Comanagement and crossreferral between optometrists and occupational therapists

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Abstract
The intent of this paper is to establish a screening program that effectively allows behavioral optometrists and occupational therapists to refer and eventually comanage patients between each other. The screening program is comprised of a case history, a questionnaire, and a testing battery. From the information derived from the screening program, a competent referral can be made.

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Comanagement and Crossreferral between Optometrists and Occupational Therapists

By

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Pamela Damm

A thesis submitted to the faculty of the College of Optometry Pacific University Forest Grove, Oregon for the degree of Doctor of Optometry May, 1990

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The intent of this paper is to establish a screening program that effectively allows behavioral optometrists and occupational therapists to refer and eventually comanage patients between each other. The screening program is comprised of a case history, a questionnaire, and a testing battery. From the information derived from the screening program, a competent referral can be made.
I. INTRODUCTION

A. Purpose:

The purpose of this paper is to bring to establishing guidelines in determining when a referral shall to be made between behavioral optometrists and occupational therapists. It shall consist of a set of screening procedures for referral between these respective professions, along with a criteria that allows the referral to be a valid one. The goal of this paper is three fold. One, it is a desire to provide guidelines to the determination of referral between these health care professionals based on the abilities and needs of the patient. Second, it's purpose is to educate the health care professional as to the tests and techniques available to properly evaluate a patients visual and sensori-motor developmental status. Third, it is the ultimate goal that the benefits of an alliance between these health care providers be realized so as to better serve the needs of the patient.

An interest has been established that unifies the professions of functional optometry and occupational therapy. Indeed, the two professions have more in common than may have been suspected. Due to the many similarities between these professions, a need has developed to try and better understand each other. It is the intent of this paper to introduce those common ideologies and techniques to the co-respective professions and to explore their differences. A desire exists to develop an alliance which can better serve the needs of the patient.

The greatest benefit that can arise for the patient is a co-practice in which both professions serve under the same roof. Though a few practices in the United States are currently doing this, a majority of functional optometrists practicing are unaware of what an occupational therapist does, let alone how they can benefit from their expertise. The same is true of occupational therapists, or OT's, who may not be aware of how the functional optometrist can aid in expanding their patient base, while at the same time better serving the needs of their patients.

The first step then is to understand what each profession can bring to each other and to make the connection. One tool that bridges the gap is a screening program that covers the essentials of each profession. With the help and guidance of the co-respective professional, a more complete understanding of the sensori-motor system interrelations can be achieved, and a stronger, more unified patient care delivery system can evolve.
II. METHODS

The screening procedures used are by no means the only ones available, but were chosen as they were deemed to provide the most amount of information for the amount of time invested, both in learning and application. It is felt that these procedures should be quick and easy to learn, well normed, and commonly used among these professions. It is up to the individual practitioner to determine whether or not these techniques should be employed, and what criterion should be used.

This paper has been written with the notion that care does not end with the simple referral of the patient. Co-management is vital to the proper care and progression of the patient. It therefore behoves the health care practitioner to provide assistance to the co-respective professional. Educational assistance can help build a common alliance that will increase each other's patient base, while providing an advanced level of care.

1. Testing conditions:

   a. Preparing the child
   The child should be explained the reason behind the screening program and what is to be anticipated. It may be helpful to utilize a pamphlet published by the National Society for the Prevention of Blindness involving home eye testing of preschool children that prepares them for a more formal screening procedure. This could be helpful if it is perceived that the child is reluctant to cooperate in the procedure and will aid in better accuracy of screening results.

   b. The Environment
   The patient must feel relaxed in order to promote their best performance. It is appropriate to isolate the task and avoid distractions in the testing area. It may be necessary to cover extraneous equipment, and to place the screening material against a light wall away from bright colors and excess clutter, and at the child's eye level. The children should be screened individually. It is helpful to appear relaxed and unhurried while performing the test, realizing as well that a fatigue factor can set in. Use a cheerful, game-like approach to help ease tension along with positive complements regardless of the results.
This screening profile is divided into three sections, a case history, a questionnaire and a testing battery. The questionnaire is further divided into Ocular Health, Visual Skills, Behavior, and Activities. It is designed for cross-referral between the two professionals, though some of the criterion may warrant outside referral. The criteria are determined through scoring the subsections of the screening. Many of the questions are roughly arranged within the subsections of the questionnaire from "most prevalent" to "least prevalent" and in some cases, not all of the questions need to be answered to necessitate a referral.

Visual/motor stress symptomology can often be masked in avoidance behaviors. This can be viewed especially during "sustained" critical visual activity and would denote a need for referral to a behavioral optometrist.

Overlap often exists when diagnosing an area of visual/motor difficulty or concern. All of the visual/motor subsystems are inseparable linked together when performing a dynamic task such as reading. It is when one or several of these subsystems does not function adequately that a global decrease in competency is often manifest, either directly through its neurological linkage, or indirectly as a result of the increased energy demand and subsequent decreased concentration on the task in order to compensate for the deficit. Often the interdependence between these components makes it difficult to isolate a particular deficit and a hierarchical protocol must be established in developing a remedial program. It is also true that "global" behavioral responses can sometimes have a singular cause, and that assumptions are hastily made.

