

The Vision Intervention Program at the Youth ChalleNGe High School in Bend, Oregon

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In 1993, Congress authorized the National Guard to conduct alternative schools for the high school drop out population – a group now recognized as a key public concern.



Logo of the Oregon National Guard Youth ChalleNGe High School.

As can be expected, learning disabilities are a common characteristic in this special population. Of particular significance to this project is the research that has shown visual dysfunction to be a key risk factor in learning disabilities, especially reading skills.





Students in the program wear uniforms similar to the Oregon National Guard and receive guidance from program administrative staff members.



Students also participate in regular physical training drills.

A pilot project at the *Youth ChalleNGe High School (YCHS)* in Bend was completed in 2004. Forty percent of the students enrolled in this program demonstrated a definite need for professional eye/vision care.



Vision Screening

Based upon what we learned in 2004, the aim of the current project is to design a novel, institution-based vision intervention for treating visual dysfunction in the high school drop out population. Specifically, we are working with YCHS • Bend students that were found during a vision screening to need professional visual care. Our goal

is to treat the visual dysfunction thus eliminating or reducing this risk factor in learning.

Methodology: A vision screening, initiated by the Children's Vision Foundation, started the process. This screening was timed to coincide with the start of the academic portion of the YCHS program. Fifty-six of the 126 (44%) students who participated were found to need professional vision care. Eye/vision exams were done by a group of volunteer optometrists from Lane and Washington Counties and from Pacific University College of Optometry over a weekend by utilizing office space provided by a local optometry clinic. Of the 56 students examined, 36 were in need of a new lens Rx. Prescription glasses were furnished free to the students via an anonymous donor. Along with basic refractive problems including nearsightedness, farsightedness, and astigmatism, other visual dysfunctions included problems with eye movements, two-eyed coordination, near-far focusing, and visual information processing. These visual skills are basic to reading success and academic achievement and optometric vision therapy is the treatment of choice for dysfunctions of this nature.



Visual information processing training utilizing a computer.



Ocular motility training.

Twenty-four of the students were placed into a vision therapy with each student receiving 60 minutes of therapy twice a week. Half of each hour is devoted to developing basic visual skills (near/far focusing, two-eyed coordination, eye movements) and half is devoted to enhancing visual information processing skills.

Staffing: The Children's Vision Foundation, which is staffed by community volunteers, provided the initial vision screening. Volunteer optometrists from throughout the state staffed the pre- and post-testing examinations. Vision therapy is provided on-site through a combination of contract therapists and a community volunteer.



Vision therapy lead by volunteers.

Dr. Sandra Landis is a volunteer serving as Clinical Director for the program, and Dr. Willard Bleything is a volunteer serving as overall Project Director.

Benchmark Measures: Care was taken to conduct a standard vision screening with established national norms. Tests for clarity of vision, refractive status, eye coordination, and eye movements were included. A test of visual information processing was also part of the initial assessment. Perhaps the most dramatic finding was this discovery: 99 of the 126 students (78%) fell in the lowest 25th percentile on the visual information processing test. This is a key finding because visual information processing skills along with eye movements skills have been found to have the most direct (visual) connection to reading ability.

Qualitative and quantitative measures are recorded at each vision therapy session. Below is list of the visual skills trained along with comments by students:

- Eye movement skills
- Hand and eye coordination skills
- Two-eyed coordination skills
- Near-far focusing skills
- Near-far eye pointing skills
- Perceptual processing skills



- “I’m getting faster – I can see a difference”
- “Vision therapy is helping me on my work.”
- “This is really good – I can really see a change.”
- “Could this be making me smarter?”

Following post-testing, which will be done at the end of therapy, tests parallel to those conducted at the intake examination will be conducted. Careful analysis to ascertain the gains made in developing basic visual skills and improving academic achievement will follow.

The entire project will be separated into component parts that will result in the publishing of scientific papers. The ‘model’ created through this project can then be shared with other YCHS programs throughout the nation.

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