A comparison of the visual care attitudes of Forest Grove and McMinnville, Oregon

Frank Salimeno
Pacific University

Charles Wardle
Pacific University

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Abstract
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Degree Type
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A STUDY PRESENTED TO THE
FACULTY OF THE COLLEGE OF OPTOMETRY
PACIFIC UNIVERSITY

A COMPARISON OF THE VISUAL CARE ATTITUDES
OF FOREST GROVE AND McMINNVILLE, OREGON

by

Frank Salimeno
Charles Wardle

Submitted in partial fulfillment of the requirement for
the Degree: Doctor of Optometry

Thesis Advisor

Thesis Chairman

Spring, 1969
We extend our appreciation to:

1. W.R. Baldwin, Dean of the College of Optometry
   Thesis Advisor

2. L.Z. Friedman, Practicing Optometrist
   Chairman of Visual Care Attitudes
   as Determined by a Survey Conducted
   by the Oregon Optometric Association.

3. C. Pitblado, Professor of Psychology, College of
   Optometry. Advisor on Compilation
   of Statistical Data.

4. C.B. Pratt, Professor of Optometry
   Chairman of Thesis Committee

5. E. Ragan, Head Medical Officer in Charge of the
   Yamhill County Health Department.

6. R. Septon, Director of Clinics, College of
   Optometry.

7. B.E. Story, Secretary, Learning Resources Center,
   College of Optometry.
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INTRODUCTION

The College of Optometry and its outpatient clinic were established at Pacific University in 1945. Since this time there has not been a study of the clinic's effect on the attitudes of the people in the surrounding community.

The purpose of the present study is to determine by means of a telephone survey sources of visual care in Forest Grove and a control community, McMinnville. Inferences will be drawn from this information concerning the impact of Pacific University's College of Optometry outpatient clinic on attitudes and practices of visual care in Forest Grove. Analysis of differences between males and females and between adults and children have also been made.
I. PROCEDURE

The telephone survey involved randomly selected samples in Forest Grove and McMinnville, Oregon, the control community. McMinnville was chosen on the basis of similar population, age range, and similar per capita income. Both Forest Grove and McMinnville are small college communities. The population of Forest Grove is approximately 6,900. The population of McMinnville is approximately 9,100. For each community the total number of listed names was determined and a one percent sample of telephone numbers was selected.

The communities differ in the following respects; distance to the nearest large town (population over 10,000), and presence of a medical eye specialist. Forest Grove is 25 miles from Portland and six miles from Hillsboro, the nearest community with ophthalmological services---two ophthalmologists have full-time practices there. There are fourteen physicians and three optometrists in the community. One of the physicians is licensed to administer the FAA flight physical and was considered by one responder to be an eye specialist rendering visual care services.

McMinnville is 39 miles from Portland and 27 miles from Salem. There are sixteen physicians in the community, one of whom is an ophthalmologist, and four optometrists. None of the respondents considered their local general practitioner as an eye specialist rendering visual care services. One family reported travelling to Salem for the services of
an ophthalmologist, but none had gone to Portland. The exception to non-local optometric service was one family who were recent members in the McMinville community. They had obtained previous visual care in Portland. The above differences may have unaccountable influences on the comparisons.

II. FORMAT

Five specific areas were incorporated in this study:
1) Number of members in family
2) Time of last visual examination of each member
3) Frequency of examinations
4) Practitioner or institution rendering visual care
5) Time elapsed since last visual examination

A standard format of questioning was established in an attempt to avoid bias. Upon answering the 'phone, the woman of the house was requested. The results of this study support one of the assumptions which led us to seek information from the housewife; namely that she often determined the source and frequency of care for herself and other family members.

Calls were made between the hours of 10:00 a.m. and 4:00 p.m. on Tuesdays. When the phone was answered, the questioner initiated the conversation by:

"Good day... We are conducting a survey of the health care attitudes toward vision. This is not a solicitation and you may hang up any time you wish. The questions will take less than a minute. Would you care to answer?"
### Table A

