedly due to persons who, having completed at least part of their training, decided that they were in the wrong profession. Unfortunately, this survey was not designed to elicit the depth of information about the inactive but not retired group that would permit a more thorough examination or a detailed explanation of the reasons for the differences. Perhaps future studies will provide such information.

GEOGRAPHIC DISTRIBUTION

Optometrists are unequally distributed geographically. In general, the distribution of optometrists is related to the distribution of the population. Several distinctions exist, however, between the two distributions.

The largest difference between the distribution of the population and that of optometrists occurs in the South Region. Only 22.4 percent of active optometrists practice in this region (table B).

Comparing the percentages of the population with the percentages of optometrists in each region leads to a single conclusion. Except for the South, the rest of the United States has larger percentages of the optometrist population

Table B. Percent distribution of the 1968 population and of optometrists by geographic region, according to activity status: United States, 1968

Geographic region	1968 civilian population	Optometrists			
		Total	Active	Inactive but not retired	Retired
	Percent distribution				
All regions	100.0	100.0	100.0	100.0	100.0
Northeast	24.4	26.0	25.8	30.9	25.2
North Central	28.0	32.3	31.9	36.2	36.6
South	31.0	21.8	22.4	16.0	15.8
West	16.6	19.9	19.9	16.9	22.5

than it does of the civilian population (table B). The effect is that the South has a much smaller ratio of optometrists to the population than do the other three regions. In fact the distribution is skewed to such an extent that the South has the only regional ratio below the national ratio of 10.3 optometrists per 100,000 population. The respective ratios for the four regions were Northeast 11.0; North Central, 11.8; West, 12.3; and South, 7.2 per 100,000 population.

Precise reasons for this maldistribution will have to be sought by others. One possible explanation may be associated with the geographic distribution of schools of optometry. Only two schools of optometry are located in the South.

Maldistribution of optometrists also occurs on the divisional and State levels.

The Middle Atlantic, East North Central, and Pacific Divisions accounted for 58 percent of all optometrists, yet these areas accounted for only 51 percent of the population. Perhaps even more significant is the fact that these three divisions accounted for 68 percent of all inactive but not retired optometrists. It is possible that the large percentage of inactive but not retired optometrists is related to a surplus of optometrists in these three divisions.

Thirty percent of the population is concentrated in four States—California, Illinois, New York, and Pennsylvania. These four States contain 37 percent of all optometrists and 36 percent of active optometrists, but they have a concentration of 56 percent of the inactive but not retired group.

This heavy concentration of inactive but not retired optometrists certainly suggests the need for future study of the reasons for the inactivity of these trained professionals. Their inactive status may be the result of factors related to maldistribution. If such is the case, then dissemination of knowledge about geographic areas in need of optometrists might equalize the distribution and make use of the talents of this particular group.

Figures 1 and 2 provide pictorial information on the State by State distribution of optometrists and the ratio of optometrists to the population. Of the States with the largest concentrations of optometrists—California, Illinois, Ohio, Pennsylvania, and New York (figure 1)—only one, Illinois, is among the States with the highest ratio of optometrists to the population (figure 2). The fact that schools in Illinois have produced a large percentage of all trained optometrists may be a contributing factor in the magnitude of the ratio for the State of Illinois.

Some indication of the changes that have taken place in both the numbers of optometrists and the ratios to the population since 1960 can be obtained from a comparison with data obtained from the decennial census. Because of differences in the methods and definitions, comparability is not exact and should be examined with caution.

In 1960, there were 16,044 employed optometrists in the United States.[1] According to the survey in 1968 there were 18,427 active optometrists. This would indicate an increase of 2,383 active optometrists in 8 years. Likewise, in 1960, the number of employed optometrists per 100,000 population was 8.9.[2] In 1968 there were 9.3 active optometrists per 100,000 population. Despite the difficulties of comparing the two sets of figures, it seems that an increase, both in the absolute number and ratio of optometrists to the population, has taken place. However, because of the differences previously mentioned, it is not possible to speculate how much of an increase has, in fact, taken place.

DEMOGRAPHIC AND PROFESSIONAL CHARACTERISTICS OF ACTIVE OPTOMETRISTS

The current age distribution of optometrists has certain implications for the future number of optometrists that will be available to provide care to persons with vision and eye care problems in the years to come.

At the time of the survey, the median age of all active optometrists was 47.5 years. This median will change, over time, because of the current age distribution of active optometrists.

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[1]Division of Public Health Methods: *Health Manpower Source Book, Section 17, Industry and Occupation Data From the 1960 Census, by State,* by R. A. Prindle and M. Y. Pennell. PHS Pub. No. 263, sec. 17. Public Health Service. Washington. U.S. Government Printing Office, 1963. p. 43.

[2]*Ibid.*

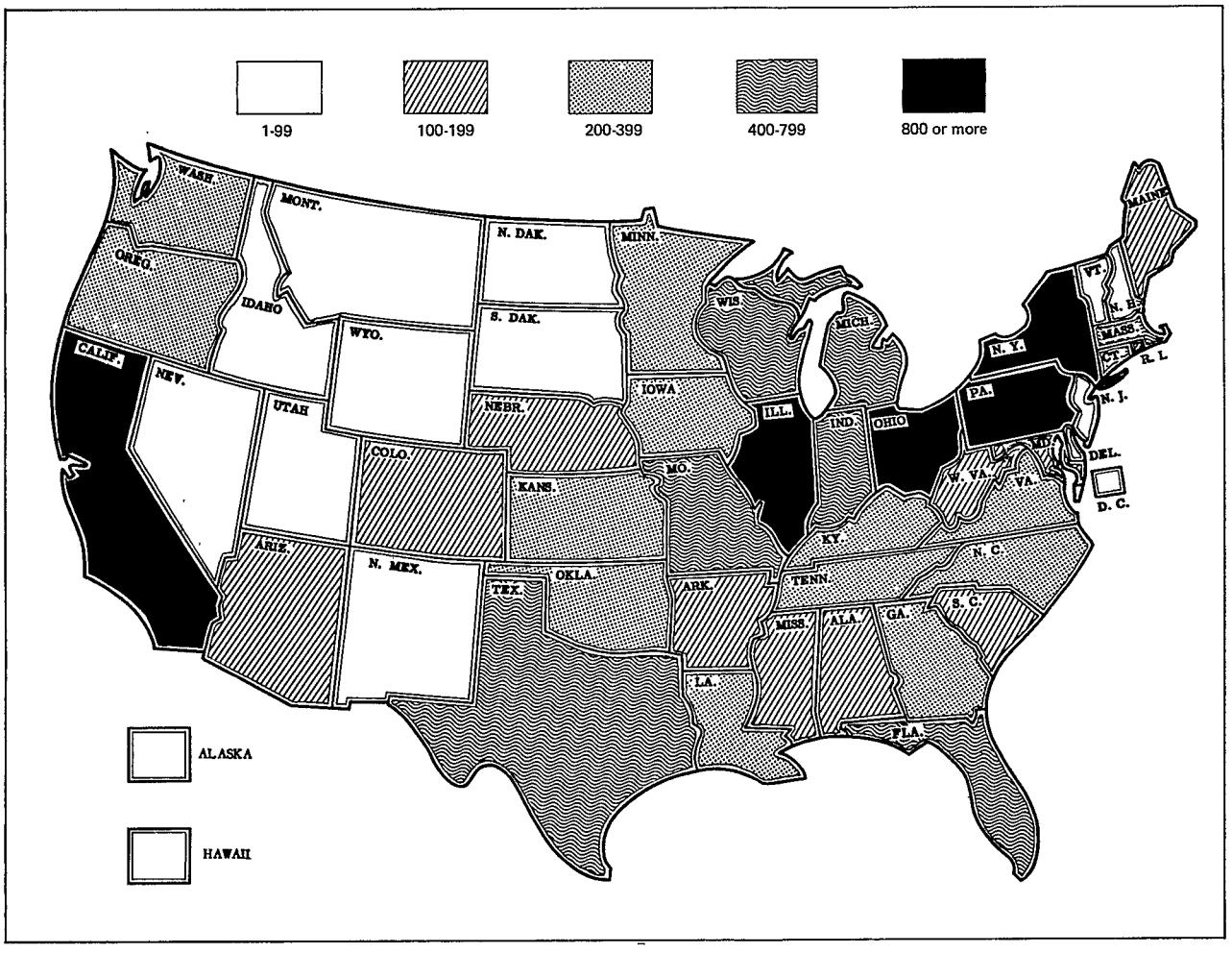

Figure 1. Number of active optometrists by State: United States, 1968.

Optometrists under 40 years of age comprised only 22 percent of all active optometrists. At the same time, those between the ages of 40 and 54 comprised 55 percent of the active optometrists. In terms of numbers, the two groups were composed of 4,037 of the former, and 10,152 of the latter. (The age distribution of active optometrists is shown in figure 3.) In effect, the younger group represents only 40 percent of the older group.

Because of the large concentration of active optometrists in the 15-year age group—40-54—the median age of active optometrists will probably rise over the next decade and then begin to decline. This is based on the assumption that the number of optometrists that will replace the current 40-to-54-year group are not numerically large enough to offset the rate of attrition that will take place in the older group because of retirement or death.

Without some increase in the rate of entry of new professionals (or an influx at the older ages), it is also to be expected that the total number of active optometrists will begin to decline as soon as those currently 40-54 years of age reach retirement age. Another factor in the expected decline is that the group under 40 years of age is too small to replace the older group as the older group becomes inactive.

The geographic distribution of optometrists is also related to their ages. Data presented in table C attest to such a relationship. It is particularly

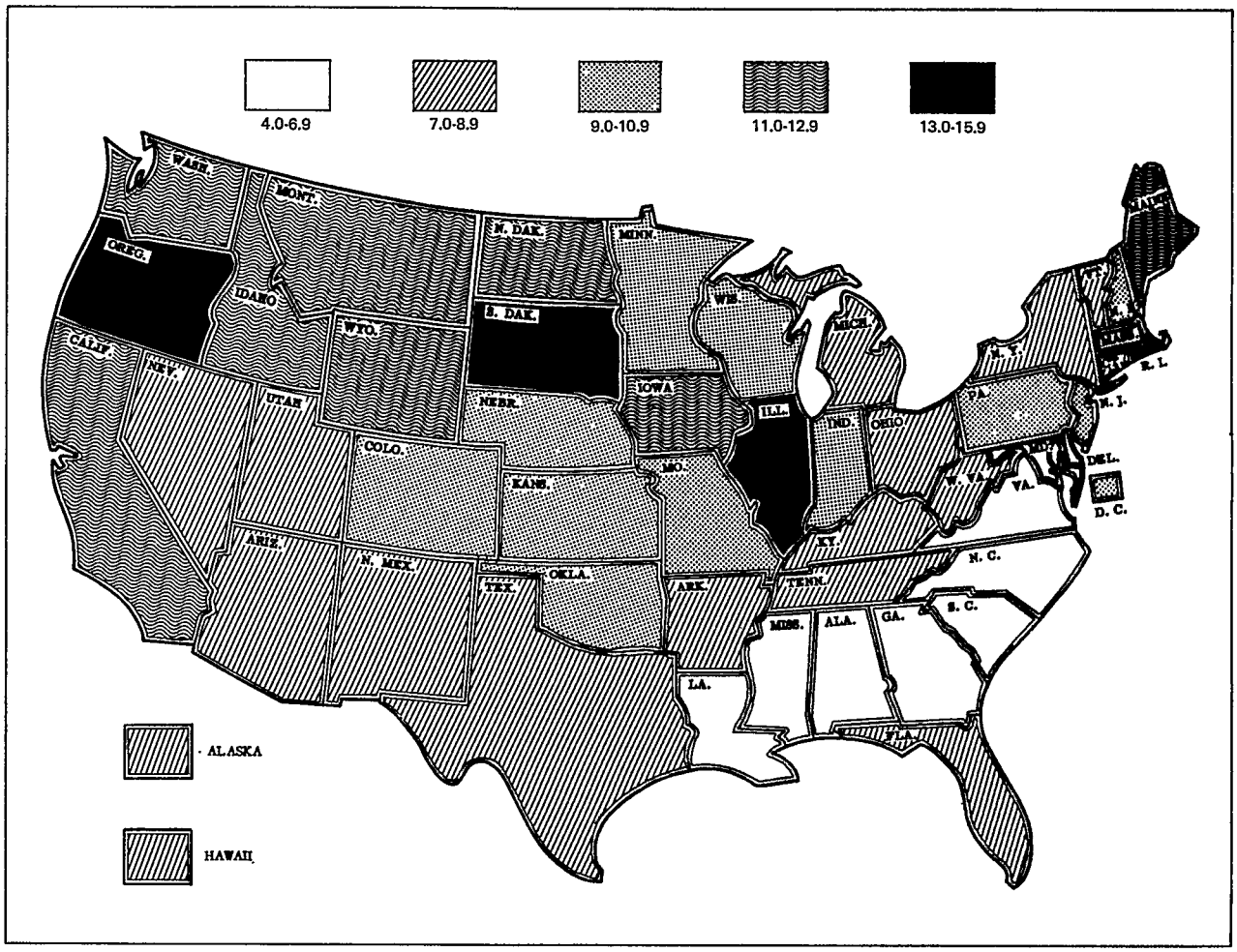

Figure 2. Number of active optometrists per 100,000 population: United States, 1968.

evident in the West Region. Active optometrists in the West Region represented a smaller percentage of the active optometrists in each age group as the ages of the optometrists rose.

Data in table C indicate that a dichotomy exists in the geographic distribution of active optometrists. Older optometrists are concentrated in the Northeast and North Central Regions. Younger ones are concentrated in the South and West. The fact that urbanization has been established to a greater extent in the Northeast and North Central Regions, for a longer period of time, may account for the greater concentration of older optometrists in these regions.

Sex and age are also related. A larger percentage of males than females are in the younger age groups; conversely there is a greater percentage of females in the older age groups of active optometrists. Among the males, 41 percent were under age 45 as compared with only 31 percent of the females. The male-female percentages were 23 and 32, respectively, for those 55 years of age and over.

The number of States in which each active optometrist was licensed to practice was another relationship found to be associated with the ages of the optometrists. The median number of States for all active optometrists was 1.66. The median number for those in specific age groups varied inversely with the ages of the groups. Among the youngest (under 35 years of age), the median number of States was 1.80, while among those 75 years of age or more, the median was down to 1.54. The implications are

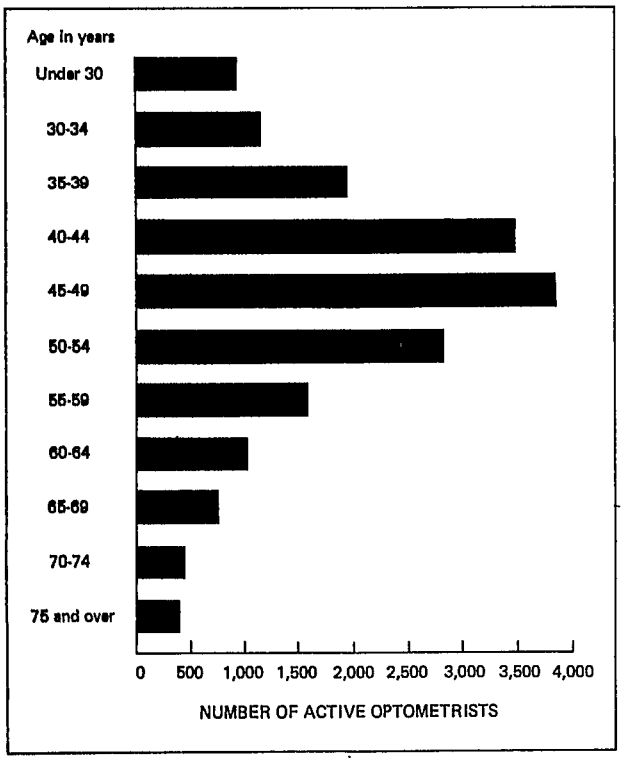

Figure 3. Number of active optometrists by age: United States, 1968.

as follows: Younger optometrists are acquiring licenses in more States than their older counterparts; older optometrists are relinquishing licenses previously held; or a combination of the two types of actions. Regardless of the reasons, it is evident that younger, active optometrists are licensed to practice in more States than are older members of the profession.

To be licensed in 1968, optometrists must have completed varying periods of training depending on the State(s) in which they were licensed. Thirteen States and the District of Columbia required optometrists to have a minimum of 6 years of preoptometry and professional optometry training; 26 States required at least 5 years; the remaining 11 States required 3 or 4 years of training in such programs.[3]

Training for optometry took place in the schools of optometry scattered throughout the country. (At the time of the survey, there were 10 accredited colleges of optometry in the United States.)[4] However, the majority of optometrists currently active obtained their training in a limited number of such schools. About sixty-three percent of all active optometrists were trained in the following five schools:

Place of training	Percent of all active optometrists
Total	63.4
Northern Illinois College, Chicago, Ill.	21.9
Southern College, Memphis, Tenn.	12.8
Pennsylvania College, Philadelphia, Pa.	12.2
Illinois College, Chicago, Ill.	8.4
Los Angeles College, Los Angeles, Calif.	8.1

Earlier it was pointed out that Illinois was among those States with both the largest number of optometrists and the highest ratio of optometrists to the population. Two of the schools of optometry listed above are located in Illinois. Between them they trained almost one-third of all active optometrists. In all probability the concentration of optometrists in Illinois is related to the large percentage trained by schools within that State.

A limited relationship was found to exist between the ages of the optometrists and the age at graduation from schools of optometry. Specifically, a direct relationship was found to exist between each group of optometrists of differing ages and the percentages of each group graduating before age 23 (table D). Only 4 percent of the optometrists under 35 years of age graduated before age 23. In contrast, 32 percent of those 65 years of age and over graduated before age 23.

Given this relationship and the fact that 89 percent of all active optometrists graduating before age 23 obtained doctor of optometry (O.D.) degrees, it would appear that future recipients of the O.D. degree will almost all have

[3]National Center for Health Statistics: *State Licensing of Health Occupations.* PHS Pub. No. 1758. Public Health Service. Washington. U.S. Government Printing Office, 1968. p. 86.