The screening is intended to be used for referral of children from ages 0 to 10. The ODOT (Optometry-Occupational Therapy) screening check list is designed to be used in cross referral and co-management between behavioral optometrists and occupational therapists in referring patients aged 0 to 7 years. The initial portion consists of case history and a comprehensive questionnaire designed to isolate specific areas of difficulty. The questionnaire is designed to provide the most pertinent question and observations initially. If it is noted the patient shares some of the questions/observations in the initial portion, the screener can further probe the area more thoroughly. The following information may be obtained through patient/parent report and evaluator observation.

The initial portion of the screening program is divided into several areas and can be utilized in two ways. It is first arranged by specific task demands that can be cross-referred to a skills analysis that may aid in the determination of a referral or co-management. Under the Activities portion of the screening, activity areas of
concern that have been previously determined can be probed more thoroughly and linked to the performance of specific skills.

The second portion refers to specific tests that can be administered and the results determined if a referral and/or co-management might be beneficial.

The physical and ocular health can grossly effect the responses and abilities of a patient and should be determined through the case history on everyone for potential referral before further functional evaluation takes place.

This screening program is scored on a scale of 1 to 5;

1 being questions that are primarily optometrically related
2 being questions that may warrant the referral to an occupational therapist, but are largely of an optometric nature.
3 being questions that would be best handled if co-management between professionals was achieved and cross referral was made.
4 being questions that may warrant the referral to an optometrist, but are largely of an occupational therapeutic nature.
5 being questions that are primarily OT related.

The areas to be evaluated are not all inclusive and outside referral to psychologists, speech therapists, physical therapists, physicians, educators and social workers may be warranted.

Areas of Assessment:
I. Case History
   A. Personal Status/Prior Diagnosis
   B. Personal/Family History
      1. Developmental History
      2. School History
   C. Visual History
      1. Previous Prescription
   D. Nutritional Data
   E. Chief Concern
II. Visual/Motor Health and Skills Assessment

A. Ocular Health Assessment

B. Visual Skills Assessment

1. Visual Acuity/Refractive Status
2. Eye Movements
3. Visual Teaming abilities (binocularity)
4. Visual Focusing abilities (accommodation)
5. Visual Perceptual abilities
   a. Form Discrimination
   b. Figure-Ground
   c. Visual Closure
   d. Visual Sequence
   e. Visual Direction/Laterality
   f. Visualization/Imagery
   g. Visual Memory
6. Visual Perceptual/Motor abilities
   a. Gross motor
      1) Balance
      2) Body Movement
   b. Fine Motor
      1) Eye/Hand/Foot coordination
   c. Sensory Integration

C. Behavior

1. Appearance
2. Social Interaction
3. Responses/Observations
4. Verbal Communication

D. Activities

1. Reading
2. Writing
3. Nearpoint Tasks

III. Testing

A. Visual Health/Skills
B. Visual Perceptual Skills  
C. Visual Perceptual/Motor  
D. Sensory Integration  
E. Test Results  

By obtaining an average score for each of the test sections and analyzing the performance levels in cross-referencing to specific visual-motor areas, a referral assessment can be made. Once the determination has been made, a professional referral/co-management is made and a plan suited for the individual’s needs is developed.

It is imperative that no assumptions be made by using this checklist by itself and the specific tests and devices need to be used in order to fully assess the individual’s needs. It is only to provide guidelines to areas of potential remediation. It is hoped that this program will be further modified and elaborated to further suit the needs of the practitioners. This can provide guidelines to further evaluated areas of remediation and to aid in communication between professionals.
I. Case History

A. Personal Status

Child’s name __________________________ Date __________________
Parents names:
Father __________________________
Mother __________________________
Home Phone: ________________________
Business phone(s): F: __________ M: __________
Date of Birth ________________________ Age/Grade __________
Optometrist ________________________ Support Services __________________________
Phone (OD) ________________________ (Educational) __________________________
Teacher(s) __________________________

Child’s status:
Natural( ), Adopted( ), Foster( ), Other( ) __________________________

Prior Diagnosis:

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Child’s Age</th>
<th>Type of Practitioner</th>
<th>Name/Address of Practitioner</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

B. Personal/Family History:

☐ 1 Positive personal/family hx of visual disorder
☐ 5 Positive personal/family hx of motor/sensory disorder

1. Developmental History:

Full term pregnancy __________________________ Normal birth __________________________
Any complications before, during or immediately after the birth __________________________

Did the child creep/crawl ______ age ______ All fours ______ age ______ Handedness ______
Age the child walked ______ Age Toilet trained __________________________
Age began to button clothes on ______ Lacing own shoes __________________________
Was the child active __________________________
Personality profile (brief) __________________________
Present physical condition: Health ______ Size ______ Teeth __________________________
History of high fevers ______ When ______ How high __________________________
History of ear infections ______ How often __________________________
Is the child currently under medication ______ What __________________________

Awareness of previous visual disorder/learning problem/maturational lag:
Type of dysfunction __________________________
Time of onset/Tx involved __________________________
2. School History