<table>
<thead>
<tr>
<th>ELAPSED TIME</th>
<th>MALES</th>
<th>FEMALES</th>
<th>M-FG</th>
<th>M-Mc</th>
<th>F-FG</th>
<th>F-Mc</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months</td>
<td>24.3</td>
<td>37.3</td>
<td>30.9*</td>
<td>17.8*</td>
<td>42.8</td>
<td>31.8</td>
</tr>
<tr>
<td>1 year</td>
<td>36.9</td>
<td>26.3</td>
<td>27.3*</td>
<td>46.5*</td>
<td>27.2</td>
<td>25.3</td>
</tr>
<tr>
<td>2 years or less</td>
<td>17.3</td>
<td>14.6</td>
<td>12.7</td>
<td>21.5</td>
<td>12.8</td>
<td>16.5</td>
</tr>
<tr>
<td>5 years or less</td>
<td>8.0</td>
<td>13.4</td>
<td>5.4</td>
<td>10.7</td>
<td>11.5</td>
<td>15.4</td>
</tr>
<tr>
<td>10 years or less</td>
<td>3.6</td>
<td>7.3</td>
<td>7.3*</td>
<td>0</td>
<td>5.7</td>
<td>8.8</td>
</tr>
<tr>
<td>Never</td>
<td>9.9*</td>
<td>1.1*</td>
<td>16.4*</td>
<td>3.5*</td>
<td>0</td>
<td>2.2</td>
</tr>
</tbody>
</table>

#### FREQUENCY

<table>
<thead>
<tr>
<th>ELAPSED TIME</th>
<th>MALES</th>
<th>FEMALES</th>
<th>M-FG</th>
<th>M-Mc</th>
<th>F-FG</th>
<th>F-Mc</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months</td>
<td>5.2</td>
<td>6.8</td>
<td>6.8</td>
<td>3.3</td>
<td>11.4*</td>
<td>2.2*</td>
</tr>
<tr>
<td>1 year</td>
<td>37.1</td>
<td>34.5</td>
<td>25.0*</td>
<td>49.2*</td>
<td>37.2</td>
<td>31.9</td>
</tr>
<tr>
<td>2 years or less</td>
<td>17.3</td>
<td>16.0</td>
<td>18.2</td>
<td>16.4</td>
<td>10.0*</td>
<td>22.0*</td>
</tr>
<tr>
<td>5 years or less</td>
<td>5.5</td>
<td>6.9</td>
<td>4.6</td>
<td>6.5</td>
<td>2.8*</td>
<td>11.0*</td>
</tr>
<tr>
<td>10 years or less</td>
<td>8.1*</td>
<td>0.7*</td>
<td>0</td>
<td>16.3*</td>
<td>1.4</td>
<td>0</td>
</tr>
<tr>
<td>No set period</td>
<td>26.8</td>
<td>35.1</td>
<td>45.4*</td>
<td>8.3*</td>
<td>37.2</td>
<td>32.9</td>
</tr>
</tbody>
</table>

#### PRACTITIONER

<table>
<thead>
<tr>
<th>PRACTITIONER</th>
<th>MALES</th>
<th>FEMALES</th>
<th>M-FG</th>
<th>M-Mc</th>
<th>F-FG</th>
<th>F-Mc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ophthalmologist</td>
<td>48.5*</td>
<td>33.3*</td>
<td>35.5*</td>
<td>61.5*</td>
<td>24.3</td>
<td>42.3</td>
</tr>
<tr>
<td>Optometrist</td>
<td>35.1*</td>
<td>59.1*</td>
<td>35.5</td>
<td>34.6</td>
<td>58.5</td>
<td>57.7</td>
</tr>
<tr>
<td>P.U. Clinic</td>
<td>7.7</td>
<td>8.6</td>
<td>15.5*</td>
<td>0</td>
<td>17.2*</td>
<td>0</td>
</tr>
<tr>
<td>Don't know</td>
<td>8.7*</td>
<td>0</td>
<td>13.5*</td>
<td>3.9*</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table A: The figures are representative percentages of the total males(M) and females(F), and comparisons of males and females in Forest Grove (FG) and McMinnville (Mc).