[4]National Center for Health Statistics: Health Manpower and Health Facilities, 1968. *Health Resources Statistics.* PHS Pub. No. 1509. Public Health Service. Washington. U.S. Government Printing Office, 1968. p. 202.

Table C. Number and percent distribution of active optometrists by geographic region, according to age: United States, 1968

Geographic region	All ages	Age				
		Under 35 years	35-44 years	45-54 years	55-64 years	65 years and over
	Number of active optometrists					
All active optometrists	18,427	2,087	5,433	6,669	2,617	1,622
	Percent distribution					
All regions	100.0	100.0	100.0	100.0	100.0	100.0
Northeast	25.8	19.4	25.2	24.9	31.5	30.5
North Central	31.9	29.4	29.5	33.2	34.1	34.1
South	22.4	24.2	24.0	23.3	17.6	19.1
West	19.9	27.1	21.2	18.6	16.9	16.3

Table D. Number and percent distribution of active optometrists by age at graduation, according to age at time of survey: United States, 1968

Age at graduation	All ages	Age at time of survey				
		Under 35 years	35-44 years	45-54 years	55-64 years	65 years and over
	Number of active optometrists					
All active optometrists	18,427	2,087	5,433	6,669	2,617	1,622
	Percent distribution					
All ages	100.0	100.0	100.0	100.0	100.0	100.0
Under 23 years	17.2	3.6	11.4	19.9	24.1	32.0
23-24 years	24.7	46.9	32.9	14.7	18.6	19.3
25-26 years	19.7	29.1	26.6	14.3	14.5	15.0
27-29 years	19.9	16.6	19.2	25.6	13.7	13.7
30-34 years	12.7	3.8	8.4	20.7	10.7	8.9
35 years and over	5.8	-	1.5	4.8	18.4	11.2

passed their 23d birthday before obtaining their degree.

Three of the nine geographic divisions contained 51 percent of the population—Middle Atlantic, East North Central, and Pacific. These divisions accounted for 57 percent of the active optometrists. However, the percentages of optometrists who practiced in these three divisions, varied with the kind of degrees held. Of active optometrists with O.D. degrees, 54 percent practiced in these three divisions. The percentages for optometrists with Ph.D., M.A., and B.A. degrees were 73, 88, and 84, respectively, for these three divisions.

TYPE OF EMPLOYMENT AND PRIMARY ACTIVITIES OF ACTIVE OPTOMETRISTS

Self-employment was the predominant form of employment among active optometrists in 1968. Eighty-eight percent so classified themselves on the questionnaires. The remainder were composed of 11 percent who were salaried and 1 percent who were self-classified as "other" (donated services, unpaid family workers, and so forth).

The percentages of males and females in different forms of employment were sufficiently different to warrant some discussion.

The first difference was in the percentages of each sex that were self-employed. Of all active males, 88 percent were self-employed as compared with 80 percent of the active females. For both sexes, the vast majority was self-employed; however, 20.3 percent of all active female optometrists were salaried, opposed to 11.6 percent of all active male optometrists.

The second difference concerns the percentages of each sex in the various categories of self-employment, particularly the solo and partnership practice categories. The majority of both sexes practices as solo practitioners; however, the percentages of each sex differ considerably. Among self-employed males, 84 percent were solo practitioners. Among the self-employed females, only 65 percent were solo practitioners. In effect, almost 20 percent more of the males who were self-employed than of females in the same category were solo practitioners.

As opposed to 16 percent of self-employed males who were in partnership or group practice, 35 percent of female optometrists who were self-employed were in partnership or group practice. In effect, approximately 20 percent more of the self-employed females were in partnership practice than were self-employed males. The respective percentages of the two sexes in partnership practice were 32 percent of the self-employed females and only 13 percent of the self-employed males; this leaves about 3 percent of each in group practice.

The median age for salaried optometrists was 1.4 years less than that for self-employed optometrists (table E). The distributions of percentages for the two groups by age indicate that the difference in the medians was due entirely to the larger concentration of optometrists under 35 years of age among the salaried group. Only 10.3 percent of the self-employed optometrists were under 35 years of age. In contrast, 19.1 percent of those salaried were concentrated in this age group.

Table E. Number and percent distribution of active optometrists by age, according to type of employment, with median age: United States, 1968

Age	Total	Type of employment	
		Self-employed	Salaried and other
	Number of active optometrists		
All active optometrists . .	18,427	16,256	2,172
	Percent distribution		
All ages	100.0	100.0	100.0
Under 35 years	11.3	10.3	19.1
35-44 years	29.5	29.8	26.7
45-54 years	36.2	36.9	30.7
55-64 years	14.2	14.3	13.7
65 years or more	8.8	8.7	9.7
Median age	47.5	47.7	46.3

Concentration of a larger percentage of the youngest optometrists in the salaried group is to be expected. Not all of the new members of the profession are able to go into business for themselves. Undoubtedly, some of those entering the profession as salaried become self-employed at a later time.

The median numbers of States in which active optometrists were licensed to practice were also calculated for optometrists in the various forms of employment. The results are indicated in figure 4. One group stands out from all others: those employed by nonprofitmaking organizations.

Why should optometrists employed by nonprofitmaking organizations be licensed to practice in a larger number of States than those in other types of employment? The median number of States for those employed by nonprofit firms was from .05 to .11 percent greater than the median for optometrists in all remaining forms of employment. Can it be that

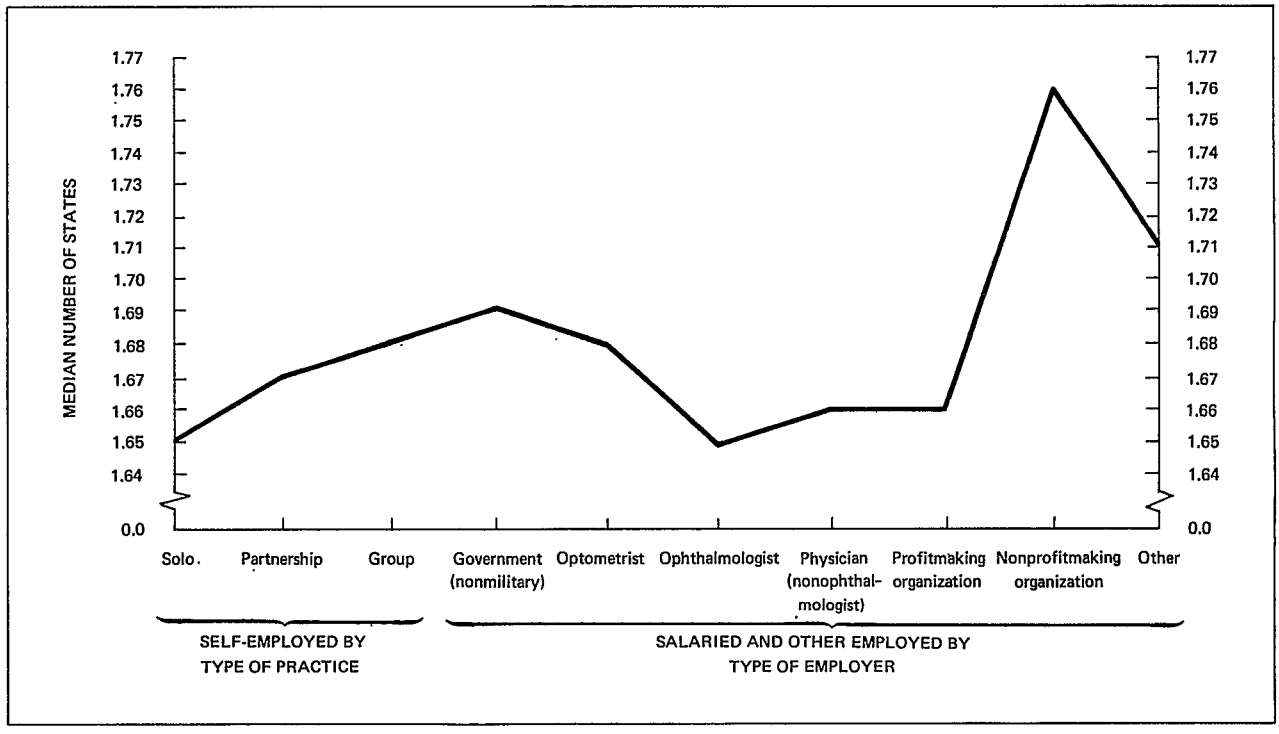

Figure 4. Median number of States in which active optometrists were licensed to practice by type and form of employment: United States, 1968.

optometrists employed by nonprofitmaking organizations plan to remain for a shorter period of time than those employed by others or working for themselves? Such plans could then also include maintaining more licenses to permit a greater number of options when they do leave. Future research is needed to determine answers to these questions outside the province of this study.

The primary activity of optometrists, unlike some of the other health professionals, is restricted almost exclusively to general practice. Specialization, for all practical purposes, is almost nonexistent. Among active optometrists 95.8 percent listed general practice as their primary activity. An additional 2 percent listed contact-lens fitting as their primary activity.

Contact-lens fitting may take on increasing significance with the passage of time. An inverse relationship was found between contact-lens fitting, as a primary and secondary activity, and the ages of active optometrists. Larger percentages of each of the younger groups of optometrists, when compared with the older groups, listed contact-lens fitting either as their primary or secondary activity. If such a condition continues, as new members enter the profession, the number of specialists in contact-lens fitting should grow and become increasingly important. In 1968, more than one-half of all active optometrists listed contact-lens fitting as their secondary activity. It is probable that this percentage will increase in the future.

The types and numbers of services active optometrists rendered their patients were found to be related to at least two of the previously discussed variables. These variables were age and form of employment.

Of the 14 specific services each active optometrist had the opportunity to check as one of those he rendered to patients, a relationship was found to exist between almost all of the types of services provided and the ages of the optometrists. (For the list of services see the copy of the questionnaire in appendix III.) Except for "aniseikonic" and "dispensing and adjusting" services, the number of active optometrists providing the services was found to be inversely

related to the ages of the optometrists. No relationship was found between the ages of the optometrists and the two exceptions.

In addition to examining the relationship between the individual types of services rendered and the ages of the optometrists, the number of different services rendered was also examined to determine its relationship to the ages of the optometrists. This was accomplished by calculating the median number of different services rendered by active optometrists in the various 5-year age groups. The results are listed below:

Age	Median number of different services rendered
Under 30 years	10.52
30-34 years	10.06
35-39 years	9.75
40-44 years	9.02
45-49 years	8.90
50-54 years	8.34
55-59 years	8.04
60-64 years	7.44
65-69 years	6.59
70-74 years	5.91
75 years and over	5.22

As indicated by the table, there was an unbroken inverse relationship between the median number of different services rendered and the ages of the optometrists.

It is not surprising to find that when optometrists are older, they provide fewer services. As they become older, they can afford to become more selective and more specialized.

Self-employed optometrists generally provided a larger number of different services than did salaried optometrists (figure 5). The median numbers of different services provided by self-employed optometrists ranged between 8.8 and 9.8. The range for salaried optometrists was 5.7 to 7.6 services.

Also worthy of note are the differences in the median numbers of services provided by optometrists in the three forms of self-employed practices. Optometrists in solo practice provided a median number of 8.8 services. Both optometrists in partnership and group practice provided about one more service according to their median numbers which were 9.6 and 9.8 services, respectively. Optometrists in partnerships and group practices may have been able to render more services simply because there were more optometrists available to provide the added services within the practice. Within given practices, there may be complementary specialties offered by the different members of the partnership or group. Solo practitioners, however, must rely on themselves for all of the types of services rendered.

Another factor that may be associated with the numbers and types of services provided is the presence or absence of support personnel. It was found that the presence of support personnel is associated with younger optometrists. For example, among active optometrists 25-34 years of age, 86 percent employed support personnel, whereas, only 46 percent of those 75 years of age and over employed them.

The previous finding of an inverse relationship between the age of the optometrist and the number of services rendered may be interrelated with the percentages employing support personnel. The implications of the presence of support personnel will be examined in subsequent reports based on the data from this survey.

ALLOCATION OF PROFESSIONAL TIME

The number of hours per week and weeks per year optometrists worked were also associated with at least three characteristics of the active optometrists or their employment. The three characteristics were sex, age, and form of employment.

Larger percentages of male optometrists were found to have worked both greater numbers of weeks per year and greater numbers of hours per week than did their female counterparts (table F).

To facilitate the discussion and to increase the clarity of the presentation, the following conventions are adopted for the discussion that follows: 1-47 weeks per year worked will be referred to as a "short year," while 48-52 weeks worked will be referred to as a "full year." Likewise, when the number of hours per week worked was less than 35, it will be referred to as "part time" and when 35 or more hours were worked, it will be referred to as "full time."

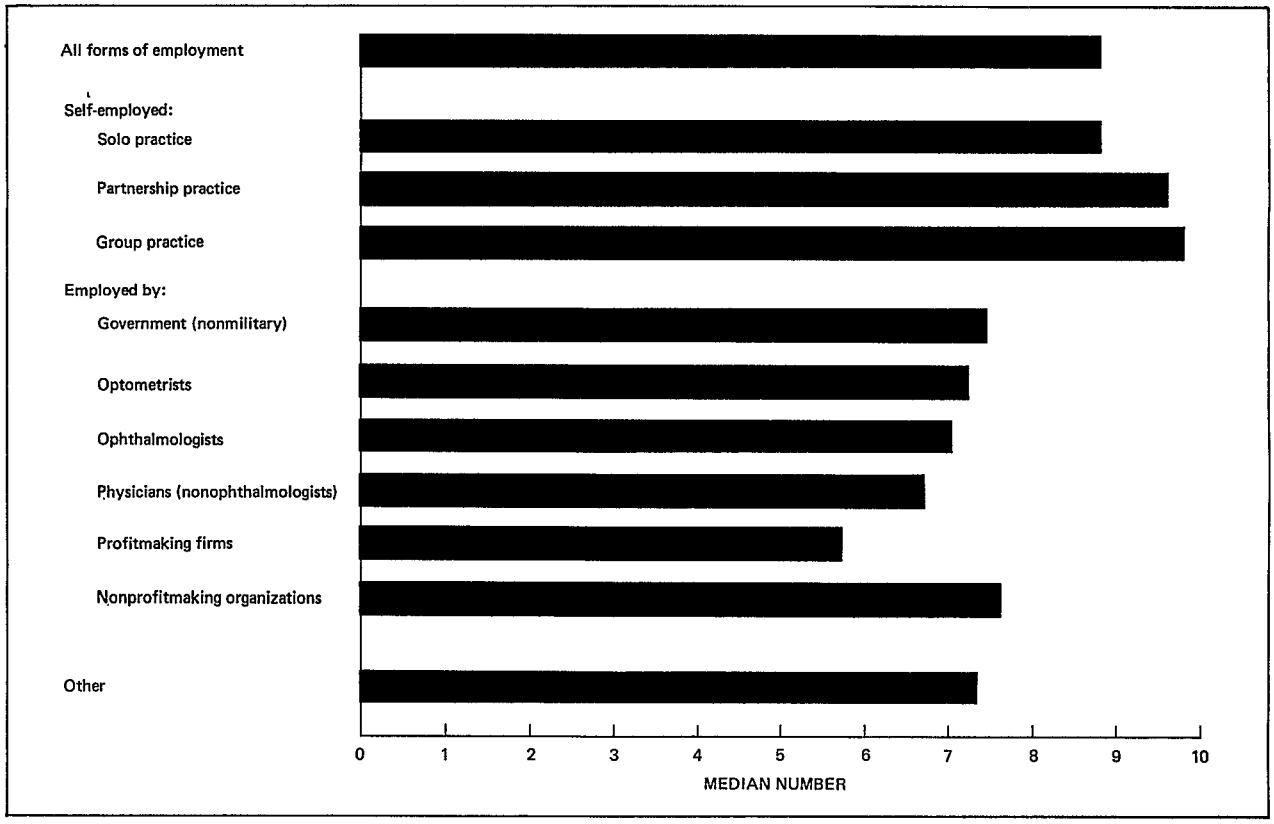

Figure 5. Median number of different services rendered to patients by active optometrists by type and form of employment: United States, 1968.

Female optometrists represented 4.4 percent of all optometrists working a short year but only 2.0 percent of those working a full year (table F). While the percentages are small, they do indicate that female optometrists represented a larger percentage of the optometrists working a short year compared with those working a full year. In a similar manner, data presented in table F also indicate that female optometrists were more heavily represented among part-time as opposed to full-time optometrists regardless of whether they were working a short year or full year. In effect, it appears that female optometrists are inclined to work fewer hours per week and fewer weeks per year than male optometrists.

The number of hours per week and weeks per year worked were likewise related to the ages of the optometrists. Older optometrists tended to work part time and a short year, while the younger optometrists tended to work full time and a full year (table F).

Similarly, the amount of time optometrists spent working was also found to be related to their form of employment. This was particularly true among the self-employed optometrists (table G). Self-employed, solo practitioners were found to be most heavily represented among optometrists working part time during the full year. In contrast, those in partnerships and group practices were most heavily represented among the groups working full time and during a short year.