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at time of entrance to Kindergarten</td>
<td></td>
</tr>
<tr>
<td>First grade</td>
<td></td>
</tr>
<tr>
<td>Does child like school</td>
<td></td>
</tr>
<tr>
<td>Teacher</td>
<td></td>
</tr>
<tr>
<td>Attends school regularly</td>
<td></td>
</tr>
<tr>
<td>Ever repeat a grade</td>
<td></td>
</tr>
<tr>
<td>Change schools often</td>
<td></td>
</tr>
<tr>
<td>Is schoolwork stressful</td>
<td></td>
</tr>
<tr>
<td>Schoolwork is: Above Average, Average, Below Average</td>
<td></td>
</tr>
<tr>
<td>What school subjects are easy for the child</td>
<td></td>
</tr>
<tr>
<td>What school subjects are difficult for the child</td>
<td></td>
</tr>
<tr>
<td>Does the child like to read Voluntarily</td>
<td></td>
</tr>
<tr>
<td>What</td>
<td></td>
</tr>
<tr>
<td>Describe any school difficulties</td>
<td></td>
</tr>
<tr>
<td>Has the child had any special remedial assistance</td>
<td></td>
</tr>
<tr>
<td>When?</td>
<td></td>
</tr>
<tr>
<td>From whom?</td>
<td></td>
</tr>
<tr>
<td>Where?</td>
<td></td>
</tr>
<tr>
<td>How long?</td>
<td></td>
</tr>
</tbody>
</table>

C. Visual History:

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous examinations/When</td>
<td></td>
</tr>
<tr>
<td>Dr's. name</td>
<td></td>
</tr>
<tr>
<td>Results</td>
<td></td>
</tr>
<tr>
<td>Reason for examination</td>
<td></td>
</tr>
<tr>
<td>Members of the family who have had visual attention and why:</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>Visual situation</td>
<td></td>
</tr>
</tbody>
</table>

1. Previous Prescription:

If patient has current Rx, please get following information.

- [ ] 1 Child wearing Rx.
  - Waiting room
  - Down hallway
  - Voluntary put on between testing procedures
- [ ] 1 How long had
- [ ] 1 Ever changed/Why.
  - Too strong
  - Too weak
  - Did not work
  - Broken
- [ ] 1 Did they help/work.
  - For how long
  - How long to adjust to
- [ ] 1 When wear Rx.
  - Home
  - School
  - What tasks
  - What % of time
- [ ] 1 Problems getting child to wear Rx.
  - Not want to wear Rx.
  - Frequently breaks or loses
  - Child's attitude
  - Parent's attitude
D. Nutritional Data

☐ 5 Currently has good diet
☐ 5 Craves certain foods
☐ 5 Eats a lot of sugar contained foods
☐ 5 Has periods of low/high energy
☐ 5 Has allergies

E. Chief Concern

Chief Problem/Concern:
II. Visual/Motor Health and Skills Assessment

A. Ocular Health Assessment:

Please indicate duration, assoc. conditions and remediation if noted.

C/o:

- 1 Sensitive to lights
- 1 Not being able to see well
- 1 Abnormally size of pupils/Difference between eyes in size
- 1 Sensitive to lights
- 1 Protruding eyes
- 1 Color deficiency
- 1 Burning, stinging, smarting, sandiness
- 1 Secretions/Swelling
- 1 Halos/Floaters
- 1 Pain
- 1 Rubbing eyes/blinks frequently
- 1 Covers or closes one eye Which/When
- 1 Has crossed or wandering eye Which/When
- 1 Has physically noticeable redness/swelling of the eye and adnexal tissue
- 1 Has recurring styes
- 1 Frowns, squints or makes other facial distortions
- 1 Eyes
  - Appear straight
  - Vary with task
  - Lids open equal amount
- 2 Face
  - Symmetrical
  - Hyper-positioned eyes
  - Scars near eyes
- 3 Headache:
  - Description
  - Onset
  - Frequency
  - Duration
  - Assoc. conditions
  - Remediation

____ Average Score

Further Comments/Concerns:

____ No problems/concerns elicited in this area
B. Visual Skills Assessment

1. Visual Acuity/Refractive Status:

☐ 1 Not being able to see well
  Static: __________________________________________
  Dynamic: _______________________________________
  Central/Peripheral: ______________________________

☐ 1 Eyes burning, stinging, smarting, sandiness, water after near work

☐ 1 Rubbing eyes/blinks frequently w/near activities

☐ 1 Squints, frowns or makes other facial distortions

☐ 2 Blurry distance/near vision w/short time
  Does it clear? How? ______________________________

☐ 3 Headache (esp. forehead/temple area):
  Description: ____________________________________
  Onset: __________________________________________
  Frequency: _______________________________________
  Duration: _________________________________________
  Assoc. conditions: _________________________________
  Remediation: ____________________________________

☐ 2 Difficulty sustaining clear vision at near

☐ 3 C/o dizziness or nausea during/after doing close work

☐ 3 Avoids close work

☐ 2 Slow adjustment from far to near

☐ 2 Increase/decrease in intensity as day progresses and with near work

☐ 2 Unusual fatigue or restlessness after maintaining visual concentration

☐ 2 Letters or lines "run together" or "jump around"

☐ 3 Reads too slowly

☐ 2 Close distance for near work (within 10 inches)

☐ 3 Tenseness/Neck stresses or irritable when doing close/distance work

☐ 4 Head tilt/thrusts forward
  Sits vs. Walking
  Direction/Vary
  ________________________________

☐ 3 C/o discomfort in tasks requiring visual interpretation

☐ 3 Comprehension reduces as reading continued; loses interest too quickly

☐ 3 Doesn't like to read or has difficulty reading

Average Score

Further Comments/Concerns:

________________________________________

________________________________________

☐ No problems/concerns illicited in this area
2. Eye Movements:

During testing/observation, does the child exhibit any of the following:

☐ 2 Difficulty/discomfort with:
   - Either eye alone
   - Both eyes together
   - Direction of movement

