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ABSTRACT

This practicum provided training for 50 parents of children receiving clinic services for visual processing disorders and provided information on visual disorders to the children's teachers. The 8-month program involved 13 parent training sessions. These sessions focused on such topics as: current research findings on vision; identification of visual dysfunctions; parental responsibility in child development, academics, and the remediation process; the visual evaluation process; terminology frequently used by educators and physicians; diagnosis of visual deficits; definition, symptomatology, and treatment of ocular motor dysfunction, convergence insufficiency, accommodative disorder, strabismus, and amblyopia; and remediation techniques for vision rehabilitation. After the intervention, surveys indicated that 42 of 50 parents had increased knowledge of visual disorders, 48 of 50 parents had adequate knowledge of remedial services within the community, and 40 of 50 parents had fundamental knowledge of remedial techniques. In addition, the 50 teachers had received useful reference materials. Extensive appendices include forms, surveys, and questionnaires used in the program as well as information sheets on all topics covered. (Contains 48 references.) (DB)

A Parent Training Program for Increasing the Visual Development of School-Aged Children

by

Timothy J. Dikowski

Cluster 54

A Practicum Report Presented to the
Ed.D. Program in Child and Youth Studies
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

Nova Southeastern University

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PRACTICUM APPROVAL SHEET

This practicum took place as described.

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This practicum report was submitted by Timothy J. Dikowski under the direction of the advisor listed below. It was submitted to the Ed.D. Program in Child and Youth Studies and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Nova Southeastern University.

Approved:

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Roberta Schomburg, Ph.D.

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To all teachers, parents, and participants a sincere level of gratitude is extended for their perseverance and patience. A special thanks is given to my staff and working colleagues for their efforts, support and encouragement. Finally, I must reply to Lonnie who has never relinquished her faith in me and continues to nurture my dreams.

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ABSTRACT

Facilitating the Visual Development of Children Through Parent Training. Dikowski, Timothy J., 1995: Practicum Report, Nova Southeastern University, Ed.D. Program in Child and Youth Studies. Visual Development/Visual Anomalies/ Visual Processing/Parent Training/Visual Motor/Visual Perception

A group of parents whose children display specific visual anomalies were selected to take part in visual training to familiarize them with terminology, services, and interventions. The parents were from different backgrounds, socioeconomic levels and were culturally diverse in nature. Each parent had a child with some degree of visual disorder. This factor makes for a common denominator and mutual concern of all participants.

The goal of the practicum was for parents to gain knowledge regarding their child's visual processing deviances and to learn remedial techniques to aid in remediation. Specific practicum objectives were to help parents and teachers to: 1) identify children with visual disorders, 2) diagnose specific visual problems, 3) develop specific knowledge of what visual anomalies consist of, 4) partake in a visual development program, 5) measure outcomes as expressed by parents on pre and post program assessment measures, and 6) report findings to all parties involved. During this project parents participated in detailed training sessions outlining visual competencies. Teachers were distributed information as an additional component to this project. The goal and objectives of this practicum were met.

The major findings of this practicum concluded that parents could in fact improve their basic understanding and knowledge of functional visual disorders. By doing so, this information was helpful for parents and teachers in assisting in the visual well being of these children.

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CHAPTER I
INTRODUCTION

Description of Community

The writer works in a private clinic which provides medical, psychological, educational, and vision services to children and adults. The community is rural, Midwestern, with light industry bordering two states. The midsized community is a hub of business and agriculture. The city is a source of services for many smaller surrounding towns. The socioeconomic status ranges from moderate to low income with most employment being from agricultural and from the blue-collar sector. The community houses several post secondary universities and schools. Medical services provided in the area include mental health, rehabilitation, cancer treatment, cardiac treatment, and a children's center housing severe and profound handicaps. The clinic in which the writer works is located near this large comprehensive medical community. The writer attempts to collaborate with the neighboring facility.

The writer serves clients from both private and public sectors and is funded accordingly. Children and adults from the normal, at-risk, and special education populations receive clinic services. Funding is derived from private

pay, individual insurance companies, and state and federalagencies.

The clinic serves about twenty-thousand patients annually. Nearly eight thousand clients are children. Approximately five-hundred children receive services related to educational needs. Seventy-five to one-hundred children participate in remedial services related to academic functioning. Parents of fifty children participated in the practicum. Fifty teachers also participated in the project.

Writer's Work Setting and Role

The writer's role in this setting is director of clinic services. The writer integrates a traditional public school background into a private educational setting. Special education and administrative training provides functional experience in this setting. Twenty-four years experience in the field of special education provides facilitation of program coordination.

A major function of the writer's work is that he must interact with other helping professions. The writer participates in a multidisciplinary team which specializes in assessment, diagnosis, and treatment. The team consists of an optometrist, an educator, and a psychologist. Team professionals are all trained in the area of vision disorders. The writer often coordinates services across the disciplines and between specialties.

The writer specifically specializes in diagnosis and treatment of visual disorders that affect children. The

writer provides both direct and indirect treatment to children and adults. The population consists mainly of children who possess varying abilities, skills, backgrounds and ethnic origin. The children display visual-motor and visual deficiencies that affect abilities in the educational setting.

The practicum involved families of school-age children who are currently diagnosed and receiving visual-motor training. Teachers from public and private schools were asked to participate in the practicum. Collaboration among professionals was encouraged. The practicum was implemented for eight months. Results of the project are contained within this report.

CHAPTER II

STUDY OF THE PROBLEM

Problem Description

The problem was that parents who came to the clinic were not able to aid their children who were diagnosed with visual processing disorders. The referral process included receiving students from a multitude of sources. These children were referred to the clinic for treatment by parents, school personnel, psychologists, and physicians. Many parents sought private services since schools were not adequately serving their children who were being diagnosed with visual processing disorders.

Many school-aged children demonstrated visual disorders that affect skills needed for academic achievement. Specific skills affected by visual processing disorders include reading, mathematics, spelling, and handwriting. Children who have undiagnosed and untreated visual deficiencies specifically display problems with concentration/attention, near/far copy, and visio-spatial integration.

Historically, visual disorders have not been comprehensively addressed. Few public schools concentrate on instructing or developing visual abilities. Although many problems are addressed with visual perceptual training,

particularly in preschool, most instruction does not continue into subsequent grades.

Restated, the problem was that parents often were not able to aid their children who were diagnosed with visual processing disorders. Teachers were also unaware of visual processing disorders and how they affected children in their classrooms.

Problem Documentation

There was evidence to support the problem. Intake information from 50 parents indicated that only 10 parents had adequate knowledge of their child's specific visual processing disorder (see Table 1). For example, when parents were asked to explain the visual concern causing difficulty they were unable to describe the problem on the initial in-take history form (see Appendix A). Parents also indicated on in-take histories that they were uninformed as to what constituted a comprehensive visual assessment.

Table 1

Intake Data

Evaluation Conducted	Can Describe Evaluation Findings	Can Describe Vision Disorder	Receives Services
45	14	10	10

These histories also provided an abundance of information to the intake professional and the diagnosticians who performed assessemnts and remediation. These histories often provided the clinician with first hand functional information pertinent to the child's vision performance.

Intake histories often included service inquiry survey's (see Appendix B). These surveys that were conducted in concordance with the intake histories provided additional insight to clinical staff. For example, these surveys indicated that only 10 of 50 parents possessed adequate knowledge of remedial services. Parents yearned for services in the community. Although the comunity appeared limited in resources, there were agencys available to assist parental needs. Parents were often negligent in seeking these services for a several reasons: 1) lack of communicative abilities, 2) inability to ask pertinent questions regarding service availability, and 3) lack of initiative to pursue further investigation.

