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Abstract

Current status and future needs of vision care in Ceylon

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CURRENT STATUS AND FUTURE NEEDS OF
VISION CARE IN CEYLON

A Thesis
Presented to
the Faculty of the College of Optometry
Pacific University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Optometry

by
Ted Dorn
Jaryl Ollenburger

May, 1970

Accepted and Approved

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I. INTRODUCTION

It has been widely accepted that vision care in Ceylon is inadequate and unavailable to the majority of the citizenry. As a means of eliminating these deficiencies, the Senate passed a resolution approving the formation of a school of optometry in Ceylon. Subsequently the Board of Regents at Vidyodaya University approved the School of Optometry in July 1968. The purpose of this paper is to delineate the vision care needs for Ceylon that are to be used as the basis for an instructional program in optometry in this newly approved School of Optometry. The paper also will show the number of optometrists required to adequately care for Ceylon's increasing needs for vision services.

No previous study has been undertaken to determine the need for trained vision care specialists in Ceylon. It is apparent that such a study is needed, along with a study of future needs, so as to aid the school in setting enrollment figures. It is important that the school keeps pace with the increasing demand, but it should not "flood" the country with new graduates before an adequate government program is started.

There has never been such a school in all of Southeast Asia until this time. It is hoped that not only Ceylon, but also many other nearby countries as well, will benefit from the services of graduates of the school. The school has been set up as a two year program with a minimum requirement for admission being an equivalent of a B.Sc. degree from a recognized university.

Ceylon appears to be as highly developed as any country in Southeast Asia. Therefore, it is natural for them to lead the way in providing improved visual services. However, in Ceylon there are only a few persons who have had any formal training in Optometry, and of this group only a very small fraction has a level of education equal to the B.Sc. in Optometry. The need for qualified optometrists is very urgent. The efficient functioning of the visual system is an important parameter in the productive efficiency of an individual, no matter what vocation he may be in. Therefore, improvement of the visual efficiency on a large scale could be conceived as a step towards increased production and growth for the Ceylonese economy.

II. PROCEDURE

In carrying out our investigation an attempt has been made to obtain a sampling of all types and sizes of optometric and ophthalmological practices. All the information was collected by personal interviews and visits to various offices.

Our investigation included a survey of the characteristics of professionalism and a general optometric understanding. Three questions were asked of all practitioners visited. These were: 1) how much optometric education have you had?; 2) what type of examination do you give? and 3) how many patients do you see each year? The answers to the last questions were generally given in the form of daily or weekly averages.

III. RESULTS

The secretary of the Ceylon Optometric Association listed the total number of non-medical refractionists in Ceylon as 87 in 1969. Since there was no legislation limiting the practice of optometry, this number fluctuated from week to week. This was proven by the fact that several of the listed practitioners were no longer practicing when they were contacted for a personal interview. They had either retired or were doing other things. A more realistic number of non-medical refractionists practicing is 75.

There are 26 ophthalmologists on the island, however, one was known not to be in practice. Ceylon has a total health care plan similar to that of Great Britain. Most of the ophthalmologists, therefore, were in governmental service. Eighteen of the 25, who are actively practicing, are working for the government. The other seven are engaged in private practice.

A combination of the total medical and non-medical people doing refraction results in a total of 100 people offering some type of vision care.

The estimated population of Ceylon in 1969 was 12,034,525 with an annual increase of 2.5 percent¹. A comparison of the number of people doing refraction to the total population of the country produces a ratio of 1:125,000.

¹The United Nation Demographic Yearbook 1967, United Nations, New York 1968, p. 107.

In order to estimate the total number of people receiving vision care annually, arrangements were made to interview a large sample of those practicing in the eye care field. The data were obtained either by direct interview with the refractionist or with his employer. Information was obtained from 54% of those practicing using this method.

None of the practitioners kept adequate records of their patients. Precise figures of the number of patients seen yearly were thus unobtainable. However, each practitioner could give an average of the number of patients that he customarily saw either daily or weekly. Due to the lack of more precise data and the fact that the weekly averages seemed logical, it was decided to use this data.