* Significant to the 5% level.
<table>
<thead>
<tr>
<th>ELAPSED TIME</th>
<th>UNDER 17</th>
<th>OVER 17</th>
<th>UNDER 17</th>
<th>OVER 17</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FG Me</td>
<td>FG Me</td>
<td>FG Mc</td>
<td>FG Mc</td>
</tr>
<tr>
<td>6 months</td>
<td>17.6*</td>
<td>30.8*</td>
<td>23.7</td>
<td>11.4</td>
</tr>
<tr>
<td>1 year</td>
<td>31.0*</td>
<td>13.6*</td>
<td>37.5</td>
<td>24.5</td>
</tr>
<tr>
<td>2 years or less</td>
<td>4.9*</td>
<td>15.9*</td>
<td>1.3*</td>
<td>8.5*</td>
</tr>
<tr>
<td>5 years or less</td>
<td>19.8*</td>
<td>10.7*</td>
<td>0 *</td>
<td>39.7*</td>
</tr>
<tr>
<td>10 years or less</td>
<td>0 *</td>
<td>5.5*</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Never</td>
<td>26.7*</td>
<td>5.5*</td>
<td>37.5*</td>
<td>15.9*</td>
</tr>
</tbody>
</table>

**FREQUENCY**

<table>
<thead>
<tr>
<th></th>
<th>UNDER 17</th>
<th>OVER 17</th>
<th>UNDER 17</th>
<th>OVER 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months</td>
<td>3.6</td>
<td>5.9</td>
<td>7.3*</td>
<td>0 *</td>
</tr>
<tr>
<td>1 year</td>
<td>34.3</td>
<td>35.8</td>
<td>39.7</td>
<td>29.0</td>
</tr>
<tr>
<td>2 years or less</td>
<td>10.9</td>
<td>16.6</td>
<td>14.5</td>
<td>5.8</td>
</tr>
<tr>
<td>5 years or less</td>
<td>3.6</td>
<td>6.3</td>
<td>0 *</td>
<td>7.3*</td>
</tr>
<tr>
<td>10 years or less</td>
<td>0 *</td>
<td>4.5*</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>No set period</td>
<td>48.2</td>
<td>30.9</td>
<td>38.5</td>
<td>57.9</td>
</tr>
</tbody>
</table>

**PRACTITIONER**

<table>
<thead>
<tr>
<th></th>
<th>UNDER 17</th>
<th>OVER 17</th>
<th>UNDER 17</th>
<th>OVER 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ophthalmologist</td>
<td>18.4*</td>
<td>40.9*</td>
<td>10.3*</td>
<td>26.6*</td>
</tr>
<tr>
<td>Optometrist</td>
<td>57.3</td>
<td>46.6</td>
<td>41.2*</td>
<td>73.4*</td>
</tr>
<tr>
<td>P.U. Clinic</td>
<td>15.0</td>
<td>8.2</td>
<td>30.8*</td>
<td>0 *</td>
</tr>
<tr>
<td>Don't know</td>
<td>8.5</td>
<td>4.3</td>
<td>17.7*</td>
<td>0 *</td>
</tr>
</tbody>
</table>

**TABLE B:** The figures are representative percentages of the total population of the two communities over and under the age of seventeen.

* Significant to the 5% level.
### TABLE C

<table>
<thead>
<tr>
<th>ELAPSED</th>
<th>FG</th>
<th>Mc</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months</td>
<td>32.5*</td>
<td>20.3*</td>
</tr>
<tr>
<td>1 year</td>
<td>30.7</td>
<td>32.2</td>
</tr>
<tr>
<td>2 years or less</td>
<td>8.9*</td>
<td>15.5*</td>
</tr>
<tr>
<td>5 years or less</td>
<td>5.6*</td>
<td>21.9*</td>
</tr>
<tr>
<td>10 years or less</td>
<td>4.4</td>
<td>2.9</td>
</tr>
<tr>
<td>Never</td>
<td>17.9*</td>
<td>7.2*</td>
</tr>
</tbody>
</table>

**FREQUENCY**

<table>
<thead>
<tr>
<th>6 months</th>
<th>9.0*</th>
<th>1.8*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year</td>
<td>34.1</td>
<td>36.7</td>
</tr>
<tr>
<td>2 years or less</td>
<td>14.5</td>
<td>14.7</td>
</tr>
<tr>
<td>5 years or less</td>
<td>2.6*</td>
<td>8.4*</td>
</tr>
<tr>
<td>10 years or less</td>
<td>0.7*</td>
<td>5.4*</td>
</tr>
<tr>
<td>No set period</td>
<td>39.1</td>
<td>33.0</td>
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</table>

**PRACTITIONER**

<table>
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<tr>
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<th>23.3*</th>
<th>43.5*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optometrist</td>
<td>45.1</td>
<td>55.2</td>
</tr>
<tr>
<td>P.U. Clinic</td>
<td>21.2*</td>
<td>0</td>
</tr>
<tr>
<td>Don't know</td>
<td>10.4*</td>
<td>1.3*</td>
</tr>
</tbody>
</table>

**TABLE C:** The figures are representative percentages comparing the Forest Grove community with the McMinnville community.