☐ 3 Ocular Localization
   - Midline jerk
   - Visual bilateral problems

☐ 3 Head turns while reading

☐ 2 Repeats letters within words

☐ 2 Rereads or skips lines unknowingly

☐ 2 Omits letters, numbers, phrases

☐ 3 Loses place while reading

☐ 3 Nausea/Dizziness with near work

☐ 3 Doesn’t separate eyes from head on oculomotor control testing

☐ 3 Nystagmus

☐ 3 Car sick

☐ 3 Have difficulty organizing on paper

☐ 3 Reads too slowly

☐ 4 Writes crookedly, poorly spaced, cannot stay on ruled lines

☐ 3 Lays head down when drawing or reading

☐ 3 Tenses/Neck stresses when looking at far and esp. near objects

☐ 3 Doesn’t like to read or has difficulty reading

Average Score

Further Comments/Concerns:

☐ No problems/concerns elicited in this area

3. Visual Teaming Abilities (Binocularity)

☐ 1 Rubbing eyes/blinks frequently w/near activities

☐ 1 C/o sees double (diplopia)

☐ 1 Eyes that turn:
   - In
   - Out
   - Up
   - Down

☐ 2 Poor judgement of distance

☐ 2 Blurry distance/weak vision w/short time

☐ Does it clear

☐ 2 Squints, closes or covers one eye

☐ 3 Lays head down when drawing or reading

☐ 3 Loses place frequently while reading

☐ 2 Letters or lines “run together” or “jump around”

☐ 2 Makes copy errors
   - From reference book to notebook
   - From chalkboard to paper on desk

☐ 3 Visual attention or fixation difficulties
   - Static
   - Dynamic
   - Location of object
   - Direction and rate of movement

☐ 4 Uses hands or fingers to keep their place on the page
- 3 Doesn't like to read or has difficulty reading
- 3 Misaligns horizontal/vertical series of numbers
- 2 Omits letters, numbers, phrases
- 3 Avoids close work
- 3 Reads too slowly
- 2 Repeats letters within words
- 2 Rereads or skips lines unknowingly
- 3 Tenseness/Neck stresses when looking at far and esp. near objects
- 2 Unusual fatigue or restlessness after maintaining visual concentration
- 3 Head turns while reading
- 4 Constantly shows gross postural deviation at desk activities
- 4 Head tilt/thrusts forward
  - Sits vs. Walking
  - Direction/Vary
- 4 Returns to “drawing with fingers” to decide likes and differences

___Average Score

**Further Comments/Concerns:**

---

- No problems/concerns illicited in this area

### 4. Visual Focusing Abilities (Accommodation)

- 1 Burning, stinging, smarting, sandiness, water esp. w/near work
- 1 Rubbing eyes/blinks frequently w/near activities
- 2 Blurry distance/near vision w/short time
  - Does it clear
  - How
- 2 Slow adjustment from far to near
- 3 C/o...w/near work
  - Sees double (diplopia)
  - Tenseness/Neck stresses
  - Irritability
  - Nausea/dizziness
  - Headaches (esp. forehead/temple area)
- 2 Difficulty sustaining clear vision at near
- 2 Letters or lines “run together” or “jump around”
- 2 Close distance for near work (within 10 inches)
- 2 Increase/decrease in intensity as day progresses and with near work
- 3 Makes copy errors
  - From chalkboard to paper on desk
  - From reference book to notebook
- 3 Doesn't like to read or has difficulty reading
- 3 Avoids close work
- 2 Unusual fatigue or restlessness after maintaining visual concentration
- 4 Returns to “drawing with fingers” to decide likes and differences

___Average Score

**Further Comments/Concerns:**

---

- No problems/concerns illicited in this area
5. Visual Perceptual Abilities

a. Form perception/discrimination
- ☐ 3 Mispronounces similar words as continues reading.
- ☐ 3 Mistakes words with the same or similar beginnings.
- ☐ 3 Fails to recognize the same word in same or next sentence/different book.
- ☐ 3 Confuses likeness and minor differences in patterns or designs.
- ☐ 3 Difficulty with the order of equations in math.

b. Figure/ground
- ☐ 3 Has difficulty with figure/ground representations.
- ☐ 3 Loses place while reading.
- ☐ 3 Mistakes words with the same or similar beginnings.
- ☐ 3 Confuses likeness and minor differences in patterns or designs.

c. Visual closure
- ☐ 3 Difficulty anticipating the end result of simple puzzles.

d. Visual sequence
- ☐ 3 Comprehension reduces as reading continued; loses interest too quickly.
- ☐ 3 Difficulty with seeing cause and effect relationships.
- ☐ 3 Difficulty with matching stories with pictures.
- ☐ 3 Difficulty with spelling.

e. Visual direction/laterality
- ☐ 3 Making reversals when reading or writing/copying.
- ☐ 4 Has trouble finding their way or gets lost easily.
  - Sits vs. Walking
  - Direction/Vary
- ☐ 3 Head turns while reading.
- ☐ 4 Repeatedly confuses left-right directions.
- ☐ 4 Misaligns horizontal/vertical series of numbers.

f. Visualization/Imagery
- ☐ 4 Demonstrates unequal work in various tasks.
- ☐ 4 Cannot apply former experiences to new situations.
- ☐ 4 Has faulty body image.
- ☐ 3 Fails to visualize what is read either silently or orally.
- ☐ 4 Repeatedly confuses left-right directions.
- ☐ 3 C/o discomfort in tasks requiring visual interpretation.
- ☐ 4 Turns the paper often during work.