At first glance this might appear to be somewhat of a contradiction; however, it may be merely the interactive effect of other variables

Table F. Number and percent distribution of active optometrists by sex and age, according to weeks per year and hours per week worked: United States, 1968

Sex and age	All active optometrists	1-47 weeks per year			48-52 weeks per year				
		Total	Hours per week		Total	Hours per week			
			1-34	35 or more		1-34	35-40	41-48	49 or more
	Number of active optometrists								
All active optometrists	18,427	1,403	583	820	17,024	1,589	6,655	5,596	3,183
	Percent distribution								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sex:									
Male	97.9	95.6	91.9	98.3	98.0	93.5	98.1	98.8	98.9
Female	2.1	4.4	8.1	1.7	2.0	6.5	1.9	1.2	1.1
Age:									
Under 35 years	11.3	5.8	2.2	8.4	11.8	7.7	11.9	11.9	13.4
35-44 years	29.5	20.7	13.2	26.0	30.2	20.5	30.0	31.6	33.0
45-54 years	36.2	28.2	20.9	33.3	36.9	28.5	36.0	38.4	40.2
55-64 years	14.2	18.7	18.7	18.8	13.8	18.6	14.7	12.9	11.3
65-74 years	6.6	19.9	33.0	10.5	5.5	15.9	5.9	4.2	1.9
75 years or more	2.2	6.8	12.0	3.1	1.8	8.9	1.5	1.1	0.3

such as the ages of the optometrists and the number of optometrists available to serve patients that is responsible for this pattern. In solo practices, the optometrists may have to be available for a greater number of weeks per year since there is no other optometrist available to take care of the patients. However, these same optometrists may be working fewer hours. As was previously pointed out, older optometrists are more heavily represented among the solo practitioners, and being older, they tend to work fewer hours.

Not all of the other characteristics of optometrists or their activities were found to be associated with the number of hours per week optometrists worked. The highest academic degree held and the number of different services provided were not found to be related to the number of hours worked.

No association was found between the hours per week worked and whether an optometrist held as his or her highest degree an O.D., M.A., or B.A. degree. Similarly, no association was found between the median number of different services provided and the number of hours per week worked by the optometrists.

The highest degree held by an optometrist was found to be related to the percentage of time spent in optometric practice activities (as opposed to teaching, research, administration, and other activities). Of the optometrists holding different levels of degrees, the percentages spending 100 percent of their time in optometric practice were as follows: O.D., 79; Ph.D., 51; M.A., 72; and B.A., 80.

On the basis of this finding one might assume that optometrists with Ph.D. degrees (but not O.D. degrees) were probably devoting their time, more exclusively, to teaching and research. Such, however, was not the case. Not a single optometrist with the Ph.D. as the highest degree devoted 100 percent of his time to either research or teaching. Some did, however, devote some of their time to these activities, but in all cases it was less than 100 percent.

Form of employment was found to be associated with the percentages of time spent by

Table G. Number and percent distribution of active optometrists by type and form of employment, according to weeks per year and hours per week worked: United States, 1968

Type and form of employment	All active optometrists	1-47 weeks per year			48-52 weeks per year				
		Total	Hours per week		Total	Hours per week			
			1-34	35 or more		1-34	35-40	41-48	49 or more
	Number of active optometrists								
All forms of employment	18,427	1,403	583	820	17,024	1,589	6,655	5,596	3,183
	Percent distribution								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Self-employed	88.2	86.7	83.9	88.8	88.3	88.6	87.9	87.0	91.5
Salaried and other	11.8	13.3	16.1	11.2	11.7	11.4	12.1	13.0	8.5
	Number of active optometrists								
Total, self-employed	16,256	1,217	489	728	15,039	1,408	5,849	4,868	2,913
	Percent distribution								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Type of practice:									
Solo	83.2	77.3	79.3	75.9	83.8	88.6	84.4	82.7	81.9
Partnership	13.5	18.4	17.0	19.4	13.0	9.5	12.9	14.1	13.4
Group	3.3	4.3	3.7	4.7	3.2	1.9	2.7	3.2	4.7

active optometrists in optometric practice activities. Among the self-employed, 80 percent of the solo practitioners, and 73 and 69 percent, respectively, of those in partnerships and group practices spent 100 percent of their time in optometric practice activities. Among optometrists employed by others, those working for nonprofitmaking organizations had the smallest percentage (41) and those working for other optometrists had the largest percentage (90) of their respective groups spending 100 percent of their time in optometric activities.

The activities of optometrists working for nonprofitmaking organizations differed from those in other forms of employment in at least one major aspect. More than one-fourth (27.9 percent) of all optometrists working for nonprofitmaking organizations spent no time whatever in optometric practice activities. This was at least five times greater than the percentages found for optometrists in any other form of employment. Additional investigation determined that larger percentages of those working for nonprofitmaking organizations were spending their time in teaching and/or research. It would appear that this group represents the academically oriented interests of the profession.

Ages of the optometrists have been shown to be related to a number of other characteristics associated with optometrists and their activities. Specifically, age was related to the number of hours per week worked. Therefore, it is not surprising to have found that the number of patients seen during a typical week by active optometrists were also related to the ages of the optometrists.

In general, the number of patients seen weekly increased with the ages of the optometrists until it reached a peak when the optometrists were between the ages of 35 and 44 years. It then declines steadily. This can be observed

Table H. Number and percent distribution of active optometrists by number of patients seen weekly, according to age, with median age of optometrists and median number of patients seen: United States, 1968

Number of patients seen weekly	All ages	Years of age					Median ages of optometrists
		Under 35	35-44	45-54	55-64	65 and over	
	Number of active optometrists						
All active optometrists	18,427	2,087	5,433	6,669	2,617	1,622	47.5
	Percent distribution						
Total	100.0	100.0	100.0	100.0	100.0	100.0	
No patients	0.7	1.0	0.6	0.5	0.6	1.3	47.9
Under 25 patients	22.2	21.5	16.2	18.5	26.8	50.6	50.7
25-49 patients	37.4	36.2	37.3	38.8	39.7	29.5	47.5
50-74 patients	20.2	20.7	22.9	21.0	18.0	10.6	46.3
75-99 patients	9.4	10.3	11.0	9.9	7.3	3.7	45.7
100 patients or more	10.2	10.3	12.1	11.1	7.6	4.3	45.9
Median number of patients seen	43.2	44.0	47.3	44.5	39.2	24.1	

from the median numbers of patients seen weekly presented at the bottom of table H. The medians in table H indicate—at least for optometrists who saw between 1 and 99 patients weekly—that the younger the optometrist, the larger the numbers of patients seen per week.

In summary, we find, as one would most probably expect, that the activities of optometrists reach a peak, insofar as patient care is concerned, in the middle years of life and then decline as the optometrist grows older. Undoubtedly, other relationships between the ages of the optometrists and their activities will emerge when subsequent reports based on data from this survey are produced. Future reports will treat in greater detail the clinical or optometric practice activities of optometrists and their support personnel.

LIST OF DETAILED TABLES

Table 1. Number and percent distribution of optometrists by activity status, according to area: United States and each State, 1968

Area	Number of optometrists				Percent distribution			
	Total	Activity status			Total	Activity status		
		Active	Inactive but not retired	Retired		Active	Inactive but not retired	Retired
United States	20,301	18,427	951	922	100.0	90.8	4.7	4.5
Alabama	192	180	5	8	100.0	93.5	2.4	4.1
Alaska	18	17	#	#	100.0	94.1	#	#
Arizona	130	127	-	3	100.0	97.5	-	2.5
Arkansas	154	151	#	#	100.0	97.8	#	#
California	2,492	2,242	125	124	100.0	90.0	5.0	5.0
Colorado	199	188	#	#	100.0	94.6	#	#
Connecticut	267	260	4	3	100.0	97.3	1.5	1.2
Delaware	39	35	#	#	100.0	90.9	#	#
District of Columbia	86	71	4	11	100.0	83.1	4.2	12.7
Florida	533	493	22	18	100.0	92.4	4.2	3.4
Georgia	278	263	8	7	100.0	94.3	3.0	2.6
Hawaii	68	64	#	#	100.0	93.8	#	#
Idaho	92	86	#	#	100.0	93.9	#	#
Illinois	1,920	1,616	202	102	100.0	84.2	10.5	5.3
Indiana	539	510	9	21	100.0	94.6	1.6	3.8
Iowa	360	336	10	14	100.0	93.4	2.7	3.9
Kansas	250	229	5	16	100.0	91.5	2.1	6.4
Kentucky	238	229	5	3	100.0	96.4	2.3	1.4
Louisiana	240	223	8	9	100.0	93.0	3.3	3.7
Maine	125	116	#	#	100.0	92.4	#	#
Maryland	194	175	9	10	100.0	90.5	4.5	5.1
Massachusetts	814	719	61	34	100.0	88.4	7.5	4.2
Michigan	772	708	30	33	100.0	91.7	3.9	4.3
Minnesota	400	354	20	26	100.0	88.5	5.1	6.4
Mississippi	129	121	4	4	100.0	93.5	3.3	3.3
Missouri	481	432	19	29	100.0	89.9	4.0	6.1
Montana	95	89	3	3	100.0	93.2	3.4	3.4
Nebraska	172	155	3	14	100.0	90.1	1.9	8.0
Nevada	38	36	#	#	100.0	94.3	#	#
New Hampshire	71	70	#	#	100.0	98.5	#	#
New Jersey	705	675	13	17	100.0	95.7	1.9	2.4
New Mexico	73	71	#	#	100.0	97.2	#	#
New York	1,801	1,598	101	101	100.0	88.7	5.6	5.6
North Carolina	342	322	17	3	100.0	94.0	5.0	0.9
North Dakota	77	72	-	5	100.0	94.0	-	6.0
Ohio	1,034	942	35	57	100.0	91.1	3.4	5.5
Oklahoma	260	247	6	6	100.0	95.1	2.5	2.5
Oregon	302	273	7	21	100.0	90.5	2.5	7.0
Pennsylvania	1,313	1,145	105	63	100.0	87.2	8.0	4.8
Rhode Island	143	132	6	6	100.0	92.2	3.9	3.9
South Carolina	162	155	#	#	100.0	96.0	#	#
South Dakota	102	94	4	3	100.0	92.6	4.2	3.2
Tennessee	324	296	13	16	100.0	91.2	3.9	4.9
Texas	820	752	31	37	100.0	91.8	3.7	4.5
Utah	86	74	5	7	100.0	86.3	5.5	8.2
Vermont	39	38	#	#	100.0	97.2	#	#
Virginia	284	274	3	7	100.0	96.5	1.2	2.3
Washington	396	356	14	26	100.0	89.9	3.5	6.5
West Virginia	158	147	#	#	100.0	93.3	#	#
Wisconsin	453	429	5	18	100.0	94.7	1.2	4.1
Wyoming	43	41	#	#	100.0	94.7	#	#

Data suppressed to comply with confidentiality requirements.

Table 2. Number and percent distribution of optometrists by activity status, according to age, sex, age at graduation, highest degree achieved, and school of graduation: United States, 1968

Characteristic	Total	Activity status			Total	Activity status		
		Active	Inactive but not retired	Retired		Active	Inactive but not retired	Retired
	Number of optometrists				Percent distribution			
All optometrists	20,301	18,427	951	922	100.0	90.8	4.7	4.5
Age:								
Under 35 years	2,138	2,087	48	3	100.0	97.6	2.3	0.0
35-44 years	5,650	5,433	212	6	100.0	96.1	3.8	0.1
45-54 years	6,991	6,669	296	26	100.0	95.4	4.2	0.4
55-64 years	2,856	2,617	148	90	100.0	91.7	5.2	3.2
65-74 years	1,783	1,215	142	425	100.0	68.2	8.0	23.9
75 years and over	883	406	105	372	100.0	46.0	11.9	42.1
Sex:								
Male	19,711	18,034	820	857	100.0	91.5	4.2	4.3
Female	590	394	131	65	100.0	66.8	22.2	11.0
Age at graduation:								
Under 23 years	3,664	3,169	272	223	100.0	86.5	7.4	6.1
23-24 years	4,946	4,549	231	166	100.0	92.0	4.7	3.3
25-26 years	3,910	3,630	126	154	100.0	92.8	3.2	4.0
27-29 years	3,949	3,676	121	153	100.0	93.1	3.1	3.9
30-34 years	2,589	2,338	118	133	100.0	90.3	4.6	5.1
35 years and over	1,243	1,067	83	93	100.0	85.8	6.7	7.5
Highest degree achieved:								
Doctor of optometry	18,258	16,543	840	876	100.0	90.6	4.6	4.8
Doctor's degree	52	41	8	3	100.0	78.6	15.1	6.3
Master's degree	450	417	31	2	100.0	92.6	6.9	0.5
Bachelor's degree	1,370	1,288	61	22	100.0	94.0	4.4	1.6
Other	171	139	12	19	100.0	81.7	7.2	11.2
School of graduation:								
Illinois College (Ill.)	1,619	1,554	46	19	100.0	96.0	2.9	1.2
Indiana University (Ind.)	198	194	4	-	100.0	97.8	2.1	-
Los Angeles College (Calif.)	1,671	1,491	73	107	100.0	89.2	4.4	6.4
Massachusetts College (Mass.)	1,201	1,115	60	26	100.0	92.8	5.0	2.2
Ohio State University College (Ohio)	882	836	31	15	100.0	94.7	3.6	1.7
Pacific University (Oreg.)	794	772	17	4	100.0	97.3	2.2	0.6
Pennsylvania College (Pa.)	2,439	2,249	132	58	100.0	92.2	5.4	2.4
Southern College (Tenn.)	2,414	2,365	43	6	100.0	98.0	1.8	0.3
University of California (Calif.)	863	793	48	22	100.0	91.9	5.5	2.5
University of Houston (Tex.)	215	212	3	-	100.0	98.5	1.5	-
University of Montreal (Canada)	1,104	982	68	54	100.0	88.9	6.2	4.9
Monroe College (Ill.)	494	424	64	7	100.0	85.7	12.9	1.4
Chicago College (Ill.)	567	529	32	6	100.0	93.4	5.6	1.0
Northern Illinois College (Ill.)	4,454	4,031	214	208	100.0	90.5	4.8	4.7
University of Rochester (N.Y.)	211	180	8	24	100.0	85.0	3.8	11.3
Needles Institute (Ill.)	253	148	23	82	100.0	58.7	9.1	32.3
All other	922	551	86	284	100.0	59.8	9.3	30.8

Table 3. Number of optometrists per 100,000 population, by activity status and geographic location: United States, each region, division, and State, 1968

Geographic location	Total	Activity status		
		Active	Inactive but not retired	Retired
	Number of optometrists per 100,000 population			
United States	10.3	9.3	0.5	0.5
Geographic region:				
Northeast	11.0	9.9	0.6	0.5
North Central	11.8	10.6	0.6	0.6
South	7.2	6.8	0.2	0.2
West	12.3	11.2	0.5	0.6
Geographic division:				
New England	12.9	11.8	0.7	0.5
Middle Atlantic	10.4	9.3	0.6	0.5
East North Central	12.0	10.7	0.7	0.6
West North Central	11.5	10.5	0.4	0.7
South Atlantic	7.1	6.6	0.3	0.2
East South Central	6.8	6.4	0.2	0.2
West South Central	7.8	7.2	0.2	0.3
Mountain	9.7	9.1	0.2	0.4
Pacific	13.1	11.8	0.6	0.7
State:				
Alabama	5.5	5.2	0.1	0.2
Alaska	7.4	7.0	-	0.4
Arizona	8.0	7.8	-	0.2
Arkansas	7.8	7.7	0.1	0.1
California	13.3	11.9	0.7	0.7
Colorado	9.9	9.4	0.1	0.4
Connecticut	9.1	8.8	0.1	0.1
Delaware	7.4	6.7	0.4	0.2
District of Columbia	10.9	9.0	0.5	1.4
Florida	8.7	8.1	0.4	0.3
Georgia	6.2	5.9	0.2	0.2
Hawaii	9.5	8.9	0.1	0.4
Idaho	13.0	12.2	0.1	0.6
Illinois	17.6	14.8	1.9	0.9
Indiana	10.7	10.1	0.2	0.4
Iowa	13.0	12.1	0.4	0.5
Kansas	11.1	10.1	0.2	0.7
Kentucky	7.5	7.2	0.2	0.1
Louisiana	6.6	6.1	0.2	0.2
Maine	13.0	12.0	0.2	0.7
Maryland	5.3	4.8	0.2	0.3
Massachusetts	15.1	13.3	1.1	0.6
Michigan	8.9	8.2	0.3	0.4
Minnesota	10.9	9.7	0.5	0.7
Mississippi	5.6	5.2	0.2	0.2
Missouri	10.5	9.5	0.4	0.6
Montana	13.8	12.9	0.4	0.4
Nebraska	12.0	10.8	0.2	1.0
Nevada	8.7	8.2	0.2	0.2
New Hampshire	10.1	10.0	0.1	-
New Jersey	10.1	9.6	0.2	0.2
New Mexico	7.5	7.3	0.1	0.1
New York	9.9	8.8	0.6	0.6
North Carolina	6.8	6.4	0.3	0.1
North Dakota	12.6	11.8	-	0.8
Ohio	9.8	8.9	0.3	0.5
Oklahoma	10.4	9.9	0.2	0.2
Oregon	15.1	13.7	0.4	1.1
Pennsylvania	11.2	9.8	0.9	0.5
Rhode Island	16.2	15.0	0.7	0.7
South Carolina	6.3	6.0	0.2	-
South Dakota	15.5	14.2	0.6	0.5
Tennessee	8.3	7.6	0.3	0.4
Texas	7.6	7.0	0.3	0.3
Utah	8.4	7.2	0.5	0.7
Vermont	9.1	8.9	-	0.2
Virginia	6.4	6.2	0.1	0.2
Washington	12.3	11.1	0.4	0.8
West Virginia	8.7	8.1	0.4	0.1
Wisconsin	10.8	10.2	0.1	0.4
Wyoming	13.5	12.9	-	0.6

SOURCE: U.S. Bureau of the Census: *Current Population Reports*, Series P25, No. 436. January 1970.

