THE ORTHOPTIST AS A SAFETY NET*

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Abstract

The Krongold Centre at Monash University is a clinical research and educational laboratory. It supports approximately 150 children per week in their local settings. The children have one or more handicaps to learning.

The orthoptist's areas of involvement in the Centre's programmmes are:

— orthoptic screening
— orthoptic treatment on referral by an ophthalmologist
— assisting staff in tuition using a low vision aid to teach visual perception
— being part of a multi-disciplinary team assisting with visual training in multi-handicapped children.

Cases in which eye problems are present, but no eye treatment is indicated, raise the following questions: the degree of handicap to learning posed by the eye problems; ways of off-setting these handicaps; why academic success can, in fact, be achieved despite the presenting problems.

Key words: *Krongold Centre, handicaps to learning, education laboratory, orthoptic screening, visual training.*

ORTHOPTICS AT THE KRONGOLD CENTRE

The Krongold Centre

The Krongold Centre at Monash University is a clinical research and educational laboratory which has evolved from the personal practice of the Founding Director, Professor Marie D. Neale. The Centre was established by a gift from the Krongold family, which was matched by a grant from the Department of Social Security under the Handicapped Persons Act. Through the experimental work, services are given directly to the community, supporting children in their local community settings whether these be pre-school, developmental centres, special centres, or the regular school.

Those who are served by the Centre are:

—Infants, groups of children and young adults with specific severe physical or intellectual handicapping conditions,

—children with learning dysfunctions from regular schools,

—handicapped young persons in special centres,

—very able or specially gifted children.[1]

Admittance to the Centre is on the basis of need and the service is offered free of charge. Operational funds come from a number of sources, including donations and bequests, the Department of Social Security, Monash University itself and teachers from the Victorian Education Department.

Architecturally the concept of the Centre is to provide a functional flow of diagnostic and treatment services from the moment that a child and parent are seen. Eight diagnostic teaching rooms form the central core of the building and the rooms have been based on a Piagetian view of intelligence from the presymbolic stage for playing shop or house, through to formal operations and abstract thinking skills. As soon as a child can imitate and play and imagine, he moves into, for example, the kitchen where he joins with other children making gingerbread

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men and attractive little dishes from natural ingredients.

The third room is fitted out with all the materials for measurement and quantification in maths programs, although practical maths will be reinforced by teachers in other parts of the building, for example, the kitchen, gymnasium, swimming pool and art room.

The fourth room is designed as a visual-literacy station with a wide array of reading teaching schemes. This is also where the orthoptist undertakes assessments and works with the teachers.

Another room acts as an assembly point for the children to which they come with their parents. The music specialist, with other teachers, engages them socially through themes using music and movement, teaching children a repertoire of nursery rhymes and songs.

Adjacent to the circular building is a small gymnasium for physiotherapy and teaching the basic sports skills. A heated swimming pool is separated from the gymnasium by toilet rooms which serve both areas. Its particular features of ramp and teaching trench facilitate working with those who are disabled or fearful of the water.

What is offered at the Centre is perhaps exemplified by Noel's program. Noel is a 10 year old with multiple handicaps. At five years of age he was referred to Professor Neale and according to normal testing criteria he had:

—below average intellectual functioning,
—very poor adaptive behaviour,
—visuo motor disabilities.

Under normal circumstances he would not have been able to cope with regular school. However, with Centre support in two sessions totalling five hours per week, Noel has been maintained in regular school right through to Grade III. The multidisciplinary team has taught him sequentially, motor skills, visual-language skills, literary maths skills and independent living skills.

This year (1982) there are approximately 150 children and young adults attending the Centre on a sessional basis. The two points to note are:

—the objectives of both individual therapy and group interaction are attempted within a very modest part-time attendance by the children averaging three hours per week,
—the staff to pupil ratio, calculated on the basis of the hours per week of each group is roughly one-to-one by careful placing of teams of part-time personnel with the full time staff. This reflects the intensive nature of the tuition and therapy and also the considerable time needed for assessment and liaison with parents and schools must be eliminated from this ratio.