5. Visual memory
- ☐ 3 Comprehension reduces as reading continued; loses interest too quickly.
- ☐ 3 Little comprehension when reading by themselves, but much better when read to.
- ☐ 2 Omiis letters, numbers, phrases.

Average Score

Further Comments/Concerns:

☐ No problems/concerns elicited in this area
6. Visual Perceptual/Motor Abilities:
   a. Visually Guided Gross Motor Activities:

   1) Balance & Muscle Tone:

   - 5 Has poor balance
   - 5 Poor posture while sitting
   - 5 Poor posture while standing
   - 5 Balance problems while tandem walking
   - 5 Seems weaker than normal
   - 5 Seems stronger than normal
   - 5 Difficulty while hopping on one foot
   - 5 Grasps objects too tightly
   - 5 Has weak grasp
   - 5 Cannot balance objects
   - 4 B5f Has faulty body image
   - 4 B3 Constantly shows gross postural deviation at desk activities
   - 5 Seems sensitive to movement
   - 3 B2 Car sick
   - 3 Overly active as a child

   No problems/concerns elicited in this area

   2) Body Movement:

   - 4 Clumsiness/Uncoordinated or stumbling over small objects
   - 5 Accident prone
   - 4 Walking into the Exam Room.
     Gen. coordination
     Gross motor locomotion
     Bilaterality
     Vision leading Motor Planning
   - 4 Walks on toes or has difficulty doing so
   - 4 Walks with feet turned inward
   - 4 Difficulty walking in straight line/up stairs
   - 4 Difficulty walking on incline
   - 4 Dislikes going in circles or spinning
   - 4 Prefers fast movement/spinning activities
   - 4 Difficulty/dislikes new movement activities
   - 4 Difficulty with sports activities
   - 4 Has trouble hopping, skipping, running
   - 4 Drags/shuffles feet
   - 4 B5e B5f B6c Repeatedly confuses left-right directions
   - 5 B1 B3 B5e Head tilt/thrusts forward
   - Sits vs. Walking
     Direction/Vary
   - 4 Turns head from side to side rhythmically
   - 4 Weakness in extremities/Favors one extremity
   - 5 Neglect or seems unaware on one side of the body
   - 5 Avoid exploring through touch or movement
   - 5 Avoid or fear activities which provide sudden and/or fast movement
   - 5 Craves constant movement
   - 5 Hesitates going up or down steps or curbs

   No problems/concerns elicited in this area
b. Visually Guided Fine Motor Activities:

1) Eye/Hand/Foot Coordination:

- □ 5 Has difficulty manipulating small objects (blocks, puzzle pieces, pencil etc.)
- □ 4 Difficulty with zippers/buttons/knots/scissors
- □ 4 Having difficulty with or no interest in games or sports
- □ 5 Display a lack of hand preference
- □ 5 Has unusual pencil grasp
- □ 4 Does not draw well with crayon or pencil and as early as other children

□ No problems/concerns elicited in this area

c. Tactile Sensation:

- □ 5 Dislikes hair/face being washed
- □ 5 Objects to being touched
- □ 5 Seems irritable when being held
- □ 5 Prefers to touch rather than being touched
- □ 5 Craves being touched
- □ 5 Likes/dislikes touching new/different textures
- □ 5 Bumps/pushes other children

□ No problems/concerns elicited in this area

d. Olfactory Sensation:

- □ 5 Explores the environment through smell
- □ 5 Overly sensitive to certain smells
- □ 5 Ignores strong or obnoxious odors
- □ 5 Difficulty discriminating odors

□ No problems/concerns elicited in this area

e. Auditory Communication:

- □ 3 Hearing problems
- □ 3 Speech problems
- □ 3 Ability to verbally communicate
  - Repeat directions
  - Ask questions
  - Communicate ideas/experiences
- □ 3 Difficulty understanding meaning to what is said
- □ 3 Speech is sometimes unclear
- □ 3 Has hearing loss
- □ 4 Asks the same question over and over again
- □ 4 Attempts to read lips
- □ 5 Cannot differentiate sounds
- □ 5 Overly sensitive to sounds
- □ 5 Chronic ear infections
- □ 4 Cannot distinguish direction of sound
- □ 4 Cannot follow simple directions when told, but can if written out
- □ 4 Cannot hear certain sounds
- □ 4 Does not comprehend what is said, but can if written
- □ 5 Has delayed speech
- □ 5 Overreacts to normal situations with continuous talk
- □ 4 Talks loudly much of the time
- □ 4 Tends to forget what is heard
Prior speech/hearing evaluation  Results ____________________ 
Prior speech/therapy Results ____________________ 

When communicating does the child use appropriate:

☐ 4 Eye contact
☐ 5 Gestures
☐ 5 Non-word sounds
☐ 5 Word articulation
☐ 5 Other

Average Score

Further Comments/Concerns:

☐ No problems/concerns elicited in this area

f. Sensory Integration

☐ 3 Doesn't like to read or has difficulty reading
☐ 3 C/o discomfort in tasks requiring visual interpretation
☐ 3 Little or no voluntary reading when child is of school age
☐ 3 Makes copy errors
  From chalkboard to paper on desk
  From reference book to notebook
☐ 3 Slowness in all schoolwork
☐ 3 Visual attention or fixation difficulties
  Static
  Dynamic
  Location of object
  Direction and rate of movement
☐ 3 Whispers to self when reading for reinforcement
☐ 3 Is two or more grades below vocal reading ability
☐ 4 Repeatedly confuses left-right directions
☐ 4 Must feel things to assist in any interpretation required
☐ 4 Returns to “drawing with fingers” to decide likes and differences
☐ 4 Misaligns horizontal/vertical series of numbers
☐ 4 Difficulty following verbal instructions
☐ 5 Have difficulty organizing on paper