Table 4. Number and percent distribution of inactive but not retired and retired optometrists by age, according to geographic location: United States, each region and division, 1968

Geographic location	All inactive optometrists	Total, inactive but not retired	Under 45 years	45-64 years	65 years and over	Total, retired	Under 65 years	65-74 years	75 years and over
	Number of optometrists								
United States	1,873	951	260	444	247	922	125	425	371
Geographic region:									
Northeast	526	294	76	131	86	232	34	112	85
North Central	681	344	93	169	82	338	36	148	154
South	299	152	40	70	42	146	18	67	61
West	368	161	51	74	37	207	37	98	71
Geographic division:									
New England	125	74	19	41	14	51	12	25	14
Middle Atlantic	401	220	58	90	72	181	23	87	71
East North Central	513	281	80	153	48	231	27	101	103
West North Central	169	62	13	16	33	106	9	47	50
South Atlantic	140	80	22	35	23	60	10	29	22
East South Central	58	27	9	11	8	31	4	15	12
West South Central	101	46	10	24	12	55	4	23	27
Mountain	44	13	2	7	4	31	8	11	12
Pacific	323	148	49	67	32	176	29	87	59
	Percent distribution								
United States	100.0	50.8	13.9	23.7	13.2	49.2	6.7	22.7	19.8
Geographic region:									
Northeast	100.0	55.9	14.4	24.9	16.3	44.1	6.5	21.3	16.2
North Central	100.0	50.5	13.7	24.8	12.0	49.6	5.3	22.2	22.0
South	100.0	50.8	13.4	23.4	14.0	48.8	6.0	22.4	20.4
West	100.0	43.8	13.9	20.1	10.1	56.3	10.1	26.6	19.3
Geographic division:									
New England	100.0	59.2	15.2	32.8	11.2	40.8	9.6	20.0	11.2
Middle Atlantic	100.0	54.9	14.5	22.4	18.0	45.1	5.7	21.7	17.7
East North Central	100.0	54.8	15.6	29.8	9.4	45.0	5.3	19.7	20.1
West North Central	100.0	36.7	7.7	9.5	19.5	62.7	5.3	27.8	29.6
South Atlantic	100.0	57.1	15.7	25.0	16.4	42.9	7.1	20.7	15.7
East South Central	100.0	46.6	13.8	19.0	13.7	53.4	6.9	25.9	20.7
West South Central	100.0	45.5	9.9	23.8	11.9	54.5	4.0	22.8	26.7
Mountain	100.0	29.5	4.6	15.9	9.0	70.5	18.1	25.0	27.3
Pacific	100.0	45.8	15.2	20.7	9.9	54.5	9.0	26.9	18.3

Table 5. Number and percent distribution of active optometrists by age, according to area: United States and each State, 1968

Area	All ages	Under 35 years	35-44 years	45-54 years	55-64 years	65 years and over
	Number of active optometrists					
United States	18,427	2,087	5,433	6,669	2,617	1,621
Alabama	180	10	60	77	20	12
Alaska	17	5	8	#	#	-
Arizona	127	21	41	37	#	#
Arkansas	151	32	33	49	17	20
California	2,242	340	698	771	256	177
Colorado	188	35	57	59	16	21
Connecticut	260	21	76	90	54	20
Delaware	35	6	11	14	#	#
District of Columbia	71	6	22	31	5	7
Florida	493	82	181	158	48	24
Georgia	263	28	90	97	37	11
Hawaii	64	8	26	16	9	4
Idaho	86	17	27	28	10	4
Illinois	1,616	89	393	687	312	135
Indiana	510	84	133	180	76	37
Iowa	336	36	108	124	43	25
Kansas	229	46	70	66	18	30
Kentucky	229	19	74	89	26	21
Louisiana	223	25	69	80	26	24
Maine	116	12	28	41	25	10
Maryland	175	24	56	65	15	15
Massachusetts	719	69	201	276	114	60
Michigan	708	73	202	265	123	45
Minnesota	354	27	124	131	29	44
Mississippi	121	9	39	53	14	6
Missouri	432	38	97	164	53	80
Montana	89	14	35	27	9	4
Nebraska	155	19	51	52	17	16
Nevada	36	7	13	11	-	5
New Hampshire	70	6	20	23	15	5
New Jersey	675	38	194	270	119	54
New Mexico	71	12	23	30	#	#
New York	1,598	146	440	491	306	215
North Carolina	322	41	111	117	32	21
North Dakota	72	15	30	21	#	#
Ohio	942	132	236	319	156	98
Oklahoma	247	29	77	96	26	19
Oregon	273	38	81	99	40	16
Pennsylvania	1,145	97	364	400	164	120
Rhode Island	132	10	37	56	22	8
South Carolina	155	17	56	59	12	12
South Dakota	94	14	25	37	9	10
Tennessee	296	35	100	102	35	24
Texas	752	96	192	307	101	56
Utah	74	9	25	27	8	5
Vermont	38	6	9	15	#	#
Virginia	274	30	88	114	22	20
Washington	356	49	107	120	56	25
West Virginia	147	15	48	48	21	16
Wisconsin	429	41	136	167	51	33
Wyoming	41	9	14	#	5	#

Data suppressed to comply with confidentiality requirements.

Table 5. Number and percent distribution of active optometrists by age, according to area: United States and each State, 1968—Con.

Area	All ages	Under 35 years	35-44 years	45-54 years	55-64 years	65 years and over
	Percent distribution					
United States	100.0	11.3	29.5	36.2	14.2	8.8
Alabama	100.0	5.7	33.3	42.8	11.3	6.9
Alaska	100.0	31.3	50.0	#	#	-
Arizona	100.0	16.5	32.2	29.6	#	#
Arkansas	100.0	21.3	22.1	32.4	11.0	13.2
California	100.0	15.2	31.1	34.4	11.4	7.9
Colorado	100.0	18.4	30.5	31.6	8.6	10.9
Connecticut	100.0	7.9	29.4	34.5	20.6	7.5
Delaware	100.0	16.7	30.0	40.0	#	#
District of Columbia	100.0	8.5	30.5	44.1	6.8	10.2
Florida	100.0	16.6	36.8	32.0	9.7	4.9
Georgia	100.0	10.8	34.4	36.8	14.0	4.0
Hawaii	100.0	13.1	41.0	24.6	14.8	6.6
Idaho	100.0	19.5	31.2	32.5	11.7	5.2
Illinois	100.0	5.5	24.3	42.5	19.3	8.3
Indiana	100.0	16.5	26.1	35.4	14.8	7.2
Iowa	100.0	10.6	32.2	37.0	12.9	7.4
Kansas	100.0	19.9	30.6	28.7	7.9	13.0
Kentucky	100.0	6.4	32.2	38.8	11.2	9.3
Louisiana	100.0	11.1	31.2	35.7	11.6	10.6
Maine	100.0	10.1	23.9	35.8	22.0	8.3
Maryland	100.0	13.7	31.7	37.3	8.7	8.7
Massachusetts	100.0	9.5	27.9	38.3	15.9	8.3
Michigan	100.0	10.4	28.5	37.3	17.4	6.4
Minnesota	100.0	7.6	35.0	36.9	8.2	12.4
Mississippi	100.0	7.8	32.2	43.5	11.3	5.2
Missouri	100.0	8.8	22.5	38.0	12.3	18.5
Montana	100.0	15.9	39.0	30.5	9.8	4.9
Nebraska	100.0	12.3	32.9	33.6	11.0	10.3
Nevada	100.0	18.2	36.4	30.3	-	15.2
New Hampshire	100.0	9.1	28.8	33.3	21.2	7.6
New Jersey	100.0	5.6	28.8	40.0	17.6	8.1
New Mexico	100.0	17.4	31.9	42.0	#	#
New York	100.0	9.1	27.5	30.7	19.1	13.5
North Carolina	100.0	12.8	34.6	36.2	10.1	6.4
North Dakota	100.0	20.6	41.3	28.6	#	#
Ohio	100.0	14.0	25.1	33.9	16.6	10.5
Oklahoma	100.0	11.7	31.2	39.0	10.4	7.8
Oregon	100.0	14.0	29.5	36.0	14.7	5.8
Pennsylvania	100.0	8.5	31.8	34.9	14.3	10.5
Rhode Island	100.0	7.6	27.7	42.0	16.8	5.9
South Carolina	100.0	11.0	35.9	37.9	7.6	7.6
South Dakota	100.0	14.8	26.1	39.8	9.1	10.2
Tennessee	100.0	11.8	33.7	34.4	11.8	8.2
Texas	100.0	12.8	25.5	40.9	13.5	7.4
Utah	100.0	12.7	33.3	36.5	11.1	6.3
Vermont	100.0	17.1	22.9	40.0	#	#
Virginia	100.0	10.8	32.1	41.8	8.0	7.2
Washington	100.0	13.6	30.0	33.6	15.8	7.0
West Virginia	100.0	10.1	32.4	32.4	14.4	10.8
Wisconsin	100.0	9.6	31.7	39.0	11.8	7.8
Wyoming	100.0	22.2	33.3	#	11.1	#

Data suppressed to comply with confidentiality requirements.

Table 6. Number and percent distribution of active optometrists by age, according to sex, principal form of employment, highest degree achieved, age at graduation, and weeks per year and hours per week worked: United States, 1968

Characteristic	All ages	Under 35 years	35-44 years	45-54 years	55-64 years	65-74 years	75 years and over
	Number of active optometrists						
All active optometrists	18,427	2,087	5,433	6,669	2,617	1,215	406
Sex:							
Male	18,034	2,051	5,347	6,522	2,545	1,180	389
Female	394	36	85	146	73	36	17
Principal form of employment:							
Self-employed	16,256	1,672	4,852	6,003	2,319	1,037	373
Solo practice	13,538	1,206	4,014	5,137	1,964	891	326
Partnership practice	2,186	387	672	680	288	122	37
Group practice	531	79	165	185	67	24	11
Salaried	2,172	415	581	666	298	179	33
Employed by:							
Government	45	6	9	22	7	2	-
Optometrist(s)	952	234	238	271	111	78	21
Ophthalmologist(s)	135	33	44	48	7	3	-
Physician(s) other than ophthalmologist(s)	36	9	15	9	2	1	-
Profitmaking organization(s)	646	53	182	211	121	71	9
Nonprofitmaking organization(s)	194	52	50	56	26	10	-
Other	163	28	44	50	24	13	3
Highest degree achieved:							
Doctor of optometry	16,543	1,810	4,916	6,013	2,302	1,110	391
Doctor's degree	41	3	9	15	9	5	-
Master's degree	417	113	209	71	20	3	1
Bachelor's degree	1,288	157	286	548	238	50	9
Other	139	3	13	22	48	47	6
Age at graduation:							
Under 23 years	3,169	75	621	1,324	631	440	78
23-24 years	4,549	979	1,786	983	487	261	53
25-26 years	3,630	607	1,446	954	380	190	52
27-29 years	3,676	346	1,043	1,707	357	144	78
30-34 years	2,338	80	455	1,378	281	77	67
35 years and over	1,067	-	82	322	481	103	79
Weeks per year and hours per week worked:							
1-47 weeks	1,403	82	290	395	263	279	95
1-34 hours	583	13	77	122	109	193	70
35 hours or more	820	69	213	273	154	86	25
48-52 weeks	17,024	2,005	5,143	6,274	2,355	937	311
1-34 hours	1,589	121	326	453	295	253	141
35-39 hours	2,641	311	768	949	394	175	45
40 hours	4,014	481	1,230	1,445	588	215	54
41-44 hours	2,244	260	699	870	297	96	23
45-48 hours	3,352	405	1,070	1,279	423	139	37
49 hours or more	3,183	426	1,050	1,278	359	59	11

Table 6. Number and percent distribution of active optometrists by age, according to sex, principal form of employment, highest degree achieved, age at graduation, and weeks per year and hours per week worked: United States, 1968—Con.

Characteristic	All ages	Under 35 years	35-44 years	45-54 years	55-64 years	65-74 years	75 years and over
	Percent distribution						
All active optometrists	100.0	11.3	29.5	36.2	14.2	6.6	2.2
Sex:							
Male	100.0	11.4	29.7	36.2	14.1	6.5	2.2
Female	100.0	9.2	21.6	37.2	18.5	9.1	4.4
Principal form of employment:							
Self-employed	100.0	10.3	29.8	36.9	14.3	6.4	2.3
Solo practice	100.0	8.9	29.7	37.9	14.5	6.6	2.4
Partnership practice	100.0	17.7	30.8	31.1	13.2	5.6	1.7
Group practice	100.0	14.9	31.1	34.8	12.6	4.5	2.1
Salaried	100.0	19.1	26.7	30.7	13.7	8.2	1.5
Employed by:							
Government	100.0	12.2	19.3	49.0	14.7	4.8	-
Optometrist(s)	100.0	24.6	25.0	28.4	11.7	8.2	2.2
Ophthalmologist(s)	100.0	24.6	32.5	35.5	5.0	2.4	-
Physician(s) other than ophthalmologist(s)	100.0	24.1	42.3	24.3	6.3	3.0	-
Profitmaking organization(s)	100.0	8.3	28.1	32.6	18.7	11.0	1.4
Nonprofitmaking organization(s)	100.0	26.6	25.7	29.0	13.6	5.1	-
Other	100.0	17.4	27.0	30.5	15.0	8.1	2.0
Highest degree achieved:							
Doctor of optometry	100.0	10.9	29.7	36.3	13.9	6.7	2.4
Doctor's degree	100.0	8.0	21.8	37.7	21.3	11.3	-
Master's degree	100.0	27.0	50.2	17.0	4.8	0.8	0.2
Bachelor's degree	100.0	12.2	22.2	42.6	18.5	3.9	0.7
Other	100.0	2.4	9.3	15.8	34.7	33.9	4.0
Age at graduation:							
Under 23 years	100.0	2.4	19.6	41.8	19.9	13.9	2.5
23-24 years	100.0	21.5	39.3	21.6	10.7	5.7	1.2
25-26 years	100.0	16.7	39.8	26.3	10.5	5.2	1.4
27-29 years	100.0	9.4	28.4	46.4	9.7	3.9	2.1
30-34 years	100.0	3.4	19.5	59.0	12.0	3.3	2.9
35 years and over	100.0	-	7.7	30.2	45.1	9.7	7.4
Weeks per year and hours per week worked:							
1-47 weeks	100.0	5.8	20.7	28.2	18.7	19.9	6.8
1-34 hours	100.0	2.2	13.2	20.9	18.7	33.0	12.0
35 hours or more	100.0	8.4	26.0	33.3	18.8	10.5	3.1
48-52 weeks	100.0	11.8	30.2	36.9	13.8	5.5	1.8
1-34 hours	100.0	7.6	20.5	28.5	18.6	15.9	8.9
35-39 hours	100.0	11.8	29.1	35.9	14.9	6.6	1.7
40 hours	100.0	12.0	30.6	36.0	14.7	5.4	1.3
41-44 hours	100.0	11.6	31.1	38.8	13.2	4.3	1.0
45-48 hours	100.0	12.1	31.9	38.2	12.6	4.1	1.1
49 hours or more	100.0	13.4	33.0	40.2	11.3	1.9	0.3

Table 7. Number and percent distribution of active optometrists by principal form of employment, according to area: United States and each State, 1968

Area	All forms of employment	Self-employed		Other forms of employment	All forms of employment	Self-employed		Other forms of employment
		Solo practice	Partnership practice			Solo practice	Partnership practice	
	Number of active optometrists				Percent distribution			
United States	18,427	13,538	2,186	2,703	100.0	73.5	11.9	14.7
Alabama	180	134	18	27	100.0	74.8	10.1	15.1
Alaska	17	12	#	#	100.0	68.8	#	#
Arizona	127	103	18	6	100.0	81.7	13.9	4.3
Arkansas	151	119	23	9	100.0	78.7	15.4	5.9
California	2,242	1,605	235	402	100.0	71.6	10.5	17.9
Colorado	188	140	28	19	100.0	74.7	14.9	10.3
Connecticut	260	221	24	14	100.0	85.3	9.1	5.6
Delaware	35	27	8	-	100.0	76.7	23.3	-
District of Columbia	71	41	11	19	100.0	57.6	15.3	27.1
Florida	493	409	45	39	100.0	83.0	9.0	8.0
Georgia	263	189	32	42	100.0	72.0	12.0	16.0
Hawaii	64	49	9	5	100.0	77.0	14.8	8.2
Idaho	86	71	11	4	100.0	81.8	13.0	5.2
Illinois	1,616	1,028	188	400	100.0	63.6	11.6	24.8
Indiana	510	381	76	53	100.0	74.8	14.8	10.4
Iowa	336	238	69	29	100.0	70.7	20.6	8.7
Kansas	229	182	29	18	100.0	79.6	12.5	7.9
Kentucky	229	183	26	20	100.0	79.9	11.2	8.9
Louisiana	223	188	27	8	100.0	84.4	12.1	3.5
Maine	116	108	4	3	100.0	93.6	3.7	2.8
Maryland	175	99	26	50	100.0	56.5	14.9	28.6
Massachusetts	719	623	41	55	100.0	86.7	5.8	7.6
Michigan	708	486	87	135	100.0	68.6	12.3	19.1
Minnesota	354	248	34	72	100.0	70.1	9.7	20.2
Mississippi	121	97	20	4	100.0	80.0	16.5	3.5
Missouri	432	300	44	87	100.0	69.5	10.3	20.3
Montana	89	80	#	#	100.0	90.2	#	#
Nebraska	155	120	19	16	100.0	77.4	12.3	10.3
Nevada	36	34	#	#	100.0	93.9	#	#
New Hampshire	70	55	10	5	100.0	78.8	13.6	7.6
New Jersey	675	565	56	54	100.0	83.7	8.2	8.1
New Mexico	71	55	11	5	100.0	76.8	15.9	7.2
New York	1,598	1,065	194	340	100.0	66.6	12.1	21.3
North Carolina	322	276	33	12	100.0	85.9	10.4	3.7
North Dakota	72	52	13	8	100.0	71.4	17.5	11.1
Ohio	942	707	127	107	100.0	75.1	13.5	11.4
Oklahoma	247	204	33	10	100.0	82.7	13.4	3.9
Oregon	273	178	33	63	100.0	65.1	12.0	22.9
Pennsylvania	1,145	939	106	100	100.0	82.0	9.3	8.7
Rhode Island	132	111	14	7	100.0	84.0	10.9	5.0
South Carolina	155	127	24	4	100.0	82.1	15.2	2.8
South Dakota	94	68	19	6	100.0	72.7	20.5	6.8
Tennessee	296	207	58	31	100.0	69.9	19.7	10.4
Texas	752	401	119	232	100.0	53.3	15.8	30.9
Utah	74	42	13	19	100.0	57.1	17.5	25.4
Vermont	38	36	#	#	100.0	94.3	#	#
Virginia	274	220	28	26	100.0	80.3	10.0	9.6
Washington	356	245	52	59	100.0	68.8	14.5	16.7
West Virginia	147	128	15	4	100.0	87.1	10.1	2.9
Wisconsin	429	308	55	66	100.0	71.8	12.8	15.4
Wyoming	41	32	9	-	100.0	77.8	22.2	-

Data suppressed to comply with confidentiality requirements.

