

## VISION IN THE ELDERLY—A NEED FOR PUBLIC AWARENESS?

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### Abstract

*It is contended that visual decline in the elderly is considered to be due to first acceptance of this as part of the "elderly" role and second due to public and professional ignorance. This contention is supported by the responses of 264 persons to a forced-choice and open-ended questionnaire.*

*Knowledge is compared between non allied health and allied health groups and while most are aware of some ocular diseases associated with aging little was known about senile macular degeneration.*

*There exists a definite role for the orthoptist in educating the public about change in visual status associated with aging and the need for early and regular ophthalmological assessment.*

*Where loss of vision is medically diagnosed as inevitable there is a need for the establishment of an Australia-wide counselling service.*

*Finally the orthoptist can play a valuable role in the visual screening of adults and in educating allied health personnel to the changes in vision associated with aging.*

**Key words:** Knowledge of common eye problems, macular degeneration, early and regular assessment, orthoptist role.

The February-May, 1979, publication by the Australian Bureau of Statistics (ABS)<sup>1</sup> states that 85.78% of persons 45 to 64 years of age and 96.31% of persons 65 years of age and over have a loss of sight. This publication also presents data on the incidence of persons with a loss of sight which cannot be helped by the use of glasses/contact lenses:

(i) there are 13.45% in the age group 45 to 64 years of age (2.40% bilateral and 11.05% unilateral)

(ii) there are 14.88% in the age group 65 and over (4.25% bilateral and 10.63% unilateral).

No data is available as to the reasons why these people are unable to be assisted by refractive correction, however, the question which must be asked is to what extent could these figures be reduced by early intervention and preventive measures?

Further, even if vision is helped by use of the appropriate refractive correction, data presented

by Martinez *et al*<sup>2</sup> indicates for 65 years of age and over that 19% of males and 31.2% of females will still have a visual acuity of 6/12 or less. Refraction, then, is still not the complete answer to decline in vision in this age group.

Second, the data relating to persons who had their sight tested in the last five years (p. 20)<sup>1</sup> can be collapsed, as given in Table 1 below.

TABLE 1  
Percentage of persons who had their sight tested in the last five years

Time since last sight test	Age (years)	
	45-64	65 or more
Less than 1 year	38%	37%
1 year to less than 3 years	41%	37%
3 years to 5 years	21%	26%
<i>Persons who tested sight</i>		
Eye specialist/Ophthalmologist	40%	46%
Optometrist/Optician	54%	46%
Other person (G.P., nurses)	4.5%	7%
Not known	1.5%	1%

Frequency counts for each question were obtained and comparisons between health workers and non-health workers are presented.

## RESULTS

To the question "Do you feel that some loss of vision is inevitable as a normal part of aging changes?" 2.3% (6) did not respond, 6.8% (18) said no, 18.2% (48) were unsure and the remainder 72.7% (192) said yes. In the health professional group 90% (45) said yes and 10% (5) were uncertain.

Respondents were asked to list any complaints which can cause a decrease in vision at any age.

The diseases most frequently mentioned by both the total sample and the allied health group are given in Figure 1.

TABLE 2  
Those complaints stated to be associated with aging

Total Sample		Allied Health Group	
Complaint	Frequency (%)	Complaint	Frequency (%)
Cataract	32	Glaucoma	50
Glaucoma	30	Cataract	40
Diabetes	11	Diabetes	30
Stroke	7	Hypermetropia	20
Senility	7	Hypertension	20
Hypermetropia	7	Presbyopia	10

In the allied health group myopia, strabismus, hypertension and presbyopia had equal frequency of occurrence but only the first mentioned in this list occurred in the ratings for the total sample. Herpes and ptosis were next in frequency, then retinal degeneration, with the others not being mentioned. Other diseases

mentioned by the allied health group were congenital defects, ocular muscle palsy, corneal ulcers, pterygium, retinitis pigmentosa, trachoma and retrolental fibroplasia.

Apart from cataracts and glaucoma less than 50% of the total sample were able to identify any other diseases. The allied health group were only able to name four diseases, cataracts, glaucoma, diabetes and retinal detachment at better than 50% response rate.

Subjects were asked to identify those complaints that are specifically associated with aging.

Table 2 lists all complaints associated with aging identified by the two groups. There exists a different listing for each group.

Respondents were next presented with a list of twenty complaints and asked to place a tick beside the complaint if they had heard of it. Table 3 lists these twenty complaints and the percentage of the total group who had heard of each and in parentheses the percentage for the allied health group.

In general there exists a high prevalence of "having heard" of the specific complaints. Specific areas of deficiency exist with arcus senilis, entropion, presbyopia, temporal arteritis, ectropion, blocked nasolacrimal duct, retinal vascular occlusion. Ignorance about these complaints may be due to the use of appropriate medical terminology. For the allied health group the problem areas were arcus senilis, entropion, presbyopia and ectropion.