THE ORTHOPTIST'S ROLE

Part of the theoretical position adopted in the programming is that, because the visual input is a significant factor in the learning process, the eyes should present to the brain the clearest possible image in the most physically comfortable manner. Thus the role of the orthoptist is frankly experimental.

As the orthoptist I have three areas of involvement in the Centre's programs:

(a) orthoptic screening of all children in the programs, and research control groups,
(b) giving orthoptic treatment to overcome defects in binocular vision, on referral by an ophthalmologist,
(c) assisting staff conduct academic programs. In particular I use a Low Vision Aid to encourage visual perception.

The purpose of orthoptic screening is to discover anything about the vision that could hinder learning, so that appropriate treatment can be arranged. It is also used to ensure, as far as possible, that there are no significant differences in visual function between groups involved in research projects and their related control groups.

The tests I give at the Centre are routine ones—acuity, cover test, convergence, eye movements, fields, dominance, and colour vision. Approximately 120 children are screened per year. Ages range between three and 12. Some 30 are pre-schoolers and the other 90 are attending primary school. As would be expected there are very few previously undetected problems in the older (say 7+) children. However, I find it necessary to refer about 12

per year of the younger ones to the Royal Victorian Eye and Ear Hospital. Most of them have low vision due to refractive error. Between one and three children per year are re-referred for orthoptic treatment.

As a general rule, any major eye problems have been detected before I screen the children at the Centre. However, occasionally some serious condition has been overlooked by the referring agency and the orthoptic screening reveals the need for a full ophthalmic examination.

CASE HISTORY —
The Orthoptist as Part of a Multidisciplinary Team

Jessie is a multi-handicapped low functioning three year old, with a history of developmental delay. She has no speech, and while capable of sitting and standing, she cannot walk. Our assessments suggested that contact through all her available senses is necessary to draw her into an active participation in the activities of a three year old's world. Our endeavours are directed to this aim in an early intervention program. For example, the physiotherapist creates body awareness in the pool through feel of water on the child's skin and through teaching her to blow bubbles and to splash. Buoyancy in the water helps her to obtain an easy upright stance, and the kicking strengthens her limbs.

How does the orthoptist work in such a case?

One of the diagnostic observations of Jessie is that visual attention is virtually non-existent. She does not look at things. Her gaze wanders around, fleetingly focusing on objects. Even when she intends to follow an instruction she does not use her eyes to assist performance. If effective learning is to take place Jessie must learn to observe salient details and relationships. I am, therefore, helping her by teaching her the first step, which is visually directed reaching.

It involves repetitive guidance of the child in an enjoyable activity that co-ordinates both eyes and hands. With Jessie sitting on the mother's lap, I place a Cheezel on each of the fingers of one hand which is held in front of her eyes. Then we bring the hand slowly up to the face to let her taste the Cheezel. She is then encouraged to take the Cheezels off her fingers with the other hand. All the time we are encouraging her to watch these actions. After some weeks of many such activities, reinforced by her mother at home, we are beginning to see Jessie use her vision in the group activities in music and movement where similar attending behaviour is directed through attractive materials and toys.

CASE HISTORY
—the Unanswered Question

Bryan is now 10 years old, and is part of Professor Neale's longitudinal research group. A traumatic birth appears implicated in mild cerebral palsy and impoverished social development. Through systematic therapy and teaching we can say that he is beginning to make substantial and sustained academic progress, enough to keep him within a regular school. The orthoptic assessment showed constant right divergent squint with latent nystagmus, binocular visual acuity 6/9. As he is cosmetically acceptable no treatment is indicated at this stage.

The unanswered questions are:

(a) How much of an extra handicap to learning is his eye condition?
(b) Why does a visually orientated program or reading bring such great success to a child with visual problems such as these?
(c) How can we program him visually to offset the distorted visuo-motor inputs which must occur from cerebral palsy?

These are just some of the many questions that challenge us in our experimental programs in the Centre. They also contribute to the excitement of helping young people gain autonomy and success in their schools.

ACKNOWLEDGEMENTS

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Reference

1. Neale MD. The Krongold Experiment: Beyond Disability. Paper presented at the 7th International Seminar on Special Education, Rehabilitation International, Vancouver, 1980.