* Significant to the 5% level.

### III. DISCUSSION

Table A shows the following:

a) More males in Forest Grove have had a visual examination within a six-month period.

b) The above tendency is more marked when males under seventeen years of age are considered.

c) The Forest Grove sample generally shows a tendency toward six-month periods since last visual examination.
The reasons for the above may lie in the fact that Pacific University has a recall system for a six-month period. This inference, however, is not supported by data in Table B, which indicates that the under 17 group and the females in Forest Grove attend the University clinic in greater incidence than do adult males.

Females may influence their family toward more frequent visual examination in the six-month period. The females and the under 17 age group of Forest Grove and the community of Forest Grove in general show a more frequent visual examination in the six-month period. This is probably related to the recall system previously mentioned.

An additional factor is the one discussed in the procedure, the housewife probably more often determines the sources of health care for the family. The mother goes to the clinic and it is apparent that the children go also. Thus, the six-month period of examinations for males holds. The male, however, possibly obtains the services of an outside practitioner because of the amount of time required to obtain clinic service.

In the community of Forest Grove males obtain visual care services less often than in McMinnville. This is also true of the under 17 age group in Forest Grove. Possible explanation for this is that males in general have less health care than females. In comparing the under 17 age group it is possible that Forest Grove has a larger segment
of the under 17 population who are younger than school age and the apparent need for visual care has never existed. As far as the total community is concerned, the data might indicate an apathy from knowing a visual care clinic is present and when the need arises, if it ever does, the services are handy. This tendency may also apply to the frequency. The male and the above 17 age group of Forest Grove have a greater tendency to have no regular schedule for visual examinations.

In comparing Forest Grove to McMinnville, Forest Grove may be considered to have two separate attitudes towards visual care -- those obtaining visual care on a very frequent basis and those obtaining visual care in no set period or not at all.

In comparing practitioners, it is noted that males tend to go to ophthalmologists more than do females. It is also shown that the over 17 age group receive care from ophthalmologists at an even higher rate. A factor that may be operating is that McMinnville population go to an ophthalmologist because of easy accessibility. In the case of females, their tendency is to seek the services of an optometrist. This is also true for the under 17 age group. Privately practicing optometrists serve the same proportion of population in both Forest Grove and McMinnville. Pacific University provides services for a higher percentage of the under 17 age group. This may be related to its child
oriented services - visual training and strabismus. A low percentage of the adult population attend the clinic, but those adults who do attend show similar frequencies of visits between males and females. Older (perhaps retired) adults attend the clinic, often husband and wife together.

IV. SUMMARY

It may be said that the females in McMinnville and the males in McMinnville entertain similar attitudes related to frequency and care, but obtain services from different practitioners; the females from optometrists and males from ophthalmologists. The females in Forest Grove do not have the same attitudes as the males, but when they seek visual care they do so from the same type of practitioner. The impact of the clinic has an indirect effect on the population of Forest Grove, but its services are not utilized in such a way as to indicate a significant and broad community impact.
Absolute numbers were transformed into percentages. It is usual procedure to use raw frequencies to calculate chi-squared values. In 1939 in the Journal of the American Statistical Association (pp. 529-544) a nomograph was published which has the advantage that one does not need to use raw frequencies, but can instead determine the significance of the different proportions directly from the percentage figures. With the nomograph the percentages can be utilized directly since it takes into account respective sample sizes in establishing significant values. Nomographs should not be used when limits of significance are boarder-line, where sample sizes are very low, failure to consider a given value according to its place in the percentage range (i.e. only observing the magnitude of difference), and when one percentage is very small and the other is very large. For inspection purposes it must be kept in mind that a significance value is obtained and it is this value which has to be reached or exceeded in the following tabulated results if the difference is to be statistically significant at one of the customary levels of probability.

Chart 1: Determination of significant level to be obtained from the N values of the sample.