Parent questionnaires revealed other diagnostic and service needs in the community (see Appendix C). In addition, results of these questionnaires that were presented to 50 parents indicated that only five parents had individual knowledge of specific remedial techniques and treatment methods (see Table 2)

Table 2

Analysis of Data Indicating the Need for Diagnostic and Remedial Services Within the Community

Indicators	Parent's Surveyed	Adequate Knowledge	Inadequate Knowledge
Able to explain the evaluation procedure	50	8	42
Able to discuss adequately prior evaluation results	50	5	45
Can describe child's disability	50	10	40
Can describe remedial techniques to assist the child	50	5	45
Able to list service providers in the community	50	10	40

Referrals were often received from other professionals in the community (see Appendix D). Referrals from 25 area professionals suggested that a majority of children screened required in depth assessment of the vision system. However, professionals often did not follow-up on referrals.

Results of surveys sent to 50 teachers indicated that public schools have little information to disseminate on diagnostic procedures and remediation of visual processing disorders (see Appendix E). Teachers continuously asked for additional information on students diagnosed with visual integration deficits (see Table 3).

Table 3

Data Showing Teacher's Need for Information Regarding Visual Disorders

Teacher's Surveyed	Indicated Possessing Adequate Knowledge	Indicated a Need for More Information
50	3	47

This accumulated evidence clearly documented the problem that parents were not able to aid their children who were diagnosed with visual processing disorders. The

evidence also indicated that professionals lacked specific knowledge regarding disorders of vision integration.

Causative Analysis

There are several possible causes related to why parents are not able to aid their children who are diagnosed with visual processing disorders. Parents lacked knowledge of visual disorders and where to locate educational resources for further information. The referral structures that were in place did not serve as a resource to parents. Inadvertently, many parents did not recognize the need for remediation services. Hence, information dissemination to families of children with visual processing disorders was insufficient. Parents were ill-equipped to address their children's needs. They lacked training to manage their children who were diagnosed with visual processing disorders.

Relationship of the Problem to the Literature

There were several studies in the review of the literature that dealt with the problem. It has been noted that gender differences can affect intellectual development, language, visual-motor abilities, and academic achievement (Vogel, 1993). Waggoner & Wilgosh (1990) recognized the importance of parental involvement in the remedial process. These researchers encouraged professionals to examine their attitudes toward the parents and families they serve, particularly those with learning disabilities. Waggoner &

Wilgosh (1990) also recommended that developmental optometrists serve as part of the overall support system to families of children with disabilities and feel that lack of parent involvement may be contributory as to why parents are not able to assist their children who have visual processing disorders.

Stein & Fowler (1985) discussed the effect of monocular occlusion on visuomotor perception and reading abilities in dyslexic children. The literature provided supportive information concerning the problem. Haegerstrom-Portnoy (1993) developed new procedures for evaluating vision functions of special populations which include parent involvement. Brink & Chandler (1993) are aware that families are inadequately prepared to assist their children with disabilities advocated teaching children by reaching out to these parents. Chen & McCann (1993) designed a booklet that encourages parent involvement for families of children with disabilities because they found that they are usually ill-equipped to deal with their disability. Since parents know little about the remediation process Heiner (1987) investigated the necessity of parental involvement. He proved that parent involvement is beneficial to children's achievement.

The writer researched the problem and noted several studies that indicated the importance and effects of causal factors relating to children's success when parents are

informed and involved in their educational program. Getman (1993) recognized that parents have little knowledge of their children's intelligence and style of learning. He described methods to enhance children's intelligence by helping parents identify visual disorders. Getman (1992) assisted parents in obtaining information regarding visual dysfunctions as related to school performance. Clarke (1993) advocated changing parent perception of educational responsibilities for children with disabilities.

DePompei, Zarski, & Hall (1987) realized that families had little knowledge of patients who have closed head injuries and associated vision problems. They developed a systems approach to understanding closed head injury family functioning. Miller (1991) described how family knowledge of disabilities can aid remediation. Baily and Hall (1989) explained who should receive vision stimulation/training and in exactly what context should it be taught. Press (1991) provided explanations to professionals and families as to the procedures for optometric vision therapy since many professionals and families involved with children who have visual disorders have little training in the area. Bosse (1993) proclaimed that parent awareness of visual disorders is a necessity and cited that professionals were negligent in educating families.

Klein (1988) presented the correlation of low birthweight, poor visual perception, and visual-motor

functions with academic difficulties and felt that most families were unaware of this interrelatedness. He remarked that professionals should address these areas as a whole rather than as separate entities.

The writer noted in the literature that referral structures affected parent resources. Shute (1991) noted that parents often receive misleading information regarding their child with visual problems. Groffman (1994) emphasized identification and referral for proper diagnosis and treatment of visual disorders found in the learning disabled. He stressed early identification to prevent later development of psychological concerns. Richards (1985) found it useful to refer students to developmental optometrists who specialized in childrens' vision. Hinrichs (1992) found that parents were often discouraged with standard assessments which do not fit the needs of their child. Koslowe (1991) concluded from results of his study that performances on standardized tests were reasons for referral to the parent and a vision specialist.

The literature noted that many times parents were not alerted as to the need for remediation. Zable (1991) emphasized family awareness of program availability. Shriver & Kramer (1993) stressed the need to facilitate parental involvement by assessing perceptions of their children's needs. Hoover (1993) suggested activities that structure parent-child interactions that are related to

skill development. Studer (1993) stressed the importance of parent teacher understanding as a useful tool for successfully bridging gaps between the home and the classroom.

Bibliographic research indicated that families of children with visual disabilities were not provided sufficient information regarding diagnosis, treatment, and service provision. Stief (1993) concluded that parents requested more information, advice, and feedback about the development of their child. Lange, Lange, & Tunstall (1991) reported in their extensive research that a great deal of input was needed pertaining to the family. O'Hare & Harrell (1991) developed components called the empowerment rehabilitation model for families, children, and professionals because they felt these individuals were unable to cope with diagnosed disabilities due to insufficient information and training.

The literature indicated that many parents were unable to address their children's needs. Diamond's (1993) research revealed the importance of parents as observers in screening their children for developmental delays. McBride & McBride (1993) concluded that since fathers lacked information regarding their childrens' development alternative resources of information should be made available to them. Kazdin (1992) evaluated the effects of problem solving and parent management training on children.

Doll (1993) identified parent concerns that were useful in describing the needs of their children.

A review of the literature noted that generally parents had no training in the area of visual rehabilitation. Getman (1992) outlined specific strategies for parents to assist their children at home and in school. Getman (1993) indicated that parents must provide basic learning opportunities for their children with visual dysfunctions. Ashley & Cates (1992) discussed the lack of training among professionals and parents regarding children's visual needs. Menard (1993) found that most parents did not have sufficient knowledge of skill development. Wittenstein (1993) promoted parent-professional collaborative training for addressing the needs of visually impaired children.

Other topical areas were explored in the literature review. Ritty, Solan & Cool (1993) concluded that classroom ergonomic conditions may have adverse affects upon learning for children diagnosed with oculomotor dysfunction. Early intervention programs which teach left/right body awareness as a pre-reading skill are justified for children who are considered at high risk for visual processing difficulties (McMonnies (1992). Lovegrove, Garzia & Nicholson (1990) authored research which indicated that over 75% of specific reading disordered children manifests a diagnosable transient visual system deficit which parents and educators are unaware. As the child's chronological age progresses

and growth occurs, the visual system also grows. Based upon this growth factor, Schrier & Hamakiotes (1993) compiled research information which indicated that children's vision should be screened on a yearly basis.