Average Score

Further Comments/Concerns:

☐ No problems/concerns elicited in this area
C. Behavioral Assessment:

1. Appearance:

- ☐ 5 Well Groomed
- ☐ 5 Appropriately Dressed

___ Average Score

☐ No problems/concerns elicited in this area

2. Social Interaction:

- ☐ 4 Cannot control behavior
- ☐ 4 Cannot make social judgments
- ☐ 4 Has difficulty with change in routine
- ☐ 4 Has poor time concept
- ☐ 3 Disrupts classroom activities
- ☐ 4 Has rapid and drastic mood changes with minor changes in the environment
- ☐ 4 Lacks social interaction with peers
- ☐ 4 Shows poor organization in activities with others
- ☐ 4 Isolates self from others

___ Average Score

☐ No problems/concerns elicited in this area

3. Responses/Observations

- ☐ 3 Fidgety behavior or inattentiveness noted during visual perceptual tests
- ☐ 3 Gets excited with much visual stimulus
- ☐ 3 Has usually short attention span or reputation as "daydreamer"
- ☐ 3 Easily frustrated with failure
- ☐ 3 Poor self image
- ☐ 4 Motor overload w/increased task demand
- ☐ 4 Doesn't like to read
- ☐ 5 Does the child slump in chair
- ☐ 4 Quality and quantity of response
  - How the CHx. questions are answered
  - How quick
  - How definite a response
  - How questions not answered are handled
  - Give up easily
  - Ask parent to help
  - Activity level
  - Hyper
  - Extent and trigger

- ☐ 4 Interest and concern of patient/parents
  - He/she feel there is a problem
  - Can verbalize the problem
  - Parents concern
  - Motivation of patient and parents
- ☐ 4 How well patient follows instructions
- ☐ 3 Child-Parent relationship
- ☐ 3 Response pattern evident
  - Central/Peripheral
When performing tasks does the child appear to be:

☐ 5 Distractible
☐ 5 Easily frustrated
☐ 5 Highly aggressive
☐ 5 Cries frequently
☐ 5 Overly active
☐ 5 Perseverative
☐ 5 Self-initiated
☐ 5 Emotionally dependant/clinging
☐ 5 Withdrawn/fearful
☐ 5 Nervous/tense
☐ 5 Depressed

___Average Score

☐ No problems/concerns elicited in this area
D. Activities:

1. Reading Skills:

- ☐ 3 B1 B5d B5g Comprehension reduces as reading continued; loses interest too quickly
- ☐ 3 B1 B2 B3 Reads too slowly
- ☐ 2 B1 B3 Blurry distance/near vision
  - Does it clear ___________ How ________ 
- ☐ 3 B3 Visual attention or fixation difficulties.
  - Static ___________
  - Dynamic ___________
  - Location of object ___________
  - Direction and rate of movement ___________
- ☐ 3 B2 B3 B5e Head turns while reading
- ☐ 3 B2 B5b Loses place while reading
- ☐ 3 B5a Mispronounces similar words as continues reading
- ☐ 3 B5e Making reversals when reading or writing
- ☐ 3 B6c Whispers to self when reading for reinforcement
- ☐ 2 B2 B3 Rereads or skips lines unknowingly
- ☐ 2 B2 B3 Repeats letters within words
- ☐ 3 B5g Little comprehension when reading by themselves, but much better when read to
- ☐ 2 B1 B3 B4 Letters or lines “run together” or “jump around”
- ☐ 3 B1 B2 B3 B4 Doesn’t like to read or has difficulty reading
- ☐ 3 B2 B3 Lays head down when drawing or reading
- ☐ 3 B6c Little or no voluntary reading when child is of school age
- ☐ 2 B5a B5b Mistakes words with the same or similar beginnings
- ☐ 2 B2 B3 B5g Omit letters, numbers, phrases
- ☐ 4 B2 B3 Uses hands or fingers to keep their place on the page
- ☐ 3 B6c Is two or more grades below vocal reading ability
- ☐ 3 B5a Fails to recognize the same word in next sentence/different book
- ☐ 3 B5a B5b Confuses likeness and minor differences in patterns or designs

___ Average Score

Further Comments/Concerns:

□ No problems/concerns elicited in this area

2. Writing:

- ☐ 3 B5e Making reversals when reading or writing
- ☐ 5 B6b1 Has unusual pencil grasp
- ☐ 5 B6b1 Display a lack of hand preference
- ☐ 3 B2 B6c Have difficulty organizing on paper
- ☐ 3 B3 B4 B6c Makes copy errors
  - From chalkboard to paper on desk
  - From reference book to notebook
- ☐ 3 B2 Lays head down when drawing or reading
- ☐ 4 B6b1 Does not draw well with crayon or pencil and as early as other children
- ☐ 4 B5t Turns the paper often during work
- ☐ 4 B2 B5e B6c Writes crookedly, poorly spaced, cannot stay on ruled lines
- ☐ 4 B3 B5e B6c Misaligns horizontal/vertical series of numbers