Chart 2: Determination of Significance to the 5% level from the percentage values.
<table>
<thead>
<tr>
<th>TIME ELAPSED</th>
<th>TOTAL MALE–FEMALE</th>
<th>MALES FG – Mc</th>
<th>FEMALES FG – Mc</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months</td>
<td>0.100</td>
<td>0.206*</td>
<td>0.120</td>
</tr>
<tr>
<td>1 year</td>
<td>0.120</td>
<td>0.210*</td>
<td>0.029</td>
</tr>
<tr>
<td>2 years or less</td>
<td>0.050</td>
<td>0.118</td>
<td>0.090</td>
</tr>
<tr>
<td>5 years or less</td>
<td>0.080</td>
<td>0.085</td>
<td>0.050</td>
</tr>
<tr>
<td>10 years or less</td>
<td>0.080</td>
<td>0.355*</td>
<td>0.050</td>
</tr>
<tr>
<td>Never</td>
<td>0.230*</td>
<td>0.210*</td>
<td>0.080</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FREQUENCY</th>
<th>TOTAL MALE–FEMALE</th>
<th>MALES FG – Mc</th>
<th>FEMALES FG – Mc</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months</td>
<td>0.040</td>
<td>0.120</td>
<td>0.210*</td>
</tr>
<tr>
<td>1 year</td>
<td>0.025</td>
<td>0.280*</td>
<td>0.060</td>
</tr>
<tr>
<td>2 years or less</td>
<td>0.020</td>
<td>0.025</td>
<td>0.120*</td>
</tr>
<tr>
<td>5 years or less</td>
<td>0.020</td>
<td>0.055</td>
<td>0.160*</td>
</tr>
<tr>
<td>10 years or less</td>
<td>0.170</td>
<td>0.360*</td>
<td>0.140</td>
</tr>
<tr>
<td>No set period</td>
<td>0.085</td>
<td>0.343*</td>
<td>0.050</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRACTITIONER</th>
<th>TOTAL MALE–FEMALE</th>
<th>MALES FG – Mc</th>
<th>FEMALES FG – Mc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ophthalmologist</td>
<td>0.165*</td>
<td>0.250*</td>
<td>0.019</td>
</tr>
<tr>
<td>Optometrist</td>
<td>0.205</td>
<td>0.008</td>
<td>0.010</td>
</tr>
<tr>
<td>P.U. Clinic</td>
<td>0.020</td>
<td>0.480*</td>
<td>0.510*</td>
</tr>
<tr>
<td>Don't know</td>
<td>0.400</td>
<td>0.190*</td>
<td>0</td>
</tr>
</tbody>
</table>

TOTAL MALES AND FEMALES:

Time elapsed values:
N₁ = 111, N₂ = 161
Significance = .124
*Significance level = 5%

Frequency and Practitioner values:
N₁ = 100, N₂ = 159
Significance = .127
*Significance level = 5%

MALES: FOREST GROVE AND McMINNVILLE:

Time elapsed values:
N₁ = 55, N₂ = 56
Significance = .206
*Significance level = 5%

Frequency and Practitioner values:
N₁ = 46, N₂ = 54
Significance = .201
*Significance level = 5%