CHAPTER III

ANTICIPATED OUTCOMES AND EVALUATION INSTRUMENTS

Goals and Expectation

When children were diagnosed with visual processing disorders parents were not able to assist their children in the remediation process. Parents did not have sufficient knowledge of the disorder nor did they have access to resources for treatment. The goals of this practicum were: 1) that parents would have adequate knowledge of their children's visual processing disorders, and 2) that these parents would gain access to techniques to aid in the remediation process. A plan was outlined to accomplish these goals.

Expected Outcomes

In the beginning of the practicum, parental knowledge and teacher knowledge of vision processing disorders was inadequate. Surveys and questionnaires indicated that parents lacked sufficient information to assist their children in the remediation of their disorder. The goal was to bring about a significant gain in parental knowledge.

The following outcomes were identified: 1) after training and intervention parent surveys will indicated that 40 of 50 parents will possess adequate knowledge of visual

disorders, 2) after information dissemination through parent training, results of surveys will indicate that 40 of 50 parents will have adequate knowledge of remedial services within the community, 3) results of questionnaires will reveal that 40 of 50 parents will have fundamental knowledge of remedial techniques to assist their child in treatment, 4) results of a follow-up survey will indicate that 50 teachers in their educational settings will have available information to disseminate to their colleagues on specific visual processing disorders. This project made a fundamental impact upon parental empowerment. Through parent participation in their child's remediation program, they became more actively involved in their child's overall development. Consequently, interest in their child's overall development was enhanced.

Measurement of Outcomes

The outcomes were to be measured through several different mediums. Post questionnaires and surveys were distributed to parents and teachers who engaged in practicum activities. The questionnaires and surveys that were distributed after the intervention were similar to the ones administered prior to intervention. Specific differences in these measures were noted and are discussed in subsequent chapters.

CHAPTER IV

SOLUTION STRATEGY

Discussion and Evaluation of Possible Solutions

A large number of parents were not able to aid their children who were diagnosed with visual processing disorders. Currently teachers and professionals have had legitimate interest in this problem. Generally, students could attain mastery of visual skills at a faster rate if parents were involved in the remediation process. Schools do not offer support to parents of children with visual integration disorders and community resources are very limited.

Several possible solutions to this problem of parents lacking knowledge concerning their children's disability were gleaned from the literature. A frequently proposed solution to the problem found in the literature is that parent inservice training regarding the specific visual needs of their children can be beneficial (Chen, 1993; Cook, 1992; Deitz & Warkala, 1993; O'Neil, Gothelf, Cohen, Lehman, & Woolf, 1990).

The benefit of dissemination of information to public and private schools regarding identification, diagnosis, and treatment of visual processing disorders is documented in the literature (Blank & Lombardi, 1991; Boyd & Lugg, 1993;

Carlton-Laney, Mickelson & Yon, 1993; Cook, 1992; Coughlin & Perry, 1993; Fertman, 1993; Getman, 1992; Hinrichs, 1992; Kunesh & Farley, 1993; O'Neil, Gothelf, Cohen, Lehman & Woolf, 1990; Schlessman-Frost, Saunders & Frank, 1993; Wittenstein, 1993).

Disseminating information to families regarding the latest research, findings, and remediation techniques for children with visual processing disorders is another possible solution to the problem (Chen, 1993; Cook, 1992; Deitz & Warkala, 1993; Getman, 1993; Heiner, 1987; O'Neil, Gothelf, Cohen, Lehmen & Woolf, 1990). The literature also indicates that parental responsibility in the remediation process is necessary to enhance visual tasks related to academic success (Chen, 1993; Cook, 1992; Davis, 1984; Deitz & Warkla, 1993; Henrichs, 1992; Heiner, 1987).

Parent inservice training involving identification, evaluation, diagnosis, and remediation of visual processing disorders is a possible solution to the problem that was noted in the literature (Cook, 1992; Deitz & Warkla, 1993; Getman, 1993; Heiner, 1987; O'Neil, Gothelf, Cohen, Lehmen & Woolf, 1990).

Description of Solution Selected

As a result from reviewing the literature several ideas were generated. Parents generally lack knowledge and skills to effectively help young children. Parents can respond positively to training from professionals. Inservice

training is found to be beneficial for parents and professionals. Early intervention and diagnosis can be precursors to academic success. Collaborative integration with parents, schools, and service providers can affect children's development.

The writer has provided structured training for parents, direct services to children, and dissemination of information to outside sources. The writer has collected specific data to validate the problem that parents are not able to aid their children who are diagnosed with visual processing disorders. Data collected indicated that parents are not prepared and have little knowledge of their children's developmental vision needs. Specific plans were designed that structurally informed and trained parents in addressing vision disorders. The plan also included information dissemination to teachers, and other public and private sources.

Report of Action Taken

The writer designed a practical solution which was implemented over an eight month period of time. This solution was comprised of specific approaches to train parents and inform educators. This plan specifically addressed the problem of visio-spatial integrative skills and their affects on classroom achievement. The goal of the practicum was to insure that parents received adequate knowledge of their children's visual processing disorders

and developed techniques to aid in their remediation. After intervention a noticeable improvement in parental knowledge was achieved.

The eight month practicum followed specific steps. During the first month of the project the writer organized all information to be presented and disseminated it to the participants in the project. A schedule was mailed to the parents concerning notification of meeting dates and times. Teachers also received notices of meeting dates and times. Fifty families who have children with visual deficits participated in the practicum. Fifty teachers also participated in the project.

A meeting was conducted with the children who were experiencing visual dysfunction. A special video presentation was shown that demonstrated specific visual problems and how they effect ones daily functions. The practicum project was explained to the children and questions were answered. Subsequently, a meeting of all families and teachers involved in the project was conducted. This meeting was basically designed to acquaint all participants and to answer questions. The practicum project was explored and roles were explained. Questions were solicited. Questions regarding parent involvement, training times, office appointments, and compliance were fielded by the writer. As with most new experiences the participants

were generally excited, anxious, and pressing to get started.

The inservices were presented during the next seven months. Inservice A focused on the current research involving the vision, overall development, education, and intelligence of children. The writer presented parents with local, state, and national associations and organizations that provide data on the needs of children with visual disabilities. A question and answer session was included that explained how these agencies can provide important input to parents.

Information was then disseminated to the 50 teacher participants through handouts (see Appendix F). The information focused on developmental vision disorders and how these disorders can affect learning. This handout consisted of basic information pertaining to the visual modality, eye movement, eye teaming, eye-hand coordination, and visual perception skills. It related how deficits in these areas can cause reciprocal academic difficulties. Inservice B was conducted with the 50 parent participants and focused on the identification of visual dysfunctions in children (see Appendix G). This presentation consisted of a video tape that depicted visual problems and their physical symptoms. A list of common visual anomalies was disseminated that provided a definitional foundation.

Information was then disseminated to teachers regarding the signs of visual dysfunction. A checklist for vision

deviance was included in this information for future use (see Appendix H). This checklist is a simple outline of symptoms that may indicate a need for a complete visual analysis.