In order to project weekly averages to a yearly average, the weekly average was multiplied by 50. This would allow for 50 work weeks and a two week vacation yearly. Daily averages were computed on the basis of the standard Ceylonese six and one half day work week. The computations were simplified by multiplying work days per week by 50 weeks per year as shown:

$$6.5 \text{ days/week} \times 50 \text{ weeks/year} = 325 \text{ days/year}$$

The yearly average was then computed by multiplying each daily average by 325.

The total average number of patients seen annually by the 54% interviewed was calculated to be 93,565.

When this average is projected to all 100 practitioners, the total of all patients seen annually would be 173,269 or approximately 1.44% of the total population.

Educational Training of Current Practitioners

Another portion of the survey deals with the amount of education of each practitioner and the number of vision services each provides. All of the 25 ophthalmologists have had a complete ophthalmological education in Great Britain. Two ophthalmic opticians have completed a course in Ophthalmic Optics at Northampton College in London. Six have spent from six months to two years in a combined Optometry and Opticianry course conducted by Messrs. Flick and Freeman in London. Three have had a similar course in Germany. The others have had no formal training and have learned refraction by an apprentice method. Table 1 shows the approximate level of educational training of all those in Ceylonese vision care.

Visual Services Now Available

During the interviews questions were asked about the type of examination given by that practitioner. This information was backed up by observation of the equipment used by the examiner or by the actual observation of an examination given by the person. Table 2 provides the percentage of the practitioners offering various visual services.

IV. DISCUSSION

Although the two year program at Vidyodaya University is well below the standards which colleges of optometry in the United States now maintain, it must be remembered that less than fifty years ago the United States was in a similar situation. When Optometry becomes further established in Ceylon, then advancements in optometric education will naturally occur.

