

**VISION SCREENING – PILOT SURVEY**

*S. Brown, S. Gillis, MD.,CL.B.,M.H.A., S. Stanley*

*Submitted December, 1975*

Following discussions with the Department of Education and the Health Commission of N.S.W., a pilot survey was undertaken of 400 children between the ages of 7.0 – 8.11. The children were 2nd and 3rd Grades from the Public Schools of Rose Bay, Redfern and Paddington.

**Personnel**

Examinations were conducted by three orthoptists from the Orthoptic Department of the Sydney Eye Hospital.

**Tests Performed**

1. Vision with an 'E' chart at 6 metres.
2. Cover test for near and distance
3. Convergence near point
4. Ocular movements
5. Stereopsis and three dimensional acuity
6. Reference eye test
7. Reading age tested with the Holborn Reading Scale

**Recording**

Copies of code and coding sheets are attached

**Breakdown of Results**

The four categories of defects found were:

1. Defective Visual Acuity
2. Squint
3. Convergence Insufficiency
4. Stereopsis

**1. Defective Visual Acuity**

Visual acuity was tested with an 'E' chart at a distance of 6 metres. 48 (12%) children were found to have defective vision in one eye only; 28% children had defective vision in both eyes.

6/9	29 Children	7.25%
6/12	8 Children	2.00%
6/18	8 Children	2.00%
6/24	1 Child	0.25%
6/36 & 6/60	None	
<6/60	2 Children	0.50%

**2. Squint**

The presence of a squint was tested by the cover test, the stereoscopic function on the Synoptophore and the Titmus Tests.

24 Children had squints	6.00%
Intermittent Convergent Squints – 3 Children	0.75%
Convergent Squints (Constant) – 12 Children	3.00%
Intermittent Divergent Squints – 9 Children	2.25%
Divergent Squint (Constant)	–
Of the 24 children – 9 had Amblyopia	2.25%

### 3. Convergence Insufficiency

131 (32.7%) children were found to be suffering from this condition – some complained of symptoms, but perhaps more noteworthy is that 62(47.3%) of the 131 had defective reading ability.

### 4. Binocular Vision

Defects in stereoscopic depth perception may cause problems in school subjects involving visual judgment and of course in many sports.

93 children in total were found to have defects in binocular stereopsis –	23%
37 had associated convergence insufficiency –	9%
28% of children with convergence insufficiency had defective stereopsis.	
20 had associated phorias –	5%

36 did not have associated phorias or overt squint or convergence insufficiency. Some of these may have had associated refractive errors, examination for which was not included in the survey, but for which electronic refraction, as a screening procedure, is now available. – 9%

### Recommendations

1. The figures presented in this report are interesting, but 400 is a relatively small group, and it is felt that a larger survey of 5,000 would give more significance to the figures.
2. The method of examination should be trimmed to a simple screening procedure, which would still adequately detect defective visual acuity, squints, convergence insufficiency and binocular function.
3. The age group should be lowered to 5.0 – 6.11 years.
4. A simple screening procedure would enable more children to be seen in a shorter period. It is estimated that 5,000 could be screened by five orthoptists in twelve weeks – orthoptists could be drawn from a number of hospitals.
5. The recording system used in this survey was simple and most efficient.