Inservice C was conducted and focused on parental responsibility in the remediation process. During this workshop specific information was given that spelled out the duties and responsibilities of parents in the remediation process. Teachers also received information regarding parental responsibility in the remediation process of visual deficits (see Appendix I). However, no specific training sessions were provided to these educators. When inservice D was conducted, it focused on parental responsibility in the overall development of their children (see Appendix J). Many of the parents that the writer has incurred during daily interactions displayed poor knowledge of how to stimulate their child's growth and development. As a result, this inservice provided general knowledge of child development. A video and handout materials were shared with participants.

Teachers were contacted in regard to their feelings about parental responsibility. Copies of handouts on parental responsibilities were provided to these educators. Similarly to the lack of parental knowledge regarding child development, the writer noted that parents were also ill-equipped to address the educational process. Consequently,

inservice E provided parents with information regarding parental responsibility in the academic arena. This inservice additionally focused on interaction between the home and school. Parents learned strategies to assist their children throughout their education career (see Appendix K). The materials presented were short and very basic in nature, however, the topics touched on specific areas and provided a fundamental foundation for academic stimulation.

At the midpoint of the practicum all participants were contacted and individual questions were addressed. Questions such as: 1) How much time should I spend teaching my child at home?, 2) Is this treatment permanent or will continued maintenance be required?, 3) Are these problems hereditary or familial? 4) Should I have younger siblings evaluated?, and 5) What causes these visual disorders? The list of questions were rather lengthy and diverse with these five being the most common.

As inservices continued workshop F was conducted. This inservice was for parents and dealt with the evaluation process. All specific aspects of visual refraction, auto refraction, and functional vision skills were discussed. Diagrams of the eye and the vision system were given to the parents to help explain some basic physiology. Teachers also received identical information on the evaluation process.

Inservice G was conducted for parents and introduced professional terminology frequently used by educators and physicians (see Appendix L). The alphabetical listing consisted of terms and definitions of common visual disorders and conditions. Videos were presented that allowed first hand observation of specific visual anomalies. A written sheet of definitions was also presented and questions were answered. Teacher participants received the same printed information concerning educational and medical terminology used in reporting data. All information disseminated to teachers was directly delivered to the schools by the writer.

Parent inservice H was conducted and focused on diagnosis of visual deficits. Every parent involved in this practicum project was involved directly in the assessment and diagnosis of their own child. This inservice served to reinforce and further develop an understanding of the proper procedures employed during the evaluation process. Teachers received information outlining diagnostic procedures and specific diagnosis information related to vision disorders.

Inservice I was conducted and focused on definition, symptomology, and treatment of ocular motor dysfunction (see Appendix M). Parents were presented with video taped subjects demonstrating oculo-motor dysfunctions. Observations were made and questions were answered. Written information outlining this disorder was given to

participants for future reference. Teachers also shared this information along with the parent participants.

Inservice J was conducted and concentrated on definition, symptomology, and treatment of convergence insufficiency, accommodative disorder, and strabismus (see Appendix N). During this session a great deal of interest was generated. Many of the subject children possessed one or more of these maladies. Videos were presented that depicted each problem and how they manifest themselves. Printed materials were provided to the participants for future reference. Questions were also fielded and answered. Ofcourse, teachers received information concerning convergence insufficiency, accommodative disorder, and strabismus through direct dissemination to the schools.

Inservice K was held and focused on definition, symptomology, and treatment of amblyopia. As with previous inservices video and printed material was presented. As each facet of the disorder was discussed specific questions were answered. The educators involved in this project received the information concerning amblyopia (see Appendix O).

Inservice L was conducted with parents having hands on participation. The workshop centered on various remediation techniques for vision rehabilitation. The exercises during this session consisted of visualization, directionality, VATKI, pursuits, push-ups, and saccades. All of these

activities required no special materials or expensive equipment and could easily be done in the home. During this period the teacher participants received information regarding remedial/treatment techniques to enhance visual deviance (see Appendix P).

Inservice M was conducted with 1/4 of the parent participants only. This design was to allow for closer contact by the writer and more interaction from parent to parent. The next several weeks were all conducted on a similar format. Smaller numbers of parents, increased interactions and parent ability to focus on needs assessment. During these inservices the parents were asked to list remaining concerns regarding their child. Specific treatment techniques were further addressed as they pertained to individual children.

During the final weeks of the project all participants met and discussed their participation in the project. A list of 38 resources for remediation/treatment was developed and distributed to parents. Post parent surveys and questionnaires were distributed and collected (see Appendix Q). Teacher surveys were also distributed and collected (see Appendix R).

CHAPTFR V

RESULTS, DISCUSSION AND RECOMMENDATIONS

Results

As initially described parents were unable to assist their children who are diagnosed with visual processing disorders. The students selected for this project were received from several referral sources. These referrals came from parents, school personnel, psychologists, and other professionals.

Many parents were forced to seek private services because schools have not adequately met the needs of these children diagnosed with visual disorders. Many of the children who participated in the practicum have demonstrated suspected visual disorders that affect academic achievement. Specific skills affected by these disorders included mechanical aspects of writing as well as reading functions.

Many of the children with untreated visual deficiencies had shown a history of problems with concentration, attention, near and far copy, and visio-spatial integration. It had been discussed that specific visual disorders have not always been appropriately addressed. Few public schools had instruction pertaining to the development of visual function. Although, most schools provided some visual

perceptual training at the preschool level most instruction did not carry over into subsequent grades.

To recapitulate, parents were not able to aid their children who are diagnosed with visual processing disorders. It was also indicated that many teachers were unaware of visual processing disorders and the affect they have upon children in the classroom.

The goal of the practicum was to insure that parents received adequate knowledge of their children's visual processing disorders and developed techniques to aid in their remediation. The initial outcome for this practicum was that after intervention through parent training follow-up surveys indicated that 42 of 50 parents demonstrated that they possessed increased knowledge of visual disorders (see Figure 1). Surveys were provided on a pre and post based assessment theme using the same criteria and participants. The results were compiled by comparing presurvey data with post survey data. Findings indicated that parents generally gained significant insights into visual conditions and prescriptive remediation.

The second outcome for this project was that after information dissemination 48 of 50 parents had adequate knowledge of remedial services within the community (see Figure 2). Initially, intake histories indicated that only a few parents had adequate knowledge of remedial services within the community. Since most services for problems of