___ Average Score
Further Comments/Concerns:

□ No problems/concerns illicited in this area

3. Near Point Tasks:

□ 1 B3 B4 C/o sees double (diplopia)
□ 2 B1 B2 B4 Tenses ness/Neck stresses or irritable when doing close/distance work
□ 2 A B1 B4 Headaches (esp. forehead/temple area)
□ 2 B1 B4 Slow adjustment from far to near
□ 3 B1 B4 C/o dizziness or nausea during/after doing close work
□ 1 A B1 B4 Eyes burning, stinging, smarting, sandiness, water after near work
□ 1 B1 B3 Squints, frowns or makes other facial distortions
□ 1 A B1 B3 B4 Rubbing eyes/blinks frequently w/near activities
□ 2 B3 Poor judgement of distance
□ 2 B1 B3 B4 Avoids close work
□ 4 B3 B6c Constantly shows gross postural deviation at desk activities
□ 3 B1 B5 B6c C/o discomfort in tasks requiring visual interpretation
□ 2 B1 B3 Blurry distance/near vision
  Does it clear __________ How ________
□ 2 B1 B4 Close distance for near work (within 10 inches)
□ 2 B1 B4 Difficulty sustaining clear vision at near
□ 2 B4 Increase/decrease in intensity as day progresses and with near work
□ 2 B1 B3 B4 Unusual fatigue or restlessness after maintaining visual concentration
□ 2 B1 B4 Is unable to see distant objects, such as the chalkboard clearly
□ 3 B2 Nausea/Dizziness with near work
□ 3 B3 B6c Visual attention or fixation difficulties.

  Static
  Dynamic
  Location of object
  Direction and rate of movement
□ 4 B6c Must feel things to assist in any interpretation required
□ 4 B3 B4 B6c Returns to “drawing with fingers” to decide likes and differences

Average Score

Further Comments/Concerns:

□ No problems/concerns illicited in this area
III. Testing

When appropriate, optometrists may choose to administer one or more of the following tests. The following questions, in relation to these tests administered, will assist the occupational therapist in identifying the child's needs.

Please note difficulty in any of the following tasks:

A. Visual Health/Skills:

☐ 1 Pupil Response
   Direct ________ Consensual ________ Accommodative ________

☐ 1 Motilities
   Pursuits
   Saccades
   Fixations
   Nystagmus

☐ 1 Motor fields OD ________ OS ________

☐ 1 Confrontational fields OD ________ OS ________

☐ 1 Corneal sensitivity OD ________ OS ________

☐ 1 NPC

☐ 1 Stereopsis

☐ 1 Auditory localization

B. Eye Movement Skills:

☐ 2 Pursuits

☐ 2 Saccadic Fixations

☐ 2 Groffman Visual Trace

☐ 2 King-Devick Saccadic Test

☐ 2 Pierce Saccadic Test

C. Keystone Visual Skills Profile:

Any deviation from the expected, please document test number and result

________________________

D. Visual Perceptual Relations Tests:

☐ 3 Form Discrimination
   ☐ Compare shapes
     3D in room
     Name Shapes
     2D picture
     □ 3D in room
     □ 2D picture
     □ Name Shapes
   ☐ Compare Objects
     Same or different
     Size
     □ 3D in 2D
     □ 3D in 2D
     □ MVPT

☐ 3 Figure Ground
   ☐ Small object in picture
   ☐ So. Calif. F.G.
   □ MVPT
3 Visual Closure
- Partial drawings
- MVPT

3 Visual Sequence
- Size blocks
- DLM/Cartoon cut-up
- Match objects, Patterns

3 Visual Direction
- Directionality
  - Jordan
  - Piaget
  - Cratty
  - DLM
- Laterality
  - Piaget
  - Cratty
  - Analysis/Angles in the snow
- Body Scheme
  - Draw a man

3 Visualization
- Rotate in mind
- Preview task

3 Visual Memory
- See-Cover-Copy/Name
- MVPT/Getman
- Monroe III
- Form board

E. Visual/Perceptual/Motor:

5 Gross Motor
- Balance
  - Static
  - Dynamic
  - Laterality
- Locomotion
  - Bilateral
- Motor Planning
  - Visual lead

5 Fine Motor
- Pencil/paper
  - Cross midline
  - Vertical
  - Draw Picture
- Puzzles
  - Form board
  - Parquetry
- Keyboard
- Rosner
- Perceptual Copy Form
- Beery
F. Sensory Integration:

Note any difficulty with the following:

- ☐ 3 Tactile ↔ Vision
  - ☐ 3D object-point to similar
  - ☐ Trace on body
  - ☐ Other

- ☐ 3 Tactile ↔ Speech
  - ☐ Name what you feel
  - ☐ Other

- ☐ 3 Auditory ↔ Visual
  - ☐ Oral Directions
  - ☐ Other

- ☐ 3 Vision ↔ Speech
  - ☐ Name Objects
  - ☐ Other

G. Test Results

- ☐ 3 Motor Free Visual Perception Test
  The results of the MVPT indicate the child demonstrates difficulty with:
    - ☐ Spatial relationships
    - ☐ Visual discrimination
    - ☐ Figure-ground
    - ☐ Visual closure
    - ☐ Visual memory

- ☐ 4 Bruininks-Oseretsky (BO)
  The results of the BO indicate that the child performed below his/her age equivalent in:
    - ☐ Running speed and Agility
    - ☐ Balance
    - ☐ Bilateral coordination
    - ☐ Strength
    - ☐ Upper-limb coordination
    - ☐ Response speed
    - ☐ Visual-Motor control
    - ☐ Upper-limb speed and Dexterity

- ☐ 4 Developmental Test of Visual-Motor Integration (VMI)
  The child's score on the VMI was:
    - ☐ Age equivalent
    - ☐ At age equivalent
    - ☐ Below age equivalent
3 VISUAL-SPATIAL DEVELOPMENT IN THE CHILD.