"Having heard of a complaint" does not indicate having a measurable knowledge about that complaint. An initial investigation into knowledge was carried out on the above twenty complaints—respondents being asked to place a

TABLE 3  
Percentage of Respondents who had Heard of a Stated Disease

Ptosis	34 (100)	Cataract	100 (100)
Glaucoma	100 (100)	Retinal degeneration	70 (90)
Hypertension	98 (100)	Diabetes	98 (100)
Hyperthyroidism	66 (100)	Malignancy	88 (100)
Arcus senilis	9 (20)	Presbyopia	18 (50)
Retinal detachment	89 (100)	Temporal arteritis	32 (90)
Rheumatoid arthritis	100 (100)	Ectropion	11 (40)
Corneal ulceration	66 (100)	Blocked nasolacrimal duct	39 (80)
Entropion	9 (50)	Retinal vascular occlusion	30 (70)
Herpes zoster	55 (100)	Keratitis	32 (90)

TABLE 4  
Percentage of those who said Complaint was Preventable

Glaucoma	25 (2)	Corneal ulcers	23 (20)
Hypertension	50 (70)	Herpes zoster	7 (0)
Hyperthyroidism	25 (30)	Cataract	2 (0)
Arcus senilis	2 (0)	Diabetes	14 (10)
Retinal detachment	11 (0)	Malignancy	2 (10)
Rheumatoid arthritis	2 (0)	Nasolacrimal duct	9 (0)

“P” beside the complaint if they knew if it could be prevented. For the twenty complaints listed the total sample stated twelve to be preventable and the allied health group six. The results are given in Table 4.

In many instances the results in Table 4 may reflect some confusion between terms such as prevention, treatable, cure. Some respondents may have equated treatable with preventable. It is doubtful if any of the twenty complaints are preventable.

Finally fourteen specific eye complaints were listed in a table. For each complaint one or more of six alternatives could be chosen to the direction “If you think a treatment is appropriate for the complaint tick the appropriate column”. The alternatives were—uncertain, glasses, drugs, surgery, other and not treatable. Responses to this question are given in Table 5.

The results in Table 5 indicate that both the total group and the allied health group have good knowledge with respect to the treatment of hypermetropia, myopia, cataracts, glaucoma and retinal detachment. There are obvious deficiencies

in the areas of presbyopia, diabetic retinopathy, senile macular degeneration (SMD), retinal vessel occlusion, ocular muscle palsy, entropion, herpes zoster, keratitis and ptosis.

#### DISCUSSION

While this study has revealed a wide range of ocular areas in which the public and allied health professionals have little knowledge its purpose was to examine specifically knowledge about vision in the elderly. Mitchell and Sarks,<sup>3</sup> have identified the principal causes of reduced vision in the elderly. On the basis of their data the prevalence is cataracts (22.4%), SMD (22.4%), glaucoma (4.5%) diabetic retinopathy (1.7%), and all others (2.1%). Neither group in this study identified SMD as being associated with aging, and both the total and allied health groups yielded inadequate percentages associating cataracts, glaucoma and diabetes with aging.

It is arguable if any of the above causes for decreased vision in the elderly are preventable, however, there do exist appropriate treatments for cataracts, diabetic retinopathy and glaucoma;

TABLE 5  
Eye Complaints and Treatment(s). Percentages of respondents

Complaint	Treatment					Not treatable
	Uncertain	Glasses	Drugs	Surgery	Other	
Hypermetropia	5	82 (50)		2	2 (10)	
Cataracts	5	20 (20)	2	86 (90)	2 (10)	
Glaucoma	16		64 (80)	45 (70)	2 (10)	
Presbyopia	68 (30)	14 (30)	2 (10)			
Diabetic retinopathy	48	2	30 (60)		7	2
Senile macular degeneration	52 (20)	14 (10)	9 (60)		2	20 (50)
Retinal detachment	20	5	2 (10)	75 (90)	(10)	2
Myopia	2	95 (80)		2		
Retinal vessel occlusion	52 (10)	2	14 (40)	20 (20)	5 (10)	5 (10)
Ocular muscle palsy	48 (10)	9 (10)	9	16 (30)	18 (40)	2 (10)
Entropion	75 (30)			9 (40)		
Herpes Zoster	52 (10)		32 (60)		2 (10)	14 (20)
Keratitis	70 (20)		9 (50)	2 (10)		2
Ptosis	70		2 (10)	16 (50)	5 (20)	5 (10)

while the latter two diseases can cause permanent loss of vision the prognosis is greatly improved if the conditions are diagnosed early.

Cataracts, as a cause of decreased vision in the elderly, need not lead to permanent loss. With modern procedures and the use of intra-ocular lenses or contact lenses vision is frequently restored to 6/6.

Thus SMD which is neither preventable nor completely treatable (as yet) presents as a disease about which the population and the allied health group know very little. It is a disease whose progress can be temporarily arrested but which may eventually result in a significant loss of vision.

The implications of the above are clear. First, there needs to be a public education programme alerting the populace to the necessity of having early and regular ophthalmological assessments in order to detect onset of visually debilitating diseases. Second, where loss of vision is an inevitable result of a disease appropriate, Australia-wide, counselling services need to be established. Patients with such diseases should

be counselled from the day the disease is diagnosed not from the point at which vision has deteriorated to a given state.

Third, education of allied medical personnel should include more detail on the aging eye and how such changes can affect patients. I would also suggest that such a course should also alert these people to various agencies and practitioners to whom they may refer. Fourth, government agencies, such as Health Departments, should establish vision screening clinics for those over 40 years of age with the specific task of detecting SMD, cataracts, glaucoma, diabetes and other ocular problems associated with ageing.

#### References

1. Cameron, R.J. Sight problems and the use of glasses/contact lenses (person aged 15 years or more). Aust Bureau Stats February-May, 1979.
2. Martinez GS, Campbell AJ, Reinkin J, Allan BC. Prevalence of ocular disease in a population study of subjects 65 years old and older. Am J Ophthalmol 1982 August; 94(2): 181-9.
3. Mitchell RD, Sarks SL. Prevalence rates of ocular diseases in an elderly population. 1983 (in press).