Figure 1

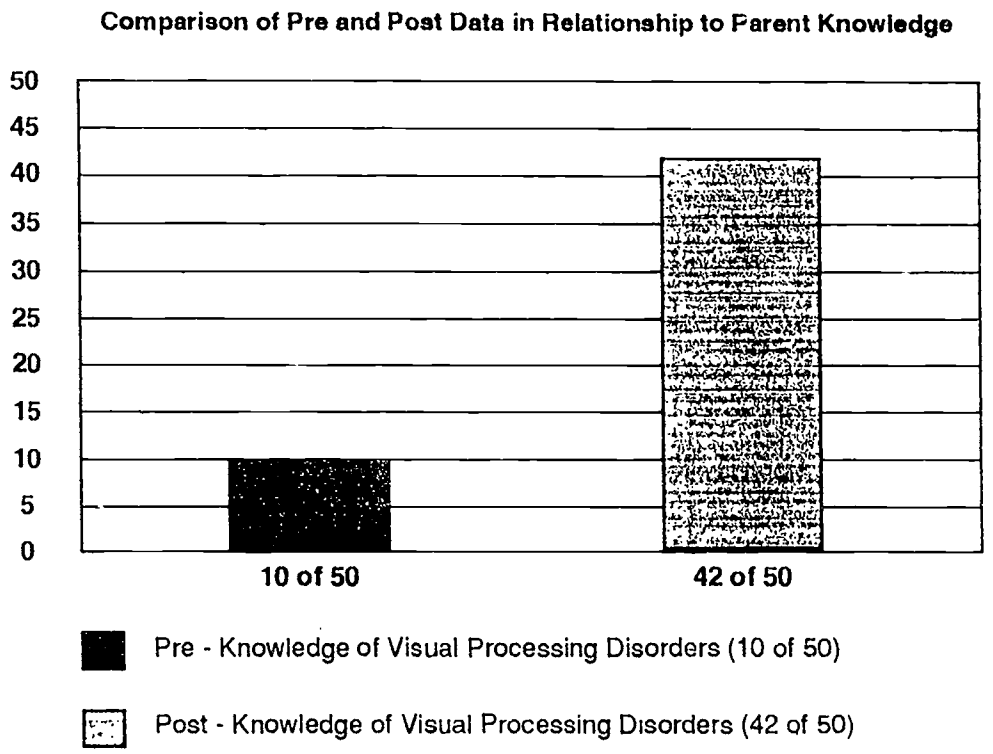
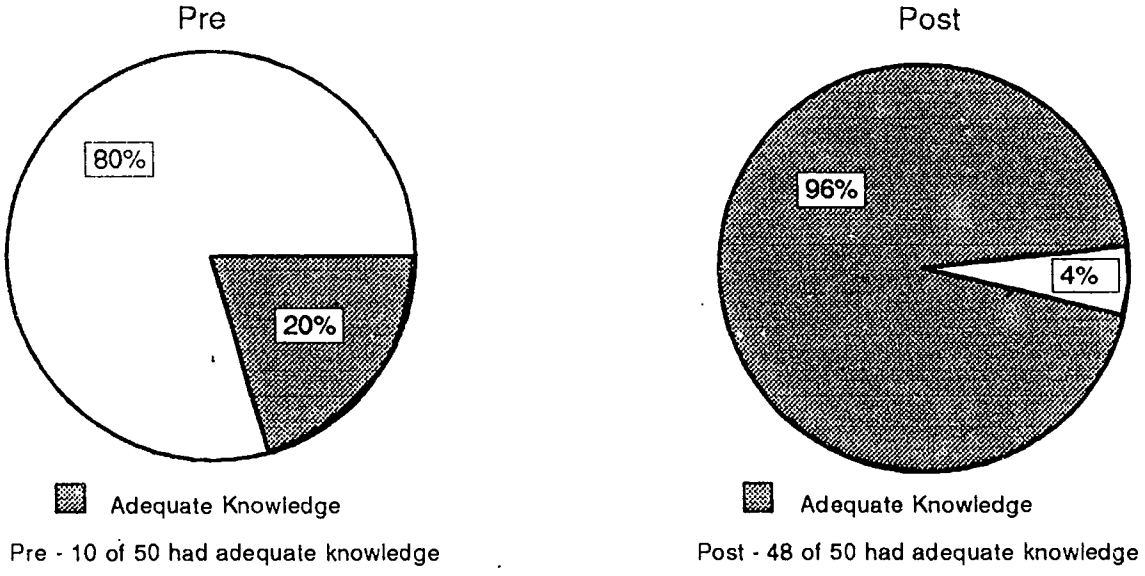

Comparison of Pre and Post Data in Relationship to Parent Knowledge
50
45
40
35
30
25
20
15
10
5
0
10 of 50
42 of 50
Pre - Knowledge of Visual Processing Disorders (10 of 50)
Post - Knowledge of Visual Processing Disorders (42 of 50)

Figure 2

Comparison of Parent Knowledge Regarding Area Resource Services

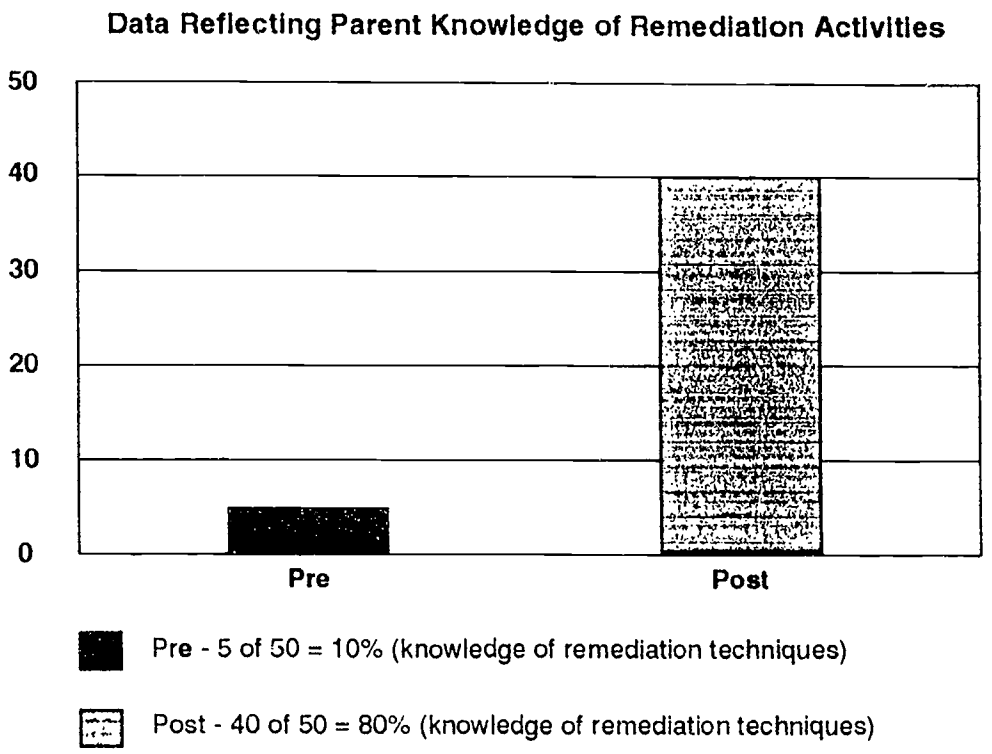


this nature are based in the private sector, it was often found that parents were unable to seek such services. During parent training information was provided that enabled parents to seek services on a local, state, and national level. This information was a significant factor in causing the projected outcome to be exceeded.

Many parents struggled with the fact that they did not feel equipped to assist their child in the remediation process. Prior to intervention only five parents had knowledge of specific remedial techniques to foster the visual development of their child. Conversely after the solution strategy was implemented through parent training, 40 of 50 parents had fundamental knowledge of remdial techniques to assist their child in treatment (see Figure 3). This outcome met with success and was measured through the comparison of pre and post parent questionnaires.

It was assumed that public schools either have little or no access to information regarding visual processing disorders. Targeted teachers completed surveys and initially reinforced this belief. During the practicum materials were disseminated to teachers on identification, diagnosis, and treatment of visual deficiencies. The final outcome of the practicum was met in that 50 teachers had avaiable information to disseminate to their colleagues on specific visual disorders. Follow-up surveys were utilized to collect this data and indicated that all 50 teacher

Figure 3


Data Reflecting Parent Knowledge of Remediation Activities
50
40
30
20
10
0
Pre
Post
Pre - 5 of 50 = 10% (knowledge of remediation techniques)
Post - 40 of 50 = 80% (knowledge of remediation techniques)

participants had useful information to use as reference material.