cont'd...
FEMALES: FOREST GROVE AND McMINNVILLE

Time Elapsed values

\[ N_1 = 70, \quad N_2 = 91 \]
Significance = .159
*Significance level = 5%

Frequency and Practitioner values

\[ N_1 = 70, \quad N_2 = 89 \]
Significance = .159
*Significance level = 5%
<table>
<thead>
<tr>
<th>Time elapsed values</th>
<th>UNDER 17 AND OVER 17</th>
<th>UNDER 17 FG - Mc</th>
<th>OVER 17 FG - Mc</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months</td>
<td>.155*</td>
<td>.156</td>
<td>.135*</td>
</tr>
<tr>
<td>1 year</td>
<td>.210*</td>
<td>.150</td>
<td>.100</td>
</tr>
<tr>
<td>2 years or less</td>
<td>.190*</td>
<td>.190*</td>
<td>.020</td>
</tr>
<tr>
<td>5 years or less</td>
<td>.130*</td>
<td>.700*</td>
<td>.075</td>
</tr>
<tr>
<td>10 years or less</td>
<td>.350*</td>
<td>0</td>
<td>.085</td>
</tr>
<tr>
<td>Never</td>
<td>.310*</td>
<td>.250*</td>
<td>.120</td>
</tr>
<tr>
<td>FREQUENCY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 months</td>
<td>.050</td>
<td>.380*</td>
<td>.120</td>
</tr>
<tr>
<td>1 year</td>
<td>.080</td>
<td>.115</td>
<td>.105</td>
</tr>
<tr>
<td>2 years or less</td>
<td>.090</td>
<td>.150</td>
<td>.070</td>
</tr>
<tr>
<td>5 years or less</td>
<td>.050</td>
<td>.380*</td>
<td>.100</td>
</tr>
<tr>
<td>10 years or less</td>
<td>.320*</td>
<td>0</td>
<td>.190</td>
</tr>
<tr>
<td>No set period</td>
<td>.180</td>
<td>.208</td>
<td>.230*</td>
</tr>
<tr>
<td>PRACTITIONER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ophthalmologist</td>
<td>.260*</td>
<td>.240*</td>
<td>.245*</td>
</tr>
<tr>
<td>Optometrist</td>
<td>.100</td>
<td>.340*</td>
<td>0</td>
</tr>
<tr>
<td>P.U. Clinic</td>
<td>.115</td>
<td>.672*</td>
<td>.510*</td>
</tr>
<tr>
<td>Don't know</td>
<td>.120</td>
<td>.509*</td>
<td>.135*</td>
</tr>
</tbody>
</table>

Time elapsed values
- Significance: 0.115, 0.190, 0.121
- N_1: 111, 59, 125
- N_2: 272, 52, 147
- *Significance level: 5%

Frequency and Practitioner values
- Significance: 0.187, 0.223, 0.124
- N_1: 32, 37, 115
- N_2: 259, 37, 143
- *Significance level: 5%
### TABLE 3

**POPULATION - FOREST GROVE - McMinnville**

<table>
<thead>
<tr>
<th>ELAPSED</th>
<th>Frequency and Practitioner values</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months</td>
<td>.155*</td>
</tr>
<tr>
<td>1 year</td>
<td>.010</td>
</tr>
<tr>
<td>2 years or less</td>
<td>.105*</td>
</tr>
<tr>
<td>5 years or less</td>
<td>.245*</td>
</tr>
<tr>
<td>10 years or less</td>
<td>.025</td>
</tr>
<tr>
<td>Never</td>
<td>.175</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FREQUENCY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months</td>
<td>.175*</td>
</tr>
<tr>
<td>1 year</td>
<td>.035</td>
</tr>
<tr>
<td>2 years or less</td>
<td>0</td>
</tr>
<tr>
<td>5 years or less</td>
<td>.110*</td>
</tr>
<tr>
<td>10 years or less</td>
<td>.125*</td>
</tr>
<tr>
<td>No set period</td>
<td>.075</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRACTITIONER</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ophthalmologist</td>
<td>.230*</td>
</tr>
<tr>
<td>Optometrist</td>
<td>.109</td>
</tr>
<tr>
<td>P.U. Clinic</td>
<td>.580*</td>
</tr>
<tr>
<td>Don't know</td>
<td>.225*</td>
</tr>
</tbody>
</table>

**TOTAL - FOREST GROVE AND McMinnville**

**Time elapsed values**

- Significance = .102
- $N_1 = 184$
- $N_2 = 199$

**Frequency and Practitioner values**

- Significance = .110
- $N_1 = 151$
- $N_2 = 185$

*Significance level = 5%
INSTRUCTIONS

A. Speak to the woman of the house; if not home, speak to the husband.
B. We are conducting a survey studying the health care attitudes toward vision.

QUESTIONS

1. How many member in your family?
   a. over 17 years of age
   b. under 17 years of age

2. When was the last time your eyes were examined?
   a. When

   if answer is uncertain lead to following:
   a. 6 months ago
   b. 1 year ago
   c. within the last 2 years
   d. less than 5 years
   e. less than 10 years
   f. never

3. How often do you have them examined?

4. Do you remember the practitioner's name who gave you this service?
   a. yes
   b. no

5. What is his name?
   a. M.D.
   b. O.D.
   c. P.U. clinic

6. When was the last time the members of your family had their eyes examined?
   a. spouse
   b. children

7. How often do the members of your family have their eyes examined?
   a. spouse
   b. children

8. What is the name of the practitioner giving this service to each member of your family?
   a. spouse
   b. children