Table 1

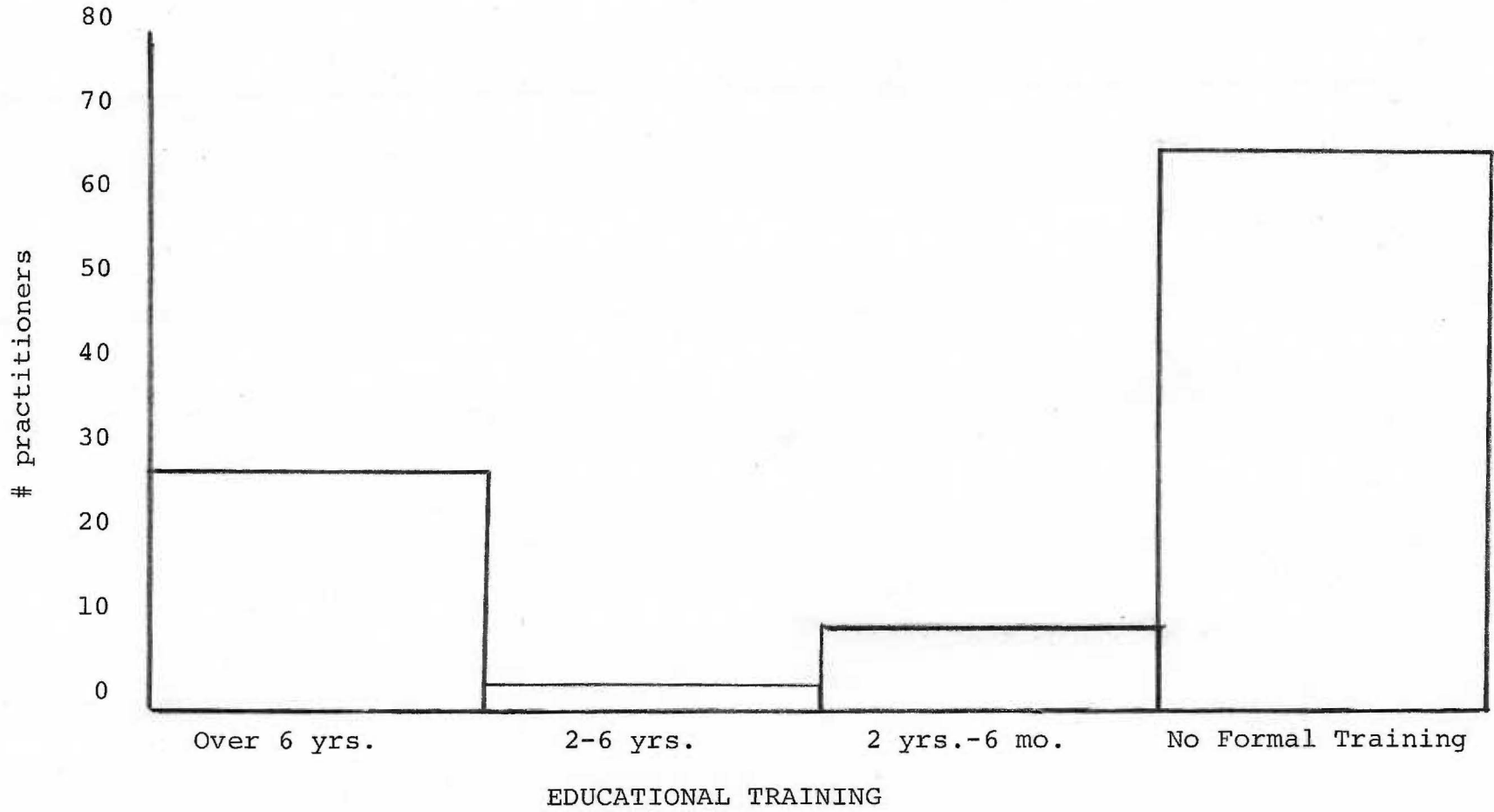
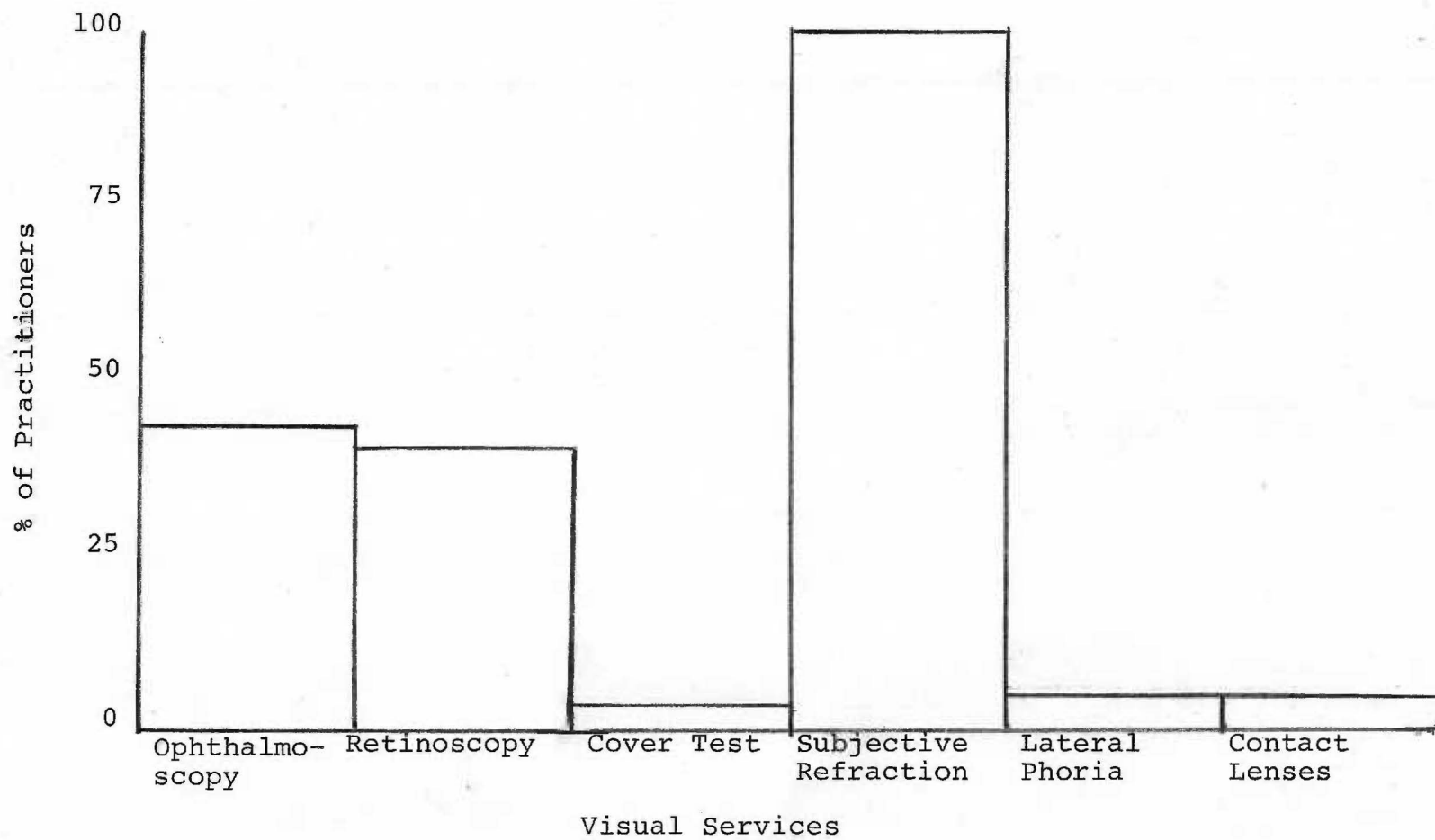