Discussion

In relationship to the previous section outcomes and projections were closely aligned. The positive inference made by parent training and involvement is evident. It is apparent that by providing direct training to parents children can benefit from their knowledge.

Participants in this practicum experience showed a direct interest in specific diagnostic and remedial activities. As a result of this interaction the children again were the recipiants of this adult participation. Intervention strategies and cooperation were key factors that surfaced as important by teachers and parents alike.

The predominant result of this practicum is that coordinated understanding of the visual needs of children can result in positive change for those children. School personnel showed an increased interest in the diagnostic process. Parents presented a genuine concern for a need to have remedial treatment programs in the community. The results that were gathered by the practicum further supported the literature by indicating through remediation visual skills can be enhanced. Thus, adding credibility to the theory that academic functions which require acute visual performance will also show enhanced development.

Recommendations

In developing this practicum the writer placed heavy emphasis on simplicity. Attention was directed to providing enough information that would inform but not overwhelm participants. Common visual anomalies were presented and remedial services to match each disorder was expanded upon. It was the intent of the practicum project to promote the importance of vision as the most utilized input mechanism from which the learner operates.

Children that are affected with learning problems that interfere with visual processing customarily have difficulties with other areas of cognitive development and function. As a result of this information it is recommended that educators be knowledgeable and tolerant of children who possess these needs. Problems associated with visual dysfunction cover the entire range from mild to severe. Although many children have similar disorders no two children are visuall alike. Consequently very few disorders are identical and as a result of these variables insight and teacher observation techniques must be in place for early referral. Currently it is rather rare that children are referred at an early age for developmental vision abnormalities. It is more common to see a child for the first time only after school failure has been experienced.

The problems that have been identified in this practicum had to be completely thought through prior to

recommending and developing intervention. Many of the following recommendations are offsprings from entities within the practicum: 1) development of a broader base of awareness of visual disorders by teachers and parents, 2) identification of target children during the early years of development, 3) referral of children to appropriate resources, 4) diagnosis of apparent visual dysfunction by developmental specialists, and 5) early treatment and remediation of apparent abnormalities. For children to reach visual parity with their peers visual programs are critical. Consequently, the development of additional developmental vision rehabilitation programs is essential for today's youth.

Dissemination

A copy of this practicum will be shared with all participants and the local school superintendent. Professionals in the clinic setting and other interested parties will have access to this material. An ERIC submission is a possibility for this report.

References

Ashley, J.R., & Cates, D.L. (1992). Albinism: Educational techniques for parents and teachers. RE:view, 24(3), 127-131.

Bailey, I.L., & Hall, A. (1989). A model for training vision functioning. Journal of Visual Impairment & Blindness, 19, 390-396.

Blank, M.J., & Lombardi, J. (1991). Towards improved services for children and families: Forging new relationships through collaboration. A Policy Brief Based on the Annual Symposium of the A.L. Mailman Family Foundation. Washington: Institute for Educational Leadership.

Bosse, J.C. (1993). Prevention rehabilitation enhancement: Parental awareness. Journal of Optometric Vision Development, 24(3), 5.

Boyd, W.L., & Lugg, C.A. (1993). Leadership for collaboration: Reducing Risk and fostering resilience. Phi Delta Kappan, 75(3), 253-256.

Brink, C., & Chandler, K. (1993). Teach the parent reach the child. Vocational Education Journal, 21, 26-48.

Carlton-Laney, I., Mickelson, R.A., & Yon, M.G. (1993). A child's place: Developing interagency collaboration on behalf of homeless children. Education and Urban Society, 25(4), 410-423.

Chen, D., & McCann, M.E. (1993). Selecting a program: A guide for parents of infants and preschoolers with

visual impairments. Los Angeles, CA: Blind Childrens Center.

Clarke, J.S. (1993). Strategies addressing discrepancies in educational and behavioral priorities and expectations between staff and middle-class k-5 parents. (Practicum Report). Ft.Lauderdale: Nova University.

Coughlin, P., & Perry, D. (1993). National policy on children and families. Washington: Georgetown University Child Development Center.

Davis, P.A. (1984). Helping the visually impaired child succeed in school. The Exceptional Parent, 35-38.

Deitz, S.J., & Warkala, C.S. (1993). Transitions: Preparing families of preschoolers for marathon skills. RE:view, 25(1), 5-11.

DePompae, R., Zarski, J.J., & Hall, D.E. (1987). A systems approach to understanding chi family functioning. Cognitive Rehabilitation, 5(2), 6-9.

Diamond, K.E. (1993). The role of parents' observations and concerns in screening for developmental delays in young children. Topics in Early Childhood Special Education, 13(1), 68-81.

Doll, B. (1993). Evaluating parental concerns about children's friendships. Journal of School Psychology, 31, 431-447.

Getman, G.N. (1993). How to develop your child's intelligence. Santa Ana, CA: Optometric Extension

Program.

Getman, G.N. (1992). Smart in everything except school. Santa Ana, CA: Vision Extension, Inc.

Groffman, S. (1994). Can optometrists prevent suicide? Journal of Optometric Vision Development, 25(1), 1-3.

Haegerstrom-Portnoy, G (1993). New procedures for evaluating vision functions of special populations. Optometry and Vision Science, 70(4), 306-314.

Heiner, D. (1987). Learning to look: A handbook for parents of low vision infants and young children. E.Lansing, MI: International Institute for Visually Impaired.

Hinrichs, C.A. (1992). Vision rehabilitation for the multiply challenged child. Journal of Optometric Vision Development, 23, 9-13.

Hoover, J.J. (1993). Helping parents develop a home-based study skills program. Intervention in School and Clinic, 28(4), 238-245.

Kazdin, A.E. (1992). Cognitive problem-solving skills training and parent management training in the treatment of antisocial behavior in children. Journal of Consulting and Clinical Psychology, 60(5), 733-747.

Klein, H.J. (1988). Children who were very low birthweight: Cognitive abilities and classroom behavior at five years of age. The Journal of Special Education, 22(1), 41-52.

Koslowe, K.C. (1991). Binocular vision, coding tests and classroom achievement, Journal of Behavioral Optometry,

2(1), 16-19.

Kunesh, L.G., & Farley, J. (1993). Integrating community services for young children and their families (Report 3). Oak Brook, IL: North Central Regional Educational Lab.

Lange, S., Lange, S., & Tunstall, C. (1991). Needs of students with acquired brain injury in the community college. Cognitive Rehabilitation, 9(1), 22-24.

Lovegrove, W.J., Garzia, R.P., & Nicholson, S.B. (1990). Experimental evidence for a transient system deficit in specific reading disability. Journal of the American Optometric Association, 61(2), 137-145.

McBride, B.A., & McBride, R.J. (1993). Parent education and support programs for fathers. 70(1), 4-9.

McMonnies, C.W. (1992). Visuo-spatial discrimination and mirror image letter reversals in reading. Journal of the American Optometric Association, 63(10), 687-692.

Menard, J. (1993). Development and implementation of an integrated parent involvement program for regular and special education classes in preschool and kindergarten for home and school. (Practicum Report) Ft.Lauderdale, FL: Nova Southeastern University.

Miller, L. (1991). Significant others: Treating brain injury in the family context. Cognitive Rehabilitation, 9(3), 16-25.

O'Hare, C. & Harrell, M. (1991). The empowerment

rehabilitation model: Meeting the unmet needs of survivors, families, and treatment providers. Cognitive Rehabilitation, 9(1), 14-21.