Body Knowledge and Control

☐ 3 When performing:
   - Standing Angles in the Snow
   - Chalkboard Circles
   - 3-by-3 Alternate Hopping

☐ The child demonstrated the lack of body knowledge and control

Bimanual Integration and/or Ability to Manually Cross the Midline

Form Matching/Reproduction

Visualized Reversals

Organization

Visual-Motor Hierarchy

☐ 3 When performing:
   - Circus Puzzle
   - Pegboard Test
   - Winterhaven Copy Forms

☐ The child did not cross the midline
☐ The child did not demonstrate adequate age-related form matching/reproductive skills

☐ The child did not demonstrate proper bimanual integrative skills
☐ The child did not demonstrate adequate organizational skills
☐ The child did not demonstrate adequate visualized reversal skills
☐ The child demonstrated age level skill in visual-motor hierarchy

Optometrist/Occupational Therapist: Please note any additional areas of concern identified during visit.

Parental Comments/Concerns (dressing, feeding, etc.)

Signature/Date
IV. RESOURCES.

PUBLICATIONS AND MATERIALS

Academic Therapy Pub. (Jordan, MVPT, 20 Commercial Blvd. Novato, CA. 94947

Vistech, Inc. 1372 N. Fairfield Rd. Dayton, OH. 45432 1-800-847-8345


American Guidance Services (BOTMP) Circle Pines, MN. 55014

Modern Curriculum Press (VMI) Biofeedtrac, Inc. 13900 Prospect Rd. 57 Hicks St. Cleveland, OH. 44136 Brooklyn, NY. 11201 1-718-852-7856

Special Child Publications (TVPS) Developmental Learning Material PO Box 33548 7440 Natchez Ave. Seattle, WA. 98133 Niles, CA. 1-800-223-1422

DLM Teaching Resources (PDMS) GTVT PO Box 4000 17907 25th Dr. SE One DLM Park Bothell, WA. 98012-6636 Allen, Texas 75002

Childcare Co. Lafayette Instrument Co. PO Box 366 PO Box 5729 Loveland, CO. 80537 Lafayette, IN. 47903 1-303-667-3573 1-800-428-7545

Efficient Seeing Pacific Prism 7510 Soquel Dr. PO Box 554 Apts, CA. 95003 Forest Grove, OR. 97116 1-408-688-2020

Hoyle Products Mast-Keystone 302 Orange Grove Dr. 4673 Air Center Circle PO Box 606 Reno, Nev. 89502 Fillmore, CA. 93108 1-702-827-8110 Perception Development Sybervision Systems, Inc. PO Box 827 Foutian Square Port Angeles, WA. 98362 6066 Civic Terrace Ave. Newark, CA. 94560 1-800-227-0600
Wayne Engineering
1825 Willow Road
Northfield, IL. 60093
1-312-441-6940

OPTOMETRIC ORGANIZATIONS:

Optometric Extension Program
2912 S. Daimler St.
Santa Ana, CA. 92705-5811
1-714-250-8070

College of Optometrists in Vision Development
PO Box 285
Chula Vista, CA. 92012
1-619-423-6191

National Academy of Sports Vision
3rd and Pine Sts.
PO Box 1123
Harrisburg, PA.
1-717-652-8080

OCCUPATIONAL THERAPY ORGANIZATIONS:

AOTA
1383 Piccard Dr.
Rockville, MD. 20850-4375
1-301-948-9626

Sensory Integration International
1402 Cravens Ave.
Torrance, CA. 90501
1-213-533-8338

SPEECH AND LANGUAGE THERAPY ORGANIZATIONS:

American Speech-Language-Hearing Association
10801 Rockville Pike
Rockville, MD. 20850
1-301-897-9016

BOOKS AND ARTICLES:


Getman, G. N.; How To Develop Your Child's Intelligence; White Plains MD. Research Publications 1984

Greenstein, Tole N.; Vision and Learning Disabilities; AOA St. Louis, MO. 1976

Ayers, AJ.; Sensory Integration and the Child. Western Psychological Services 1979 Los Angeles, CA.

Ayers, AJ.; Sensory Integration and Learning Disabilities. Western Psychological Services 1979 Los Angeles, CA.

Forrest, EB.; Stress and Vision, OEP, Santa Ana, CA., 1988

Mailloux, Z.; Sensory Integrative Approaches in Occupational Therapy. Hawthorne Press, 1987

Brask, Garretton & Slavik; Sensory Integration: A Foundation for Development; a handbook illustrated for parents.,1981
V. REFERENCES.

1. National Association for Visually Handicapped; About Children's Eyes
3. AOA; A Teachers Guide to Vision Problems, AOA, St. Louis, MO.
4. AAOpthal.; Eye Cues for Eye Care for Children.
5. Getman, G.N.; Techniques and Diagnosis Criteria for the Optometric Care of Children's Vision, OEP, Duncan, Okla., 1960
7. OEP Foundation Inc.; Vision Information Catalog; Educator's Checklist, Observable Clues to Classroom Vision Problems., OEP Foundation Inc, Duncan, Okla.
8. AOTA Inc.; Sensory Integration Information Packet #29, Practice Division, AOTA Inc. Rockville, MD. 1986