Table 8. Number and percent distribution of active optometrists by principal form of employment, according to sex, age, weeks per year and hours per week worked, percent of time spent in different activities, number of States licensed in, and highest degree achieved: United States, 1968

Characteristic	All forms of employment	Self-employed				Salaried			
		Total	Solo practice	Partnership practice	Group practice	Total	Optometrist, ophthalmologist, or other physician	Profitmaking organization	Other[1]
	Number of active optometrists								
All active optometrists	18,427	16,256	13,538	2,186	531	2,172	1,123	646	402
Sex:									
Male	18,034	15,942	13,334	2,086	522	2,092	1,075	636	380
Female	394	314	204	101	9	80	48	10	22
Age:									
Under 25 years	65	33	20	11	2	32	22	4	6
25-29 years	840	623	408	174	40	218	160	15	42
30-34 years	1,182	1,017	778	202	37	165	93	33	38
35-39 years	1,950	1,763	1,439	266	58	187	98	53	36
40-44 years	3,483	3,089	2,575	406	107	394	199	129	67
45-49 years	3,835	3,457	2,989	358	111	378	192	116	71
50-54 years	2,834	2,546	2,149	323	74	288	136	95	57
55-59 years	1,595	1,413	1,194	172	47	182	67	80	35
60-64 years	1,022	906	770	115	20	116	53	41	22
65-69 years	749	642	558	68	16	107	49	39	19
70-74 years	467	395	333	54	8	72	33	32	7
75 years and over	406	373	326	37	11	33	21	9	3
Weeks per year and hours per week worked:									
1-47 weeks	1,403	1,216	940	224	52	187	72	34	81
1-34 hours	583	489	387	83	18	95	38	19	37
35 hours or more	820	728	553	141	34	92	33	14	44
48 weeks or more	17,024	15,039	12,598	1,962	479	1,985	1,051	613	321
1-34 hours	1,589	1,408	1,247	134	27	181	81	36	64
35-39 hours	2,641	2,449	2,092	307	50	193	120	38	35
40 hours	4,014	3,401	2,846	447	108	614	304	226	84
41-44 hours	2,244	1,929	1,587	277	66	315	198	96	21
45-48 hours	3,352	2,940	2,441	408	91	413	224	147	43
49 hours or more	3,183	2,913	2,386	390	138	270	124	71	74
Activities:									
Optometric practice:									
No time spent	128	38	28	9	1	90	1	10	79
1-99 percent	3,702	3,380	2,632	586	163	322	130	69	122
100 percent	14,597	12,837	10,878	1,592	367	1,760	992	567	201
Teaching in a school of optometry:									
No time spent	18,085	16,019	13,357	2,139	523	2,066	1,118	642	306
1-99 percent	314	232	177	47	8	82	5	3	73
100 percent	28	4	4	-	-	24	-	1	23
Optometric research:									
No time spent	17,376	15,367	12,819	2,046	502	2,009	1,075	617	316
1-99 percent	1,035	877	709	138	29	159	48	28	82
100 percent	16	12	10	2	-	4	-	1	3
Administration:									
No time spent	16,133	14,142	11,940	1,791	411	1,991	1,065	609	316
1-99 percent	2,281	2,111	1,596	394	120	171	58	34	79
100 percent	13	3	2	1	-	10	-	3	7
Other:									
No time spent	17,237	15,197	12,718	2,002	477	2,040	1,076	614	350
1-99 percent	1,170	1,048	814	180	55	121	46	30	45
100 percent	21	11	7	4	-	10	1	2	7
Number of States licensed in:									
1 State	20	15	14	1	-	5	2	-	2
2 States	14,011	12,423	10,409	1,621	393	1,588	826	489	273
3 States	3,377	2,972	2,444	419	109	405	220	101	84
4 States or more	1,020	846	671	146	29	174	74	56	43
Highest degree achieved:									
Doctor of optometry	16,543	14,659	12,253	1,931	475	1,885	992	552	341
Doctor's degree	41	24	18	4	2	16	2	4	10
Master's degree	417	342	264	69	9	75	41	15	18
Bachelor's degree	1,288	1,120	907	171	42	168	75	61	31
Other	139	111	96	11	3	28	12	14	2

See footnote at end of table.

Table 8. Number and percent distribution of active optometrists by principal form of employment, according to sex, age, weeks per year and hours per week worked, percent of time spent in different activities, number of States licensed in, and highest degree achieved: United States, 1968—Con.

Characteristic	All forms of employment	Self-employed				Salaried			
		Total	Solo practice	Partnership practice	Group practice	Total	Optometrist, ophthalmologist, or other physician	Profitmaking organization	Other[1]
	Percent distribution								
All active optometrists	100.0	88.2	73.5	11.9	2.9	11.8	6.1	3.5	2.2
Sex:									
Male	100.0	88.4	73.9	11.6	2.9	11.6	6.0	3.5	2.1
Female	100.0	79.8	51.9	25.6	2.3	20.3	12.3	2.5	5.5
Age:									
Under 25 years	100.0	50.4	30.4	16.7	3.3	49.5	34.0	6.9	8.6
25-29 years	100.0	74.1	48.6	20.7	4.8	26.0	19.1	1.8	5.0
30-34 years	100.0	86.0	65.8	17.1	3.1	13.9	7.9	2.8	3.2
35-39 years	100.0	90.4	73.8	13.6	3.0	9.6	5.0	2.7	1.8
40-44 years	100.0	88.7	73.9	11.7	3.1	11.3	5.7	3.7	1.9
45-49 years	100.0	90.1	77.9	9.3	2.9	9.9	5.0	3.0	1.8
50-54 years	100.0	89.9	75.8	11.4	2.6	8.2	4.8	3.4	-
55-59 years	100.0	88.6	74.8	10.8	3.0	11.4	4.2	5.0	2.2
60-64 years	100.0	88.6	75.4	11.3	1.9	11.4	5.2	4.0	2.2
65-69 years	100.0	85.7	74.5	9.0	2.2	14.3	6.6	5.2	2.5
70-74 years	100.0	84.5	71.4	11.5	1.6	15.4	7.1	6.9	1.4
75 years and over	100.0	91.9	80.1	9.1	2.7	8.1	5.1	2.2	0.8
Weeks per year and hours per week worked:									
1-47 weeks	100.0	86.7	67.0	16.0	3.7	13.3	5.1	2.4	5.8
1-34 hours	100.0	83.9	66.3	14.3	3.2	16.1	6.5	3.3	6.3
35 hours or more	100.0	88.8	67.4	17.2	4.1	11.2	4.0	1.7	5.4
48 weeks or more	100.0	88.3	74.0	11.5	2.8	11.7	6.2	3.6	1.9
1-34 hours	100.0	88.6	78.5	8.4	1.7	11.4	5.1	2.3	4.0
35-39 hours	100.0	92.7	79.2	11.6	1.9	7.3	4.5	1.4	1.3
40 hours	100.0	84.7	70.9	11.1	2.7	15.3	7.6	5.6	2.1
41-44 hours	100.0	86.0	70.7	12.3	2.9	14.0	8.8	4.3	0.9
45-48 hours	100.0	87.7	72.8	12.2	2.7	12.3	6.6	4.4	1.3
49 hours or more	100.0	91.5	75.0	12.3	4.3	8.5	3.9	2.2	2.3
Activities:									
Optometric practice:									
No time spent	100.0	29.7	21.9	7.0	0.8	70.3	0.8	7.8	61.7
1-99 percent	100.0	91.3	71.1	15.8	4.4	8.7	3.5	1.9	3.3
100 percent	100.0	87.9	74.5	10.9	2.5	12.1	6.8	3.9	1.4
Teaching in a school of optometry:									
No time spent	100.0	88.6	73.9	11.8	2.9	11.4	6.2	3.5	1.7
1-99 percent	100.0	73.9	56.4	15.0	2.5	26.1	1.6	1.0	23.2
100 percent	100.0	14.3	14.3	-	-	85.7	-	3.6	82.1
Optometric research:									
No time spent	100.0	88.4	73.8	11.8	2.9	11.6	6.2	3.6	1.8
1-99 percent	100.0	84.7	68.5	13.3	2.8	15.4	4.6	2.7	7.9
100 percent	100.0	75.0	62.5	12.5	-	25.0	-	6.3	18.8
Administration:									
No time spent	100.0	87.7	74.0	11.1	2.5	12.3	6.6	3.8	2.0
1-99 percent	100.0	92.5	70.0	17.3	5.3	7.5	2.5	1.5	3.5
100 percent	100.0	23.1	15.4	7.7	-	76.9	-	23.1	53.8
Other:									
No time spent	100.0	88.2	73.8	11.6	2.8	11.8	6.2	3.6	2.0
1-99 percent	100.0	89.6	69.6	15.4	4.7	10.3	3.9	2.6	3.8
100 percent	100.0	52.4	33.3	19.0	-	47.6	4.8	9.5	33.3
Number of States licensed in:									
1 State	100.0	75.0	70.0	5.0	-	25.0	10.0	-	10.0
2 States	100.0	88.7	74.3	11.6	2.8	11.3	5.9	3.5	1.9
3 States	100.0	88.0	72.4	12.4	3.2	12.0	6.5	3.0	2.5
4 States or more	100.0	82.9	65.8	14.3	2.8	17.1	7.3	5.5	4.2
Highest degree achieved:									
Doctor of optometry	100.0	88.6	74.1	11.7	2.9	11.4	6.0	3.3	2.1
Doctor's degree	100.0	58.6	43.9	9.8	4.9	39.1	4.9	9.8	24.4
Master's degree	100.0	82.0	63.3	16.5	2.2	18.0	9.8	3.6	4.3
Bachelor's degree	100.0	87.0	70.4	13.3	3.3	13.0	5.8	4.7	2.4
Other	100.0	79.9	69.1	7.9	2.2	20.1	8.6	10.1	1.4

[1] Includes government (nonmilitary) organizations, nonprofitmaking organizations or institutions, health insurance plans, health care programs, and so forth.

Table 9. Number and percent distribution of active optometrists by weeks per year and hours per week worked, according to area: United States and each State, 1968

Area	All active optometrists	Under 48 weeks per year	48-52 weeks per year			
			Hours per week			
			1-34	35-40	41-48	49 or more
	Number of active optometrists					
United States	18,427	1,403	1,589	6,655	5,596	3,183
Alabama	180	6	12	70	64	27
Alaska	17	#	#	5	6	3
Arizona	127	9	10	43	43	22
Arkansas	151	10	20	68	37	17
California	2,242	184	229	929	608	293
Colorado	188	15	8	73	56	36
Connecticut	260	25	25	106	71	33
Delaware	35	#	#	13	7	9
District of Columbia	71	#	#	19	29	15
Florida	493	23	46	199	146	78
Georgia	263	6	13	81	111	51
Hawaii	64	11	9	24	16	4
Idaho	86	9	7	36	16	19
Illinois	1,616	136	161	501	515	303
Indiana	510	31	30	213	134	102
Iowa	336	27	19	149	96	44
Kansas	229	20	18	94	70	27
Kentucky	229	14	30	85	77	24
Louisiana	223	13	18	80	88	24
Maine	116	8	22	40	25	19
Maryland	175	14	13	51	51	46
Massachusetts	719	57	72	242	196	153
Michigan	708	67	51	287	206	97
Minnesota	354	28	24	120	133	50
Mississippi	121	5	7	54	37	18
Missouri	432	26	40	176	111	79
Montana	89	10	8	43	19	9
Nebraska	155	11	8	67	43	25
Nevada	36	#	#	22	3	3
New Hampshire	70	3	8	30	23	5
New Jersey	675	60	70	191	200	154
New Mexico	71	3	6	30	22	10
New York	1,598	171	100	429	519	380
North Carolina	322	12	43	143	79	45
North Dakota	72	#	#	37	17	8
Ohio	942	65	72	343	288	173
Oklahoma	247	16	20	112	67	31
Oregon	273	23	27	117	73	34
Pennsylvania	1,145	87	132	345	309	271
Rhode Island	132	7	12	44	39	30
South Carolina	155	5	17	70	45	18
South Dakota	94	6	7	45	24	12
Tennessee	296	16	20	117	94	49
Texas	752	37	33	202	359	122
Utah	74	-	9	24	22	19
Vermont	38	4	4	9	13	8
Virginia	274	11	10	109	91	53
Washington	356	26	30	147	110	43
West Virginia	147	18	18	54	34	23
Wisconsin	429	41	37	157	135	59
Wyoming	41	#	#	14	16	7

Data suppressed to comply with confidentiality requirements.

Table 9. Number and percent distribution of active optometrists by weeks per year and hours per week worked, according to area: United States and each State, 1968—Con.

Area	All active optometrists	Under 48 weeks per year	48-52 weeks per year			
			Hours per week			
			1-34	35-40	41-48	49 or more
	Percent distribution					
United States	100.0	7.6	8.6	36.1	30.4	17.3
Alabama	100.0	3.3	6.9	39.0	35.7	15.1
Alaska	100.0	#	#	29.4	35.3	17.6
Arizona	100.0	7.0	7.9	33.9	33.9	17.3
Arkansas	100.0	6.5	13.1	44.9	24.4	11.2
California	100.0	8.2	10.2	41.4	27.1	13.1
Colorado	100.0	8.0	4.3	38.8	29.8	19.1
Connecticut	100.0	9.5	9.6	40.8	27.3	12.7
Delaware	100.0	#	#	37.1	20.0	25.7
District of Columbia	100.0	#	#	26.8	40.8	21.1
Florida	100.0	4.7	9.3	40.5	29.6	15.8
Georgia	100.0	2.4	4.9	30.9	42.3	19.5
Hawaii	100.0	17.2	14.1	37.5	25.0	6.3
Idaho	100.0	10.3	8.0	41.4	18.4	21.8
Illinois	100.0	8.4	10.0	31.0	31.9	18.8
Indiana	100.0	6.1	5.9	41.8	26.3	20.0
Iowa	100.0	8.0	5.7	44.4	28.7	13.1
Kansas	100.0	8.8	7.9	41.0	30.6	11.8
Kentucky	100.0	6.0	13.0	37.0	33.5	10.4
Louisiana	100.0	6.0	8.1	35.7	39.4	10.8
Maine	100.0	7.0	19.3	35.1	21.9	16.7
Maryland	100.0	8.1	7.4	29.1	29.1	26.3
Massachusetts	100.0	7.9	10.0	33.6	27.2	21.3
Michigan	100.0	9.5	7.2	40.5	29.1	13.7
Minnesota	100.0	7.9	6.8	33.8	37.5	14.0
Mississippi	100.0	4.3	5.8	44.5	30.6	14.8
Missouri	100.0	6.0	9.3	40.7	25.7	18.3
Montana	100.0	11.0	9.0	48.4	21.4	10.1
Nebraska	100.0	7.1	5.2	43.5	27.9	16.2
Nevada	100.0	#	#	61.1	8.3	8.3
New Hampshire	100.0	4.3	11.6	43.5	33.3	7.2
New Jersey	100.0	8.9	10.4	28.3	29.6	22.8
New Mexico	100.0	4.3	8.5	42.2	31.0	14.1
New York	100.0	10.7	6.3	26.8	32.5	23.8
North Carolina	100.0	3.7	13.4	44.4	24.5	14.0
North Dakota	100.0	#	#	51.4	23.6	11.1
Ohio	100.0	6.9	7.6	36.4	30.6	18.4
Oklahoma	100.0	6.5	8.1	45.4	27.2	12.7
Oregon	100.0	8.4	9.9	42.7	26.6	12.4
Pennsylvania	100.0	7.6	11.5	30.1	27.0	23.7
Rhode Island	100.0	5.3	9.1	33.3	29.5	22.7
South Carolina	100.0	3.2	11.0	45.1	29.0	11.6
South Dakota	100.0	6.4	7.4	47.9	25.5	12.8
Tennessee	100.0	5.4	6.8	39.5	31.8	16.6
Texas	100.0	4.9	4.4	26.9	47.7	16.2
Utah	100.0	-	12.2	32.4	29.7	25.7
Vermont	100.0	10.5	10.5	23.7	34.2	21.1
Virginia	100.0	4.0	3.6	39.8	33.2	19.3
Washington	100.0	7.3	8.4	41.3	30.9	12.1
West Virginia	100.0	12.2	12.2	36.8	23.2	15.6
Wisconsin	100.0	9.6	8.6	36.6	31.5	13.8
Wyoming	100.0	#	#	34.1	39.0	17.1

Data suppressed to comply with confidentiality requirements.