O'Neil, J., Gothelf, C.R., Cohen, S., Laurie, L., & Woolf, S.B. (1990). Parent handbook: A curricular approach to support the transition to adulthood of adolescents with visual or dual sensory impairments and cognitive disabilities. New York: Jewish Guild for the Blind.

Press, L.J. (1991). Strabismus. Journal of Optometric Vision Development, 22(1), 5-20.

Ritty, J.M., Solan, H.A., & Cool, S.J. (1993). Visual and sensory-motor functioning in the classroom: A preliminary report of ergonomic demands. Journal of the American Optometric Association, 64(4), 238-244.

Richards, R.G. (1985). Wasting teacher time. Academic Therapy, 20(4), 411-418.

Schlessman-Frost, A., & Saunder, T.F. (1993). Collaboration: A Model for Design, Management and Evaluation. Paper presented at the annual meeting of the American Educational Research Association, Atlanta, GA.

Schrier, M., & Hamakiotes, D. (1993). Two school populations of differeing socioeconomic composition. Journal of Optometric Vision Development, 24(4), 15-20.

Shiver, M.D. & Kramer, J.J. (1993). Parent involvement in an early childhood special education program: A descriptive analysis of parent demographics and level of involvement.

Psychology in the Schools, 30, 255-263.

Shute, R.H. (1991). Psychology in vision care. Oxford: Butterworth-Heinemann Ltd.

Stein, J., & Fowler, S. (1985). Effect of monocular occlusion on visuomotor perception and reading in dyslexic children. The Lancet, 4, 69-73.

Stief, E.A. (1993) The role of parent education in achieving school readiness. Washington: National Governors' Association.

Studer, J.R. (1993). Listen so that parents will speak. Childhood Education, 70(2), 74-76.

Vogel, S.A. (1993). Gender differences in intelligence, language, visual-motor abilities, and academic achievement in students with learning disabilities: A review of the literature. Journal of Learning Disabilities,23(1), 44-51.

Waggoner., & Wilgosh, L. (1990). Concerns of families of children with learning disabilities. Journal of Optometric Vision Development, 23(2),97-113.

Wittenstein, S.H. (1993). A parent-professional collaboration model of transitional planning. Journal of Visual Impairment & Blindness, 6, 227-229.

Zabel, M.K. (1991). Teaching young children with behavioral disorders. Reston, VA: Council for Exceptional Children.

APPENDIX A

INTAKE HISTORY FORM

WELCOME TO OUR OFFICE

CASE HISTORY

Vision
Speech
Language
Academic

Date _____

Patient Name _____

Address _____ Phone _____
_____

Date of Birth _____ Soc.Sec # _____

Employer _____ Work Phone_____

Family Physician _____ City/State _____

Insurance: Vision Medical Medicare Medicaid Other

Company Name: _____

Group Number: _____

Individual Claim Number: _____

Person Responsible for Charges: _____

Address: _____

_____

Telephone:_____

GENERAL HISTORY

Reason for Today's Visit _____

List all Major Health Problems _____

Medications Currently Taking _____

Do You Use a Computer? YES NO

Do you Experience Headaches? YES NO

Date of Last Vision Exam _____

Explain the Type of Evaluations Conducted _____

Do You Wear Glasses? YES NO Hearing Aid? YES NO

Do You Have Problems With Vision? YES NO

Indicate Problem Areas:

_____ Eyes Blur _____ Amblyopia _____ Alignment

_____ Repeating Lines _____ Skipping Lines

_____ Reversals _____ Eye Hand Coordination

_____ Other

Explain: _____

Do You Have Problems With Speech? YES NO

Explain: _____

_____

_____

Do you Have Problems With Memory? YES NO

Explain: _____

_____

_____

ABOUT THE CHILD

Birth Was: Premature _____ On Time _____ Birth Weight _____

Describe Complications During Pregnancy or Delivery? _____

_____

_____

History of Ear or Hearing Problems? YES NO

Explain: _____

_____

List Medications Currently Taking: _____

_____

Hospitalizations/Surgery/Major Accidents? YES NO

Explain: _____

_____

_____

How Old Was the Child When He/She Began Walking? _____

Talking? _____ Riding a Bike? _____

School Attending:_____ Grade _____

Regular Class _____ Special Education Classes _____

Has the Student Repeated a Grade? YES NO

Has the Child Attended Transition? YES NO

Is the Child Achieving at Expected Levels? YES NO

Indicate Problems in the Following Areas:

_____ Reading _____ Mathematics _____ Spelling

_____ Writing _____ Language Arts _____ Other

Is the Student Being Tutored? YES NO

APPENDIX B

SERVICE INQUIRY SURVEY

Service Inquiry Survey

NAME _____ D.O.B. _____ AGE ____

ADDRESS _____ TELEPHONE _____

_____

PLEASE ANSWER THE FOLLOWING QUESTIONS TO THE BEST OF YOUR ABILITY.

1. Has your child been evaluated before?

   YES NO

   When _____ Where _____

2. Was the evaluation procedure explained to you?

   YES NO

3. Did you understand the evaluation procedure?

   Explain: _____

   _____

   _____

4. Do you have adequate knowledge of your child's prior evaluation results?

YES NO

5. Can you describe your child's disability?

YES NO

6. Is your child currently receiving remediation services or treatment for his/her condition?

YES NO

If so, how often? _____

7. Are you aware of alternative service providers in the community?

YES NO

8. Why did you contract services through this clinic?

_____

_____

APPENDIX C

PARENT QUESTIONNAIRE

Questionnaire

1. Do you understand the term orthoptics?

   YES NO

2. Are you aware of any remedial or treatment techniques that would assist your child's visual disability?

   YES NO

3. Do you have knowledge of the following terms?

	YES	NO
Suppression	_____	_____
Amblyopia	_____	_____
Convergence	_____	_____
Divergence	_____	_____
Oculomotor Dysfunction	_____	_____

4. Explain your child's ability or inability to write letters/ symbols. _____

   _____

   _____

APPENDIX D

REFERRAL FORM

R E F E R R A L F O R M

Referral Date: _____

Patient/Client Name: _____

Address: _____

_____

Telephone: _____

Referral Agency: _____

Individual Referring: _____

Reason for Referral: _____

_____

_____

_____

APPENDIX E

TEACHER SURVEY

Teacher Survey

Child: _____ D.O.B. _____

School: _____ Grade: _____

Circle the following Yes or No responses

1. Does the child have adequate motor coordination?

   Y N

2. Has the child established hand preference?

   Y N

3. Does the child use proper pencil grip?

   Y N

4. Does the child work from left to right?

   Y N

5. Does the child discriminate shape form?

   Y N

6. Can the child write letters from memory?

   Y N

7. Does the child reverse letters?

   Y N

8. Does the child turn or rotate paper?

Y N

9. Does the child use proper spacing?

Y N

10. Are written symbols the appropriate size?

Y N

11. Does the child observe the lines on paper?

Y N

12. Is the child excessively slow when writing?

Y N

13. Teacher Comments _____

_____

_____

14. Do you have adequate information available at your school concerning visual processing disorders?

Y N

15. Do you desire additional information regarding visual disorders and how they can affect academic performance?

Y N

APPENDIX F

VISION DISORDERS AND RELATED ACADEMIC CONCERNS

VISION DISORDERS AND RELATED ACADEMIC CONCERNS

Contrary to common belief vision is a cognitive function which allows the individual to assess objects, determine size, judge rate of movement, and the integration of all these functions simultaneously. In the educational setting it has been determined that 70 to 90 percent of all learning comes through the visual modality. It is logical to assume that if there is interference with this modality the child will probably have learning difficulties.