Table 2



The need for a lower ratio of optometrist per population is apparent even today. The present ratio using the figures of 75 optometrists and 12.5 million population becomes 1:166,000. If one includes optometrists and ophthalmologists, the ratio is lowered to about 1:125,000.

The education level of the Ceylonese is increasing at tremendous rates. The education is free through the college level so nearly all young people will have a chance to obtain an education. As the education level of the population rises, so too will the level of industrial development and cultural complexity. Along with these changes will come an increased need for visual care and also an increased awareness for this need.

Even though leaders of government in Ceylon might agree with this concept, they are not entirely convinced of the need for more optometrists with better training. One of the hardest problems which had to be overcome in order to start the school was to convince the officials of the need for such a school in Ceylon. The school was approved, but this was just the beginning.

Optometry is not included in the total health care of Ceylon. For this reason many of the people cannot afford proper vision care. A service similar to the dental care in the schools needs to be set up, since it is recognized that eye care is at least as important in the efficient performance of a school child as is dental care. In the future the expanded health services would include optometrical and ophthalmological care at every eye clinic. Even a mobile vision care unit could be dispatched to the remote areas in an attempt to provide more adequate vision care. In order for this to become reality, the government must be convinced of the urgent need for optometrists.

It is hoped that the government will shortly recognize the true value of Optometry and include it in its health care program. This would enable a greater number of people to obtain much needed eye care previously unavailable. It is from this point that our projections as to the number of optometrists required will be made.

V. PROJECTIONS

The proposed ratio of optometrists to population in the United States is 1:7,000. This will not be a realistic figure for Ceylon for a good many years. However, it is a long range goal to keep in mind. If present population growths continue, Ceylon's population will be over 14 million by 1975 and more than 16 million by 1980. If one assumes that by 1975 the government will have included optometrists in its hospitals and clinics so that the people can have free visual care, a ratio of 1:80,000 would definitely not be unrealistic. To achieve such a ratio would require approximately a total of 175 optometrists. This represents 100 new optometrists in five years if none of the present practitioners retires.

By 1980 the demand for visual care should have increased considerably due to a shift towards a more industrialized nation accompanied by a greater social and cultural demand for efficient vision. Thus a figure of 1 optometrist per 40,000 population would be a reasonable goal. This would require a total of 400 optometrists providing the above mentioned population figures remain realistic. Thus within a ten year period a minimum of 300 new optometrists would be required. This would mean an average of 30 graduates each year.

The school is currently set up to handle only 12 students per class. There will be a new incoming class only every other year. At this rate the above hoped for ratios would never be attained. By 1975 the ratio would be cut to only 1:135,000 instead of the 1:80,000 desired, assuming 70 of the present 75 practitioners will still be practicing optometry. It, therefore, would appear that the fear of many that the current output of the School of Optometry will "flood" the visual care field is a false one.

VI. SUMMARY

It has been shown that even under the present conditions there is an urgent need for more optometrists in Ceylon. As the standard of visual care improves and the technological level of the nation increases, the need for optometrists will increase four times. The present optometrist to population ratio is 1:166,000. By 1980 with the expected technological advances a ratio of 1:40,000 would not seem unreasonable. These projections were made under the assumption that the government will soon realize the need for more adequate visual care and will recognize optometry as a profession, thus including it in the free health service program. According to our projection, Ceylon will need at least 325 new optometrists by 1980 to adequately take care of its increasing visual demands.

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