Table 10. Number and percent distribution of active optometrists by weeks per year and hours per week worked, according to sex, age, principal form of employment, highest degree achieved, and supplementary personnel assistance in optometric practice: United States, 1968

Characteristic	All active optometrists	Under 48 weeks per year			48-52 weeks per year				
		Total	Hours per week		Total	Hours per week			
			1-34	35 or more		1-34	35-40	41-48	49 or more
	Number of active optometrists								
All active optometrists	18,427	1,403	583	820	17,024	1,589	6,655	5,596	3,183
Sex:									
Male	18,034	1,342	536	805	16,692	1,486	6,528	5,530	3,147
Female	394	61	47	14	332	103	127	66	36
Age:									
Under 25 years	65	5	3	2	59	7	28	22	3
25-34 years	2,022	76	10	67	1,946	115	765	643	423
35-44 years	5,433	290	77	213	5,143	326	1,998	1,768	1,050
45-54 years	6,669	395	122	273	6,274	453	2,393	2,149	1,278
55-64 years	2,617	263	109	154	2,355	295	981	720	359
65-74 years	1,215	279	193	86	937	253	390	234	59
75 years and over	406	95	70	25	311	141	99	60	11
Principal form of employment:									
Self-employed	16,256	1,217	489	728	15,039	1,408	5,849	4,868	2,913
Solo practice	13,538	940	387	553	12,598	1,247	4,938	4,027	2,386
Partnership practice	2,186	224	83	141	1,962	134	754	685	390
Group practice	531	52	18	34	479	27	157	156	138
Salaried	2,172	187	95	92	1,985	181	806	728	270
Employed by:									
Government	45	9	3	5	37	16	9	4	8
Optometrist(s)	952	54	35	19	898	65	336	390	108
Ophthalmologist(s)	135	16	3	12	119	13	74	17	16
Physician(s) other than ophthalmologist(s)	36	2	-	2	34	3	14	15	1
Profitmaking organization	646	34	19	14	613	36	263	242	71
Nonprofitmaking organization(s)	194	33	11	22	161	18	72	32	40
Other	163	40	23	17	123	31	38	28	26
Highest degree achieved:									
Doctor of optometry	16,543	1,240	514	726	15,303	1,445	5,976	5,025	2,857
Doctor's degree	41	4	1	3	36	2	10	12	12
Master's degree	417	29	10	19	388	27	157	132	71
Bachelor's degree	1,288	107	43	64	1,181	93	471	389	229
Other	139	23	16	8	116	22	41	38	15
Supplementary personnel assistance in optometric practice:									
Some assistance	14,339	963	317	647	13,376	988	5,295	4,490	2,603
No assistance	3,960	411	255	157	3,549	594	1,324	1,079	552
No optometric practice	128	28	12	16	100	8	37	27	28

Table 10. Number and percent distribution of active optometrists by weeks per year and hours per week worked, according to sex, age, principal form of employment, highest degree achieved, and supplementary personnel assistance in optometric practice: United States, 1968—Con.

Characteristic	All active optometrists	Under 48 weeks per year			48-52 weeks per year				
		Total	Hours per week		Total	Hours per week			
			1-34	35 or more		1-34	35-40	41-48	49 or more
	Percent distribution								
All active optometrists	100.0	7.6	3.2	4.4	92.4	8.6	36.1	30.4	17.3
Sex:									
Male	100.0	7.4	3.0	4.5	92.6	8.2	36.2	30.7	17.5
Female	100.0	15.5	11.9	3.6	84.3	26.1	32.2	16.8	9.1
Age:									
Under 25 years	100.0	7.7	4.6	3.1	92.3	10.8	43.1	33.8	4.6
25-34 years	100.0	3.8	0.5	3.3	96.2	5.7	37.8	31.8	20.9
35-44 years	100.0	5.3	1.4	3.9	94.7	6.0	36.8	32.5	19.3
45-54 years	100.0	5.9	1.8	4.1	94.1	6.8	35.9	32.2	19.2
55-64 years	100.0	10.0	4.2	5.9	90.0	11.3	37.5	27.5	13.7
65-74 years	100.0	23.0	15.9	7.1	77.1	20.8	32.1	19.3	4.9
75 years and over	100.0	23.4	17.2	6.2	76.6	34.7	24.4	14.8	2.7
Principal form of employment:									
Self-employed	100.0	7.5	3.0	4.5	92.5	8.7	36.0	29.9	17.9
Solo practice	100.0	6.9	2.9	4.1	93.1	9.2	36.5	29.7	17.6
Partnership practice	100.0	10.2	3.8	6.5	89.8	6.1	34.5	31.3	17.8
Group practice	100.0	9.8	3.4	6.4	90.2	5.1	29.6	29.4	26.0
Salaried	100.0	8.6	4.4	4.2	91.4	8.4	37.1	33.5	12.4
Employed by:									
Government	100.0	20.0	6.7	11.1	82.2	35.6	20.0	8.9	17.8
Optometrist(s)	100.0	5.7	3.7	2.0	94.3	6.8	35.3	41.0	11.3
Ophthalmologist(s)	100.0	11.9	2.2	8.9	88.1	9.6	54.8	12.6	11.9
Physicians other than ophthalmologist(s)	100.0	5.6	-	5.6	94.4	8.3	38.9	41.7	2.8
Profitmaking organization	100.0	5.3	2.9	2.2	94.9	5.6	40.7	37.5	11.0
Nonprofitmaking organization(s)	100.0	17.0	5.7	11.3	83.0	9.3	37.1	16.5	20.6
Other	100.0	24.5	14.1	10.4	75.5	19.0	23.3	17.2	16.0
Highest degree achieved:									
Doctor of optometry	100.0	7.5	3.1	4.4	92.5	8.7	36.1	30.4	17.3
Doctor's degree	100.0	9.8	2.4	7.3	87.8	4.9	24.4	29.3	29.3
Master's degree	100.0	7.0	2.4	4.6	93.0	6.5	37.6	31.7	17.0
Bachelor's degree	100.0	8.3	3.3	5.0	91.7	7.2	36.6	30.2	17.8
Other	100.0	16.5	11.5	5.8	83.5	15.8	29.5	27.3	10.8
Supplementary personnel assistance in optometric practice:									
Some assistance	100.0	6.7	2.2	4.5	93.3	6.9	36.9	31.3	18.2
No assistance	100.0	10.4	6.4	4.0	89.6	15.0	33.4	27.2	13.9
No optometric practice	100.0	21.9	9.4	12.5	78.1	6.3	28.9	21.1	21.9

Table 11. Number and percent distribution of active optometrists by percent of time spent in optometric practice activities, according to area: United States and each State, 1968

Area	Time spent in optometric practice activities									
	Total	No time spent	1-49 percent	50-99 percent	100 percent	Total	No time spent	1-49 percent	50-99 percent	100 percent
	Number of active optometrists					Percent distribution				
United States	18,427	128	135	3,568	14,597	100.0	0.7	0.7	19.4	79.2
Alabama	180	#	#	34	145	100.0	#	#	18.9	80.6
Alaska	17	-	-	5	12	100.0	-	-	29.4	70.6
Arizona	127	#	#	33	92	100.0	#	#	26.0	72.4
Arkansas	151	-	-	28	123	100.0	-	-	18.5	81.5
California	2,242	21	22	507	1,693	100.0	0.9	1.0	22.6	75.5
Colorado	188	#	#	54	130	100.0	#	#	28.7	69.1
Connecticut	260	#	#	49	206	100.0	#	#	18.8	79.2
Delaware	35	-	-	11	25	100.0	-	-	31.4	71.4
District of Columbia	71	-	-	17	54	100.0	-	-	23.9	76.1
Florida	493	#	#	131	360	100.0	#	#	26.6	73.0
Georgia	263	#	#	51	210	100.0	#	#	19.4	79.8
Hawaii	64	-	-	14	50	100.0	-	-	21.9	78.1
Idaho	86	#	#	22	63	100.0	#	#	25.6	73.3
Illinois	1,616	14	21	254	1,327	100.0	0.9	1.3	15.7	82.1
Indiana	510	6	6	104	393	100.0	1.2	1.2	20.4	77.1
Iowa	336	#	#	55	280	100.0	#	#	16.4	83.3
Kansas	229	-	-	31	198	100.0	-	-	13.5	86.5
Kentucky	229	-	-	29	200	100.0	-	-	12.7	87.3
Louisiana	223	#	#	43	179	100.0	#	#	19.3	80.3
Maine	116	-	-	16	100	100.0	-	-	13.8	86.2
Maryland	175	#	#	47	128	100.0	#	#	26.9	73.1
Massachusetts	719	5	8	154	553	100.0	0.7	1.1	21.4	76.9
Michigan	708	-	4	125	579	100.0	-	0.6	17.7	81.8
Minnesota	354	#	#	50	302	100.0	#	#	14.1	85.3
Mississippi	121	#	#	19	101	100.0	#	#	15.7	83.5
Missouri	432	#	#	65	362	100.0	#	#	15.0	83.8
Montana	89	-	-	16	72	100.0	-	-	18.0	80.9
Nebraska	155	#	#	30	124	100.0	#	#	19.4	80.0
Nevada	36	-	-	9	27	100.0	-	-	25.0	75.0
New Hampshire	70	-	-	14	56	100.0	-	-	20.0	80.0
New Jersey	675	#	#	145	518	100.0	#	#	21.5	76.7
New Mexico	71	-	-	15	56	100.0	-	-	21.1	78.9
New York	1,598	11	14	314	1,260	100.0	0.7	0.9	19.6	78.8
North Carolina	322	#	#	63	257	100.0	#	#	19.6	79.8
North Dakota	72	-	-	15	58	100.0	-	-	20.8	80.6
Ohio	942	#	#	181	744	100.0	#	#	19.2	79.0
Oklahoma	247	#	#	49	195	100.0	#	#	19.8	78.9
Oregon	273	8	4	68	193	100.0	2.9	1.5	24.9	70.7
Pennsylvania	1,145	11	20	181	932	100.0	1.0	1.7	15.8	81.4
Rhode Island	132	-	-	23	109	100.0	-	-	17.4	82.6
South Carolina	155	-	-	21	134	100.0	-	-	13.5	86.5
South Dakota	94	-	-	25	70	100.0	-	-	26.6	74.5
Tennessee	296	#	#	54	235	100.0	#	#	18.2	79.4
Texas	752	12	3	100	637	100.0	1.6	0.4	13.3	84.7
Utah	74	-	-	17	58	100.0	-	-	23.0	78.4
Vermont	38	-	-	9	29	100.0	-	-	23.7	76.3
Virginia	274	#	#	67	205	100.0	#	#	24.5	74.8
Washington	356	#	#	82	273	100.0	#	#	23.0	76.7
West Virginia	147	-	-	31	117	100.0	-	-	21.1	79.6
Wisconsin	429	#	#	87	340	100.0	#	#	20.3	79.3
Wyoming	41	-	-	5	36	100.0	-	-	12.2	87.8

Data suppressed to comply with confidentiality requirements.

Table 12. Number and percent distribution of active optometrists by percent of time spent in optometric practice activities, according to sex, age, principal form of employment, highest degree achieved, and weeks per year and hours per week worked: United States, 1968

Characteristic	Time spent in optometric practice activities									
	Total	No time spent	1-49 percent	50-99 percent	100 percent	Total	No time spent	1-49 percent	50-99 percent	100 percent
	Number of active optometrists					Percent distribution				
All active optometrists	18,427	128	135	3,568	14,597	100.0	0.7	0.7	19.4	79.2
Sex:										
Male	18,034	122	127	3,519	14,266	100.0	0.7	0.7	19.5	79.1
Female	394	6	8	48	331	100.0	1.5	2.0	12.2	84.0
Age:										
Under 25 years	65	2	1	11	50	100.0	3.1	1.5	16.9	76.9
25-29 years	840	9	9	244	578	100.0	1.1	1.1	29.0	68.8
30-34 years	1,182	10	11	348	813	100.0	0.8	0.9	29.4	68.8
35-39 years	1,950	9	13	499	1,429	100.0	0.5	0.7	25.6	73.3
40-44 years	3,483	24	30	695	2,734	100.0	0.7	0.9	20.0	78.5
45-49 years	3,835	20	22	795	2,998	100.0	0.5	0.6	20.7	78.2
50-54 years	2,834	17	20	522	2,275	100.0	0.6	0.7	18.4	80.3
55-59 years	1,595	9	10	233	1,343	100.0	0.6	0.6	14.6	84.2
60-64 years	1,022	8	7	105	903	100.0	0.8	0.7	10.3	88.4
65-69 years	749	5	5	54	685	100.0	0.7	0.7	7.2	91.5
70-74 years	467	6	3	34	424	100.0	1.3	0.6	7.3	90.8
75 years and over	406	11	4	27	364	100.0	2.7	1.0	6.7	89.7
Principal form of employment:										
Self-employed	16,256	38	62	3,318	12,837	100.0	0.2	0.4	20.4	79.0
Solo practice	13,538	28	42	2,590	10,878	100.0	0.2	0.3	19.1	80.4
Partnership practice	2,186	9	13	572	1,592	100.0	0.4	0.6	26.2	72.8
Group practice	531	1	6	156	367	100.0	0.2	1.2	29.5	69.1
Salaried	2,172	90	73	249	1,760	100.0	4.1	3.3	11.5	81.0
Employed by:										
Government	45	2	7	10	27	100.0	4.8	14.6	21.7	58.9
Optometrist(s)	952	1	1	94	856	100.0	0.1	0.1	9.9	89.9
Ophthalmologist(s)	135	-	-	21	114	100.0	-	-	15.5	84.5
Physician(s) other than ophthalmologist(s)	36	-	-	14	22	100.0	-	-	39.4	60.6
Profitmaking organization	646	10	12	57	567	100.0	1.6	1.9	8.8	87.7
Nonprofitmaking organization(s)	194	54	33	28	80	100.0	27.7	16.9	14.4	41.0
Other	163	23	20	25	95	100.0	14.0	12.2	15.6	58.2
Highest degree achieved:										
Doctor of optometry	16,543	100	117	3,211	13,115	100.0	0.6	0.7	19.4	79.3
Doctor's degree	41	5	5	9	21	100.0	12.2	12.2	22.0	51.2
Master's degree	417	9	3	106	299	100.0	2.2	0.7	25.4	71.7
Bachelor's degree	1,288	14	9	230	1,035	100.0	1.1	0.7	17.9	80.4
Other	139	-	-	12	127	100.0	-	-	8.6	91.4
Weeks per year and hours per week worked:										
1-47 weeks	1,403	28	33	237	1,105	100.0	2.0	2.4	16.9	78.8
1-34 hours	583	12	21	57	493	100.0	2.1	3.6	9.8	84.6
35 hours or more	820	16	12	180	612	100.0	2.0	1.5	21.9	74.6
48 weeks or more	17,024	100	102	3,331	13,492	100.0	0.6	0.6	19.6	79.3
1-34 hours	1,589	8	27	187	1,367	100.0	0.5	1.7	11.8	86.0
35-39 hours	2,641	12	6	409	2,214	100.0	0.5	0.2	15.5	83.8
40 hours	4,014	25	13	572	3,404	100.0	0.6	0.3	14.3	84.8
41-44 hours	2,244	9	4	390	1,840	100.0	0.4	0.2	17.4	82.0
45-48 hours	3,352	18	11	689	2,635	100.0	0.5	0.3	20.5	78.6
49 hours or more	3,183	28	41	1,083	2,031	100.0	0.9	1.3	34.0	63.8

Table 13. Number and percent distribution of active optometrists by percent of time spent per week in teaching activities, according to sex, age, principal form of employment, highest degree achieved, weeks per year and hours per week worked, and geographic division of employment: United States, 1968

Characteristic	Time spent per week in teaching activities							
	Total	No time spent	1-19 percent	20-100 percent	Total	No time spent	1-19 percent	20-100 percent
	Number of active optometrists				Percent distribution			
All active optometrists	18,427	18,085	152	191	100.0	98.1	0.8	1.0
Sex:								
Male	18,034	17,703	150	181	100.0	98.2	0.8	1.0
Female	394	381	2	10	100.0	96.7	0.5	2.5
Age:								
Under 25 years	65	61	-	3	100.0	93.8	-	4.6
25-29 years	840	807	9	25	100.0	96.1	1.1	3.0
30-34 years	1,182	1,141	22	18	100.0	96.5	1.9	1.5
35-39 years	1,950	1,905	25	20	100.0	97.7	1.3	1.0
40-44 years	3,483	3,405	41	37	100.0	97.8	1.2	1.1
45-49 years	3,835	3,775	27	33	100.0	98.4	0.7	0.9
50-54 years	2,834	2,793	16	24	100.0	98.6	0.6	0.8
55-59 years	1,595	1,577	7	12	100.0	98.9	0.4	0.8
60-64 years	1,022	1,010	6	7	100.0	98.8	0.6	0.7
65-69 years	749	743	-	6	100.0	99.2	-	0.8
70-74 years	467	467	-	-	100.0	100.0	-	-
75 years and over	406	401	-	5	100.0	98.8	-	1.2
Principal form of employment:								
Self-employed	16,256	16,019	140	97	100.0	98.5	0.9	0.6
Solo practice	13,538	13,357	105	77	100.0	98.7	0.8	0.6
Partnership practice	2,186	2,139	30	18	100.0	97.8	1.4	0.8
Group practice	531	523	5	2	100.0	98.6	1.0	0.4
Salaried	2,172	2,066	12	94	100.0	95.1	0.6	4.3
Employed by:								
Government	45	43	-	2	100.0	95.2	-	4.8
Optometrist(s)	952	950	2	-	100.0	99.8	0.2	-
Ophthalmologist(s)	135	132	2	1	100.0	97.5	1.7	0.8
Physician(s) other than ophthalmologist(s)	36	36	-	-	100.0	100.0	-	-
Profitmaking organization(s)	646	642	2	2	100.0	99.3	0.3	0.3
Nonprofitmaking organization(s)	194	125	6	63	100.0	64.5	2.8	32.7
Other	163	138	-	25	100.0	84.7	-	15.3
Highest degree achieved:								
Doctor of optometry	16,543	16,257	127	159	100.0	98.3	0.8	1.0
Doctor's degree	41	30	2	9	100.0	73.2	4.9	22.0
Master's degree	417	395	10	12	100.0	94.7	2.4	2.9
Bachelor's degree	1,288	1,264	13	11	100.0	98.1	1.0	0.9
Other	139	139	-	-	100.0	100.0	-	-
Weeks per year and hours per week worked:								
1-47 weeks	1,403	1,365	12	26	100.0	97.3	0.9	1.9
1-34 hours	583	570	2	11	100.0	97.7	0.4	1.9
35 hours or more	820	795	10	15	100.0	96.9	1.2	1.8
48 weeks or more	17,024	16,720	140	165	100.0	98.2	0.8	1.0
1-34 hours	1,589	1,571	9	10	100.0	98.8	0.6	0.6
35-39 hours	2,641	2,608	15	18	100.0	98.8	0.6	0.7
40 hours	4,014	3,976	14	24	100.0	99.1	0.3	0.6
41-44 hours	2,244	2,219	14	11	100.0	98.9	0.6	0.5
45-48 hours	3,352	3,290	29	33	100.0	98.2	0.9	1.0
49 hours or more	3,183	3,056	58	69	100.0	96.0	1.8	2.2
Geographic division:								
New England	1,334	1,301	17	16	100.0	97.5	1.3	1.2
Middle Atlantic	3,418	3,336	43	39	100.0	97.6	1.3	1.1
East North Central	4,204	4,112	35	58	100.0	97.8	0.8	1.4
West North Central	1,672	1,666	3	3	100.0	99.6	0.2	0.2
South Atlantic	1,936	1,927	7	2	100.0	99.5	0.4	0.1
East South Central	825	820	-	5	100.0	99.4	-	0.6
West South Central	1,373	1,355	5	13	100.0	98.7	0.4	0.9
Mountain	711	709	2	-	100.0	99.7	0.3	-
Pacific	2,953	2,859	40	54	100.0	96.8	1.4	1.8

Table 14. Number and percent distribution of active optometrists by percent of time spent per week in optometric research activities, according to sex, age, principal form of employment, highest degree achieved, weeks per year and hours per week worked, and geographic division of employment: United States, 1968

Characteristic	Time spent per week in optometric research activities							
	All active optometrists	No time spent	1-19 percent	20-100 percent	All active optometrists	No time spent	1-19 percent	20-100 percent
	Number of active optometrists				Percent distribution			
All active optometrists	18,427	17,376	910	141	100.0	94.3	4.9	0.8
Sex:								
Male	18,034	17,000	896	138	100.0	94.3	5.0	0.8
Female	394	376	14	3	100.0	95.4	3.6	0.8
Age:								
Under 25 years	65	59	4	1	100.0	91.5	6.8	1.7
25-29 years	840	765	65	10	100.0	91.1	7.7	1.2
30-34 years	1,182	1,085	88	9	100.0	91.8	7.4	0.8
35-39 years	1,950	1,827	105	18	100.0	93.7	5.4	0.9
40-44 years	3,483	3,295	162	25	100.0	94.6	4.7	0.7
45-49 years	3,835	3,603	215	17	100.0	94.0	5.6	0.4
50-54 years	2,834	2,664	150	20	100.0	94.0	5.3	0.7
55-59 years	1,595	1,515	69	11	100.0	95.0	4.3	0.7
60-64 years	1,022	991	23	8	100.0	97.0	2.3	0.8
65-69 years	749	729	15	4	100.0	97.3	2.0	0.5
70-74 years	467	456	9	2	100.0	97.6	1.9	0.4
75 years and over	406	386	5	16	100.0	95.1	1.2	3.9
Principal form of employment:								
Self-employed	16,256	15,367	790	99	100.0	94.5	4.9	0.6
Solo practice	13,538	12,819	639	80	100.0	94.7	4.7	0.6
Partnership practice	2,186	2,046	124	16	100.0	93.6	5.7	0.8
Group practice	531	502	27	2	100.0	94.5	5.1	0.4
Salaried	2,172	2,009	120	43	100.0	92.5	5.5	2.0
Employed by:								
Government	45	39	6	1	100.0	85.4	12.2	2.4
Optometrist(s)	952	916	33	3	100.0	96.2	3.4	0.3
Ophthalmologist(s)	135	127	7	1	100.0	94.2	5.0	0.8
Physician(s) other than ophthalmologist(s)	36	31	4	-	100.0	87.9	12.1	-
Profitmaking organization(s)	646	617	23	6	100.0	95.5	3.6	0.9
Nonprofitmaking organization(s)	194	142	29	23	100.0	73.3	14.9	11.8
Other	163	135	19	9	100.0	83.2	11.5	5.3
Highest degree achieved:								
Doctor of optometry	16,543	15,589	831	123	100.0	94.2	5.0	0.7
Doctor's degree	41	28	5	8	100.0	68.3	12.2	19.5
Master's degree	417	393	19	5	100.0	94.2	4.6	1.2
Bachelor's degree	1,288	1,233	50	6	100.0	95.7	3.9	0.5
Other	139	134	5	-	100.0	96.4	3.6	-
Weeks per year and hours per week worked:								
1-47 weeks	1,403	1,305	70	29	100.0	93.0	5.0	2.0
1-34 hours	583	553	19	12	100.0	94.7	3.2	2.1
35 hours or more	820	753	51	16	100.0	91.8	6.2	2.0
48 weeks or more	17,024	16,071	841	113	100.0	94.4	4.9	0.7
1-34 hours	1,589	1,537	40	12	100.0	96.7	2.5	0.8
35-39 hours	2,641	2,557	77	8	100.0	96.8	2.9	0.3
40 hours	4,014	3,870	124	21	100.0	96.4	3.1	0.5
41-44 hours	2,244	2,147	85	11	100.0	95.7	3.8	0.5
45-48 hours	3,352	3,170	174	8	100.0	94.6	5.2	0.2
49 hours or more	3,183	2,789	340	54	100.0	87.6	10.7	1.7
Geographic division:								
New England	1,334	1,264	58	13	100.0	94.8	4.3	1.0
Middle Atlantic	3,418	3,220	170	27	100.0	94.2	5.0	0.8
East North Central	4,204	3,969	194	42	100.0	94.4	4.6	1.0
West North Central	1,672	1,610	52	11	100.0	96.3	3.1	0.7
South Atlantic	1,936	1,832	97	6	100.0	94.6	5.0	0.3
East South Central	825	768	53	4	100.0	93.1	6.4	0.5
West South Central	1,373	1,296	67	11	100.0	94.4	4.9	0.8
Mountain	711	674	31	7	100.0	94.8	4.4	1.0
Pacific	2,953	2,743	190	20	100.0	92.9	6.4	0.7

Table 15. Number and percent distribution of active optometrists by percent of time spent per week in administrative activities, according to sex, age, principal form of employment, highest degree achieved, weeks per year and hours per week worked, and geographic division of employment: United States, 1968

Characteristic	Time spent per week in administrative activities							
	All active optometrists	No time spent	1-19 percent	20-100 percent	All active optometrists	No time spent	1-19 percent	20-100 percent
	Number of active optometrists				Percent distribution			
All active optometrists	18,427	16,133	2,080	215	100.0	87.6	11.3	1.2
Sex:								
Male	18,034	15,762	2,063	209	100.0	87.4	11.4	1.2
Female	394	371	17	5	100.0	94.2	4.3	1.3
Age:								
Under 25 years	65	58	5	1	100.0	89.2	7.7	1.5
25-29 years	840	692	139	10	100.0	82.4	16.5	1.2
30-34 years	1,182	936	228	18	100.0	79.2	19.3	1.5
35-39 years	1,950	1,594	333	23	100.0	81.7	17.1	1.2
40-44 years	3,483	3,011	433	38	100.0	86.4	12.4	1.1
45-49 years	3,835	3,322	469	44	100.0	86.6	12.2	1.1
50-54 years	2,834	2,507	283	44	100.0	88.5	10.0	1.6
55-59 years	1,595	1,466	112	17	100.0	91.9	7.0	1.1
60-64 years	1,022	964	51	8	100.0	94.3	5.0	0.8
65-69 years	749	725	18	7	100.0	96.8	2.4	0.9
70-74 years	467	457	7	3	100.0	97.9	1.5	0.6
75 years and over	406	401	2	3	100.0	98.8	0.5	0.7
Principal form of employment:								
Self-employed	16,256	14,142	1,958	156	100.0	87.0	12.0	1.0
Solo practice	13,538	11,940	1,494	104	100.0	88.2	11.0	0.8
Partnership practice	2,186	1,791	358	37	100.0	81.9	16.4	1.7
Group practice	531	411	105	15	100.0	77.3	19.8	2.9
Salaried	2,172	1,991	122	59	100.0	91.7	5.6	2.7
Employed by:								
Government	45	40	4	1	100.0	87.9	9.7	2.4
Optometrist(s)	952	909	43	1	100.0	95.4	4.5	0.1
Ophthalmologist(s)	135	128	6	-	100.0	95.1	4.9	-
Physician(s) other than ophthalmologist(s)	36	28	8	-	100.0	78.7	21.3	-
Profitmaking organization(s)	646	609	20	17	100.0	94.2	3.1	2.6
Nonprofitmaking organization(s)	194	145	21	29	100.0	74.5	10.8	14.7
Other	163	132	20	11	100.0	81.2	12.0	6.8
Highest degree achieved:								
Doctor of optometry	16,543	14,487	1,878	177	100.0	87.6	11.4	1.1
Doctor's degree	41	28	6	6	100.0	68.3	14.6	14.6
Master's degree	417	352	59	7	100.0	84.4	14.1	1.7
Bachelor's degree	1,288	1,131	132	24	100.0	87.8	10.2	1.9
Other	139	135	4	-	100.0	97.1	2.9	-
Weeks per year and hours per week worked:								
1-47 weeks	1,403	1,252	130	22	100.0	89.2	9.2	1.6
1-34 hours	583	554	24	5	100.0	95.0	4.1	0.9
35 hours or more	820	698	106	17	100.0	85.1	12.9	2.0
48 weeks or more	17,024	14,881	1,950	193	100.0	87.4	11.5	1.1
1-34 hours	1,589	1,507	75	8	100.0	94.8	4.7	0.5
35-39 hours	2,641	2,376	249	16	100.0	90.0	9.4	0.6
40 hours	4,014	3,634	347	33	100.0	90.5	8.6	0.8
41-44 hours	2,244	1,996	241	7	100.0	89.0	10.7	0.3
45-48 hours	3,352	2,908	407	37	100.0	86.7	12.1	1.1
49 hours or more	3,183	2,460	631	92	100.0	77.3	19.8	2.9
Geographic division:								
New England	1,334	1,174	149	12	100.0	88.0	11.2	0.9
Middle Atlantic	3,418	3,063	310	45	100.0	89.6	9.1	1.3
East North Central	4,204	3,726	432	47	100.0	88.6	10.3	1.1
West North Central	1,672	1,489	172	11	100.0	89.1	10.3	0.7
South Atlantic	1,936	1,612	296	28	100.0	83.3	15.3	1.4
East South Central	825	735	83	8	100.0	89.1	10.1	1.0
West South Central	1,373	1,239	126	9	100.0	90.2	9.2	0.7
Mountain	711	584	115	13	100.0	82.1	16.2	1.8
Pacific	2,953	2,511	398	43	100.0	85.0	13.5	1.5

Table 16. Number and percent distribution of active optometrists by age, according to primary activity, secondary activity, patients seen weekly, services rendered to patients, and supplementary personnel assistance in optometric practice: United States, 1968

Characteristic	All ages	Under 35 years	35-44 years	45-54 years	55-64 years	65-74 years	75 years and over
	Number of optometrists						
All optometrists in optometric practice	18,299	2,066	5,400	6,632	2,600	1,205	396
Primary activity:							
General practice	17,657	1,939	5,169	6,438	2,540	1,185	387
Contact-lens fitting	368	74	144	112	31	6	1
Visual training/orthoptics	63	21	24	9	6	3	-
Developmental vision	87	21	30	22	10	3	1
Prescribing low-vision aids	5	-	-	2	1	1	1
Industrial vision	29	3	3	20	3	-	-
Other	90	8	29	31	10	7	6
Secondary activity:							
General practice	2,709	263	676	905	472	294	99
Contact-lens fitting	10,588	1,474	3,665	4,019	1,144	257	29
Visual training/orthoptics	1,104	128	272	358	195	122	29
Developmental vision	483	67	143	196	47	25	6
Prescribing low-vision aids	218	10	51	76	56	21	5
Industrial vision	611	24	121	256	149	44	17
Other	213	22	50	72	42	21	6
No secondary activity	2,373	79	422	751	495	421	204
Patients seen weekly:							
Less than 25 patients	4,086	449	879	1,236	702	569	251
25-49 patients	6,886	756	2,024	2,588	1,039	383	96
50-74 patients	3,719	432	1,243	1,402	471	141	31
75-99 patients	1,726	215	599	663	190	55	6
100 patients or more	1,881	214	655	743	200	57	12
Services rendered:							
Refractions	18,238	2,060	5,382	6,620	2,590	1,196	390
Visual fields	13,780	1,810	4,307	4,996	1,783	696	189
Tonometry	12,098	1,754	4,036	4,450	1,354	417	86
Aniseikonic testing	1,528	250	423	542	211	81	22
Biomicroscopy	5,907	1,197	2,110	1,967	513	97	24
Ophthalmoscopy	16,928	2,011	5,203	6,264	2,318	906	225
Contact-lens fitting	14,521	2,001	4,893	5,429	1,693	437	68
Visual training/orthoptics	9,128	1,384	2,830	3,184	1,174	430	126
Developmental vision	5,225	819	1,737	1,758	619	224	68
Prescribing low-vision aids	7,450	1,093	2,402	2,655	909	296	95
Visual readiness for reading	4,735	695	1,494	1,708	562	211	67
Dispensing and adjusting	17,122	1,951	5,122	6,304	2,424	1,024	296
Frame repairs	15,532	1,870	4,831	5,771	2,014	799	247
Fabrication of eyeware	6,610	812	2,142	2,396	833	331	95
Other	718	110	239	242	91	25	11
Supplementary personnel assistance in optometric practice:							
Some assistance	14,339	1,780	4,562	5,238	1,850	723	186
No assistance	3,960	286	838	1,395	751	481	210

Table 16. Number and percent distribution of active optometrists by age, according to primary activity, secondary activity, patients seen weekly, services rendered to patients, and supplementary personnel assistance in optometric practice: United States, 1968—Con.

Characteristic	All ages	Under 35 years	35-44 years	45-54 years	55-64 years	65-74 years	75 years and over
	Percent distribution						
All optometrists in optometric practice	100.0	11.3	29.5	36.2	14.2	6.6	2.2
Primary activity:							
General practice	100.0	11.0	29.3	36.5	14.4	6.7	2.2
Contact-lens fitting	100.0	20.2	39.1	30.4	8.5	1.5	0.3
Visual training/orthoptics	100.0	33.3	38.1	14.3	9.5	4.8	-
Developmental vision	100.0	24.2	34.5	25.3	11.5	3.4	1.1
Prescribing low-vision aids	100.0	-	-	40.0	20.0	20.0	20.0
Industrial vision	100.0	10.3	10.3	69.0	10.3	-	-
Other	100.0	8.9	32.2	34.4	11.1	7.8	6.7
Secondary activity:							
General practice	100.0	9.7	24.9	33.4	17.4	10.9	3.7
Contact-lens fitting	100.0	13.9	34.6	38.0	10.8	2.4	0.3
Visual training/orthoptics	100.0	11.6	24.6	32.4	17.7	11.1	2.7
Developmental vision	100.0	13.8	29.5	40.5	9.7	5.2	1.2
Prescribing low-vision aids	100.0	4.5	23.2	34.6	25.7	9.6	2.3
Industrial vision	100.0	3.9	19.8	41.9	24.4	7.2	2.7
Other	100.0	10.2	23.7	33.8	19.5	9.8	3.0
No secondary activity	100.0	3.3	17.8	31.7	20.9	17.7	8.6
Patients seen weekly:							
Less than 25 patients	100.0	11.0	21.5	30.3	17.2	13.9	6.1
25-49 patients	100.0	11.0	29.4	37.6	15.1	5.6	1.4
50-74 patients	100.0	11.6	33.4	37.7	12.7	3.8	0.8
75-99 patients	100.0	12.4	34.7	38.4	11.0	3.2	0.3
100 patients or more	100.0	11.4	34.8	39.5	10.6	3.0	0.6
Services rendered:							
Refractions	100.0	11.3	29.5	36.3	14.2	6.6	2.1
Visual fields	100.0	13.1	31.2	36.3	12.9	5.1	1.4
Tonometry	100.0	14.5	33.4	36.8	11.2	3.4	0.7
Aniseikonic testing	100.0	16.4	27.7	35.4	13.8	5.3	1.4
Biomicroscopy	100.0	20.3	35.7	33.3	8.7	1.6	0.4
Ophthalmoscopy	100.0	11.9	30.7	37.0	13.7	5.4	1.3
Contact-lens fitting	100.0	13.8	33.7	37.4	11.7	3.0	0.5
Visual training/orthoptics	100.0	15.2	31.0	34.9	12.9	4.7	1.4
Developmental vision	100.0	15.7	33.2	33.6	11.8	4.3	1.3
Prescribing low-vision aids	100.0	14.7	32.2	35.6	12.2	4.0	1.3
Visual readiness for reading	100.0	14.7	31.6	36.0	11.9	4.4	1.4
Dispensing and adjusting	100.0	11.4	29.9	36.8	14.2	6.0	1.7
Frame repairs	100.0	12.0	31.1	37.2	13.0	5.1	1.6
Fabrication of eyeware	100.0	12.3	32.4	36.2	12.6	5.0	1.4
Other	100.0	15.3	33.3	33.7	12.7	3.5	1.5
Supplementary personnel assistance in optometric practice:							
Some assistance	100.0	12.4	31.8	36.5	12.9	5.0	1.3
No assistance	100.0	7.2	21.2	35.2	19.0	12.1	5.3

APPENDIX I
TECHNICAL NOTES ON METHODS

Background of This Report

The data presented in this report were collected as part of the 1968-69 Vision and Eye Care Manpower Survey. The Survey, conducted by the U.S. Bureau of the Census under contract to the Division of Health Resources Statistics, National Center for Health Statistics (NCHS), was designed to obtain information about the demographic and professional characteristics of optometrists engaged in providing direct health care to the public.

Survey Coverage

The total number of optometrists, for purposes of this survey, was defined as all legally registered persons licensed to practice optometry in any of the 50 States and the District of Columbia. The most complete and readily available list of these persons was *The Blue Book of Optometrists,*[5] which provided the names and addresses of licensed optometrists in each State and the District of Columbia. This list of 20,565 names and addresses became the original mailing list for the survey.

A pretest of the questionnaire used for the optometrists' survey was conducted during the period May-July 1968. Questionnaires were mailed to two optometrists in each State and the District of Columbia. After an initial mailout, one mail followup, and a telephone followup, a response rate of 91 percent was achieved. The questionnaire proved to be an effective instrument. Only minor alterations were required for the final questionnaire. (See appendix III for a copy of the final questionnaire.)

[5] *The Blue Book of Optometrists: 1968,* (Professional Press, Inc., Chicago, 1968).

Data Collection and Processing

The collection of data for the 1968 Manpower Survey was accomplished under contract with the U.S. Bureau of the Census. This agency was responsible for mailing the questionnaires, receipt and control procedures, coding the completed questionnaires in accordance with specifications established by NCHS, and for followup whenever incomplete or inadequate questionnaires were returned or whenever a questionnaire was not returned.

For the actual survey, three mailouts were employed in an attempt to elicit a response, the first two by first-class mail, the last by certified mail. All three mailings were made in every case in which a return was not received.

Telephone contacts and personal interviews were also used. They were employed in cases of nonresponse or refusal, as well as in cases of questionnaires that had been only partially completed.

A preliminary edit of the data was undertaken at the time of the return of the survey questionnaires. This was done to insure completeness of the responses. The data from the questionnaires were coded, punched on cards, transferred to computer tape, and sent to NCHS for processing. Processing included an elaborate series of checks and cross-checks to confirm the accuracy of responses, to correct coding and punching errors that occurred, and also to insure consistency between related items.

Response to the Survey

A total of 20,565 optometrists were provided by the original mailing list for the survey; 262 were eliminated. These were duplicate names and military personnel. Military personnel were

eliminated because some were inaccessible. The data provided in this report are for civilian optometrists in the 50 States and the District of Columbia. This amounted to 20,303 optometrists, or 98.7 percent of the original list.

A total of 18,533, or 91.2 percent of the 20,303, responded to the survey with usable questionnaires. The remainder was composed of: 699 nonrespondents (i.e., reasons unknown); 533 postmaster returns (i.e., unable to locate); 308 deceased; and 230 refusals.

Of these 18,533 usable questionnaires (good responses), 16,835, or 90.8 percent, were active optometrists while 1,698 reported that they were either retired or not currently engaged in optometrical activities although not retired. There is evidence to indicate that the responses from active optometrists were better than those from inactive optometrists.

Item Response

A response to the survey does not necessarily insure adequate answers to all of the questions on the questionnaire. In fact, a response to a single question is considered a response to the survey. This section will be concerned with the nonresponses to individual questions on the questionnaire, i.e., item nonresponse. The previous section discussed nonresponses to the survey as a whole, i.e., unit responses. This discussion will involve only the 18,533 good unit responses because interest here concerns the variability of responses to different questions. Table I presents the distribution of responses to selected questions on the questionnaire. Selection of the questions was based on their relevance to this report.

One can hardly avoid noticing the differences in the percentages of responses to the individual questions between the active and inactive respondents. At least 17 percent more active respondents answered every question (among those asked of both active and inactive optometrists) than did inactive respondents. Based on this finding, it is not unrealistic to suspect that a similar situation prevailed in terms of responses to the questionnaire generally. A larger share of the unit nonresponses were probably attributable to inactive persons than to those who were active.

Imputation for Unknowns

As a matter of policy, tables in this publication are presented with item nonresponses imputed. The allocation of the item nonresponses was done by computer, utilizing two principles: first, random assignment; and second, utilization of related information as category controls to insure consistency among different related items within the same record.

Assignment of values to replace item nonresponse is done on a random basis to prevent bias. The value used to replace an item nonresponse is randomly selected from within a range of values prescribed by related information from the record containing the item nonresponse. Establishment of a range of values is necessary to insure that the value used to replace the item nonresponse will not be inconsistent with other values within the record in which the value is being placed.

An example may clarify the procedures. Mr. Blank is 48 years of age. His year at graduation is not known. It must be imputed. Age and year at graduation are related items. In this case, Mr. Blank's age will be used as a category control to choose an appropriate record from which a year at graduation will be selected. By means of a random selection process, Mr. Given's record is chosen because his age was 49. (The age category in this case could have been 48-50.) Thus, Mr. Blank's and Mr. Given's ages were both in the same category. Mr. Given's year at graduation was listed as 1942. The year 1942 is then copied into Mr. Blank's record as his year at graduation and will be counted in all tabulations as if it were the actual year Mr. Blank had provided on his questionnaire.

State and National Estimates

The statistics presented in this report were inflated to allow for unit nonresponses, i.e., for the nonavailability of entire questionnaires. This "inflation" factor was the ratio of total optometrists to the number of usable (good) responses obtained. Within each State the number of optometrists was divided by the number of good responses to obtain the increment needed to

Table I. Number and percent distribution of respondents to the questionnaire by question number and content, according to activity status: United States, 1968

Question number and content	All active respondents	Inactive respondents, retired and not retired
	Number	
All respondents	16,835	1,698
	Percent distribution	
Total	100.0	100.0
2. In what year were you born?	99.6	82.5
5. Sex?	97.9	81.1
6a. From which school of optometry did you graduate?	99.1	78.1
6b. When did you graduate?	98.7	75.6
7. What degrees have you earned?	97.5	72.4
8. In which States do you currently hold an active license to practice optometry?	98.6	74.1
9. Are you currently active in optometry?	100.0	100.0
10. Which categories best describe your principal form of employment?	99.6	...
11. How many weeks per year do you usually practice optometry?	99.0	...
12. How many hours per week do you usually practice optometry?	99.0	...
13a. Approximately what percent of the hours per week do you usually spend in optometric practice?	98.8	...
16a. In your optometric practice, approximately how many patient visits for all purposes do you have during a typical week?	92.0	...
16b. Approximately how many patients does this represent?	88.4	...
18. In your optometric practice do you have supplementary personnel to assist you?	98.4	...

adjust the statistics for the nonresponses. The increment multiplied by the number of respondents provided the inflated number of civilian optometrists (20,301).

Table II presents the number of respondents to the optometry manpower survey, the ratio weights, and the inflated numbers of active optometrists for each State.

Table II. Number of optometrists by activity status, before and after inflation: United States and each State, 1968

	Optometrist		Inflation factors	Inflated active optometrists	Inflated inactive optometrists	Inflated total
	Active	Inactive				
United States	16,835	1,698	1.10	18,427	1,873	20,301
Alabama	159	11	1.13	180	12	192
Alaska	16	1	1.06	17	1	18
Arizona	115	3	1.10	127	3	130
Arkansas	136	3	1.11	151	3	154
California	2,077	231	1.08	2,242	249	2,492
Colorado	174	10	1.08	188	11	199
Connecticut	252	7	1.03	260	7	267
Delaware	30	3	1.18	35	4	39
District of Columbia	59	12	1.21	71	15	86
Florida	465	38	1.06	493	40	533
Georgia	250	15	1.05	263	16	278
Hawaii	61	4	1.05	64	4	68
Idaho	77	5	1.12	86	6	92
Illinois	1,393	262	1.16	1,616	304	1,920
Indiana	472	27	1.08	510	29	539
Iowa	311	22	1.08	336	24	360
Kansas	216	20	1.06	229	21	250
Kentucky	214	8	1.07	229	9	238
Louisiana	199	15	1.12	223	17	240
Maine	109	9	1.06	116	10	125
Maryland	160	17	1.09	175	19	194
Massachusetts	660	87	1.09	719	95	814
Michigan	656	59	1.08	708	64	772
Minnesota	331	43	1.07	354	46	400
Mississippi	115	8	1.05	121	8	129
Missouri	400	45	1.08	432	49	481
Montana	82	6	1.08	89	6	95
Nebraska	146	16	1.06	155	17	172
Nevada	33	2	1.09	36	2	38
New Hampshire	66	1	1.06	70	1	71
New Jersey	608	27	1.11	675	30	705
New Mexico	69	2	1.03	71	2	73
New York	1,402	178	1.14	1,598	203	1,801
North Carolina	298	19	1.08	322	21	342
North Dakota	63	4	1.15	72	5	77
Ohio	880	86	1.07	942	92	1,034
Oklahoma	231	12	1.07	247	13	260
Oregon	258	27	1.06	273	29	302
Pennsylvania	1,022	150	1.12	1,145	168	1,313
Rhode Island	119	10	1.11	132	11	143
South Carolina	145	6	1.07	155	6	162
South Dakota	88	7	1.07	94	7	102
Tennessee	279	27	1.06	296	29	324
Texas	690	62	1.09	752	68	820
Utah	63	10	1.18	74	12	86
Vermont	35	1	1.08	38	1	39
Virginia	249	9	1.10	274	10	284
Washington	330	37	1.08	356	40	396
West Virginia	139	10	1.06	147	11	158
Wisconsin	397	22	1.08	429	24	453
Wyoming	36	2	1.13	41	2	43

APPENDIX II

DEFINITIONS OF CERTAIN TERMS USED IN THIS REPORT

Demographic Terms

Age.—Refers to the respondent's age in 1968. In all cases, it is calculated as the difference between 1968 and respondent's year of birth.

Geographic region and division.—The States in which the respondent is licensed to practice optometry are classified into four regions which are further subdivided into nine divisions corresponding to those used by the U.S. Bureau of the Census. These regions and divisions are as follows:

Region and divisions	*States included*
Northeast	
New England	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut
Middle Atlantic	New York, New Jersey, Pennsylvania
North Central	
East North Central ..	Ohio, Indiana, Illinois, Michigan, Wisconsin
West North Central .	Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas
South	
South Atlantic	Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina South Carolina, Georgia, Florida
East South Central ..	Kentucky, Tennessee, Alabama, Mississippi
West South Central .	Arkansas, Louisiana, Oklahoma, Texas
West	
Mountain	Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada
Pacific	Washington, Oregon, California, Alaska, Hawaii

United States.—The 50 States and the District of Columbia.

Terms Relating to Optometry

Licensed optometrist.—An individual who has met the legal requirements to practice optometry in a given State or the District of Columbia.

Optometric practice activity.—Providing vision care directly to the patient.

Optometrist.—An expert in measuring human vision; educated, trained, and licensed to examine the eye and related structures to determine the presence of vision impairments, eye diseases, vision malfunctions related to educational difficulties, or other abnormalities. He prescribes and adapts lenses, contact lenses, other optical aids, and utilizes vision training to preserve, restore, and improve vision efficiency. He may engage in research and teaching.

Part time.—An optometrist was classified as a part-time worker if he reported that he usually practices optometry less than 35 hours per week.

Full time.—An optometrist who reported that he usually practices optometry 35 hours or more per week was classified as a full-time worker.

Short year.—The term "short year" describes a work-year of less than 48 weeks per year reported by an optometrist.

Full year.—The term "full year" identifies a work-year of 48 or more weeks per year reported by an optometrist.

Active.—Active optometrists are those who reported that they were currently engaged, at least part time, in the practice of optometry.

Inactive.—Inactive optometrists are those who reported that they were not currently engaged in optometry in any way. They may have been working in some other occupation during the survey.

Retired.—Retired optometrists were formerly active in optometry, but reported that they are currently retired from optometry and other forms of employment.

APPENDIX III

SURVEY QUESTIONNAIRE

PHS-T407-3
REV. 8-68

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
ACTING AS COLLECTING AGENT FOR THE
U.S. PUBLIC HEALTH SERVICE

CONFIDENTIAL: All information which permits the identification of the individual will be held strictly confidential, will be used solely by persons engaged in, and only for the purposes of the survey and will not be disclosed or released to other persons or for any other purpose.

SURVEY OF OPTOMETRISTS

Form Approved
Budget Bureau No. 68-S68028

1. Is your name correct, and is the address above your PRIMARY PLACE OF PRACTICE?

1 ☐ Yes 2 ☐ No

If no, please enter the correct information below:

Name: _____
First *Middle* *Last*

Primary place of practice: _____
Number *Street*

_____
City *State* *Zip Code*

2. In what year were you born? _____
(Year)

3. Where were you born? _____
(State or foreign country)

4. Are you a citizen of the United States? *(Please check appropriate box)*

1 ☐ Yes, Native Born
2 ☐ Yes, Naturalized
3 ☐ No

5. Sex: 1 ☐ Male
2 ☐ Female

6. A. From which school of optometry did you graduate?

_____
Name of School

_____
City *State or Country*

B. When did you graduate? _____
(Year graduated)

7. **What degrees have you earned?** *(Check all that apply)*

1 ☐ Doctor of Optometry

2 ☐ Doctorate *(Specify major field:* _____ *)*

3 ☐ Master's *(Specify major field:* _____ *)*

4 ☐ Bachelor's *(Specify major field:* _____ *)*

5 ☐ Other *(Specify:* _____ *)*

8. **In which States do you currently hold an ACTIVE LICENSE to practice optometry?**

_____

_____

9. **Are you CURRENTLY ACTIVE in optometry?** *(Include patient care, teaching, research, and administration)*

1 ☐ Yes, Full-time

2 ☐ Yes, Part-time

→ **PROCEED to Question 10.**

3 ☐ No, Not active in optometry

4 ☐ No, Retired

→ **STOP!**
Remainder of questionnaire does not apply. Please return questionnaire in the envelope provided.

10. **Which of the following categories best describes your PRINCIPAL form of employment?** *(Check one)*

01 ☐ Self-employed – Solo practice

02 ☐ Self-employed – Partnership practice

03 ☐ Self-employed – Group practice

→ **If in partnership or group practice, how many OPTOMETRISTS are there in the partnership or group COUNTING YOURSELF?**

_____
Number

04 ☐ Employed by – Military

05 ☐ Employed by – Government *(non-military)*

06 ☐ Employed by – Optometrist(s)

07 ☐ Employed by – Ophthalmologist(s)

08 ☐ Employed by – Physician(s) other than ophthalmologist(s)

09 ☐ Employed by – Firm or corporation *(profit-making)*

10 ☐ Employed by – Nonprofit organization or institution

11 ☐ Other *(Specify:* _____ *)*

11. **How many WEEKS per year do you usually practice optometry?** *(Include patient care, teaching, research, and administration. Do not count vacations as weeks worked.)*

_____
(Weeks per year)

12. **How many HOURS per week do you usually practice optometry?** *(Include patient care, teaching, research, and administration)*

_____
(Hours per week)

13. **APPROXIMATELY** what **PERCENT** of the hours per week, indicated in Item 12 above, do you usually spend in each of the following activities?

a. _____ % Optometric practice

b. _____ % Teaching in a school of optometry

c. _____ % Optometric research

d. _____ % Administration *(Optometric Association, etc.)*

e. _____ % Other *(Specify:* _____ *)*

100 % TOTAL

If 0% of your time is spent in **OPTOMETRIC PRACTICE**, (Item 13 a. above) **STOP**, and return questionnaire in the envelope provided: otherwise continue.

14. In your **OPTOMETRIC PRACTICE**, which of the services below are rendered to your patients by you or under your direction? *(Check all that apply)*

01 ☐ Refractions
02 ☐ Visual fields
03 ☐ Tonometry
04 ☐ Aniseikonic testing
05 ☐ Biomicroscopy
06 ☐ Ophthalmoscopy
07 ☐ Contact lens fitting
08 ☐ Visual training/orthoptics
09 ☐ Developmental vision
10 ☐ Prescribing low vision aids
11 ☐ Visual readiness for reading
12 ☐ Dispensing and adjusting
13 ☐ Frame repairs
14 ☐ Fabrication of eyeware
15 ☐ Other *(Specify:* _____ *)*

15. In your **OPTOMETRIC PRACTICE**, what do you consider to be your **PRIMARY**, and your **SECONDARY**, activity?

A. PRIMARY activity: *(Check one)*

1 ☐ General practice
2 ☐ Contact lens fitting
3 ☐ Visual training/orthoptics
4 ☐ Developmental vision
5 ☐ Prescribing low vision aids
6 ☐ Industrial vision
7 ☐ Other *(Specify:* _____ *)*

B. SECONDARY activity: *(Check one)*

1 ☐ General practice
2 ☐ Contact lens fitting
3 ☐ Visual training/orthoptics
4 ☐ Developmental vision
5 ☐ Prescribing low vision aids
6 ☐ Industrial vision
7 ☐ Other *(Specify:* _____ *)*
8 ☐ None

16. A. In your **OPTOMETRIC PRACTICE, APPROXIMATELY** how many patient **VISITS** for all purposes do you have during a typical week?

_____
(Approximate number of visits)

B. **APPROXIMATELY** how many **PATIENTS** does this represent? *(Patients with multiple visits should be counted only once)*

_____
(Approximate number of patients)

17. What is the total number of office locations at which you currently practice optometry?

_____
(Number of locations)

18. In your **PRINCIPAL FORM OF EMPLOYMENT**, indicated in Item 10 above, do you have supplementary personnel to assist you?

1 ☐ Yes 2 ☐ No

Please indicate the NUMBER in each category below for ALL offices combined which are related to your principal form of employment.

(Persons who spend less than 75% of their time in any one category below should be counted in category b, general optometric assistant)

	NUMBER WHO WORK FULL-TIME (35 hours or more per week)		NUMBER WHO WORK PART-TIME (Less than 35 hours per week)	
	FOR YOU ALONE	FOR YOU AND ASSOCIATES	FOR YOU ALONE	FOR YOU AND ASSOCIATES
a. Secretaries, Receptionists				
b. General optometric assistants				
c. Optometric technicians				
d. Dispensing opticians				
e. Contact lens technicians				
f. Optical technicians *(Shopmen)*				
g. Other *(Specify:* _____)				

19. A. If you have made entries under **FOR YOU AND ASSOCIATES** in the full-time or part-time columns in Item 18 above how many associates, **COUNTING YOURSELF**, share these personnel?

_____
(Number of associates)

B. Of these associates, how many are **OPTOMETRISTS, COUNTING YOURSELF**?

_____
(Number of optometrists)

COMMENTS - General comments are invited as well as comments on specific items:

PLEASE RETURN QUESTIONNAIRE IN THE STAMPED ENVELOPE PROVIDED.

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