Categories of Visual Deficits

Eye Movement Skills - the ability of the eye to scan, search, with accurate speed and control.

Eye Teaming Skills - the ability of the eyes to function in pairs with all muscles working as a reciprocal team.

Eye-Hand Coordination Skills - the integration and use of the eyes and hand as a tandem for mechanical functions.

Visual Form Perception - the skill of visual image that allows an individual to relate experiences to the pictures that are formed on the printed page.

Academic Manifestations

Poor Handwriting	Poor Reading Abilities
Poor Visual Memory	Short Attention Span
Difficulty With Mathematics	Skipping Words
Omission of Words or Numbers	Frequently Looses Place
Needs Finger to Maintain Place	Substitutions of Words
Substitution of Letters	Misalignment of Digits

APPENDIX G

IDENTIFICATION OF VISUAL DEFICITS

IDENTIFICATION OF VISUAL DEFICITS

Accommodation - the process of adjusting the eyes for focusing.

Amblyopia - reduced visual acuity even with maximum spectacle prescription.

Astigmatism - multiple refractive errors in the same eye.

Bifocal - two different prescriptions in the same eye.

Binocular - systematic use of both eyes.

Convergence - the ability of the eyes to turn inward for near distance tasks.

Diplopia - double vision.

Divergence - the ability of the eyes to turn outward for tasks at distance.

Eso - the eye turns inward.

Exo - the eye turns outward.

Fusion - the ability of the brain to put together images from the two eyes into one picture.

Hyperopia - the power of the eye is too weak for its length (the eye is elongated; farsighted).

Monocular - one eye.

Myopia - the power of the eye is too strong for its length; nearsighted.

Oculomotor - pertains to eye movement skills.

Orthoptics - vision stimulation procedures designed for training focus, alignment, and eye movement.

Perception - the ability of the brain to process and analyze visual information.

Presbyopia - the loss of ability to focus at near.

Pursuits - the ability of the eye to smoothly follow a moving object.

Saccades - the ability of the eye to shift fixation from one point to another.

Sensory Motor Adaptation - brain adjustment in response to visual input.

Strabismus - overt misalignment of the eyes.

Suppression - all or part of an image from one eye is turned off at the brain.

Tropia - appearance of improperly aligned eyes.

Visual Acuity - the ability to determine visual detail.

Visual Fields - assessment to detect defect abnormality to the visual pathway of the brain.

APPENDIX H

CHECKLIST FOR VISUAL DEVIANCE

CHECKLIST FOR VISUAL DEVIANCE

The presence of these symptoms may indicate a need for a thorough visual analysis.

* Eyes Crossed
* Eyes Moving Independently of One Another
* Frequent Headaches
* Burning Eyes
* Blurring
* Double Vision
* Avoidance of Close Work
* Short Attention Span
* Head Tilt or Postural Deviance
* Placing Head Close to Reading or Writing Material
* Facial Grimaces While Reading
* Poor Handwriting
* Excessive Blinking
* Closing or Covering One Eye
* Reading Avoidance Syndrome
* Low Frustration Level
* Loosing Place While Reading
* Poor Board Copy
* Displaying the Need for Auditory Reinforcement

APPENDIX I

PARENTAL RESPONSIBILITY IN THE REMEDIATION PROCESS

PARENTAL RESPONSIBILITY IN THE REMEDIATION PROCESS

1. Parent accompany child to all in office therapy sessions.

2. During in office therapy the parent works directly with child and therapist.

3. Parent must supervise all home therapy activities.

4. Parent must assure that the child performs therapy properly and completely each day.

5. Continuity must exist in each therapeutic home session.

6. Reinforcement of visual remediation activities immediately following appropriate responses.

7. Parent must create a pleasant atmosphere free from distraction so that the child can practice his vision exercise.

8. The parent must be firm and consistent with the approach to vision therapy.

9. Parent must assess the child's performance and observe strengths and weaknesses.

10. The parent must act as a liaison between child and therapist.

APPENDIX J

PARENT RESPONSIBILITY REGARDING CHILD'S OVERALL DEVELOPMENT

PARENT RESPONSIBILITY REGARDING CHILD'S OVERALL DEVELOPMENT

In order to stimulate the child to grow, develop and become a responsible citizen parents should . . . . . .

1. Provide a safe and nurturing environment.
2. Provide for health and nutritional needs.
3. Demonstrate appropriate verbal and other communication skills.
4. Create an environment free of drugs, alcohol, and other social stresses.
5. Provide the child with appropriate relationship and social models.
6. Create and atmosphere that is exempt from psychological and emotional distress.
7. Promote responsibility within the home, school, and social environments.
8. Expose the child to appropriate preacademic environments through structured social interactions.
9. Provide stimulation of visual, auditory, and motor senses.
10. Provide an environment that promotes academic achievement and creativity.

APPENDIX K

PARENT STRATEGIES FOR ACADEMIC SUCCESS

PARENT STRATEGIES FOR ACADEMIC SUCCESS

1. Parent Involvement
2. Nurturing Home Environment
3. School and Parent Interaction
4. Open Communication Between Parent, Child and School
5. Parent Dedication to Child's Success
6. Formulation of Realistic Goals
7. Supportive Environment that Promotes Positive Educational Outcomes
8. Parental Support in Crisis Situations
9. Attendance at School Social Gatherings
10. Patrons in Parent Teacher Organizations
11. Participation in All Scheduled School Conferences
12. Reinforcement of Teacher, School and Social Values
13. Promotion and Support of School Curriculum
14. Facilitation and Reinforcement of Academic Material Through Follow-Up Home Activities
15. Encouragement of Child Participation in Structured Organizations that Promote Growth and Social Development

APPENDIX L

TERMINOLOGY

TERMINOLOGY

Accommodative Disorder - nonrefractive anomaly of the vision system characterized by the reduced facility and flexibility of the eye to sustain focus.

Alternating - a condition of switching visual processing from one eye to another on an inconsistent basis.

Amblyopia - a syndrome characterized by a general degradation of visual acuity and reduced visual processing.

Astenopia - sustained and localized discomfort or pain in or around the eye.

Binocular Vision Disorder - a category of sensory and neural muscular anomalies marked by the inability of an individual to sustain two eyed vision.

Convergence Insufficiency - a sensory and neuromuscular disorder of the binocular vision system characterized by an inability to converge the eyes.

Hyperphoria - misalignment of the eye with a tendency to turn upward.

Hypotropia - misalignment of the eye with a tendency to turn downward.

Intermittent - condition of visual anomaly that does not exist at all times.

Nystagmus - rapid consistent back and forth eye movements.

Ocular Motor Dysfunction - a neuromuscular deficiency of eye movements control characterized by an inability to fixate and move one's eyes.

Presbyopia - the loss of ability to focus at near.

Photophobia - physiological reaction to light causing discomfort and pain.

Refraction - specific tests to assess for nearsightedness, farsightedness, astigmatism.

Strabismus - a sensory and neuromuscular disorder of binocular nature resulting in the failure of an individual to maintain binocular alignment.

Stereopsis - combined two-eyed vision resulting in depth perception.

Transient Blurred Vision - vision that is blurred on an inconsistent and erratic basis.

Tunnel Vision - inversion and narrow visual fields which result in reduced peripheral vision.

Vertigo - general dizziness due to lack of visual fixation abilities.

Visiospatial - the inability of one to assess physical space and parameters.

Visual Conversion Reaction - complete or partial loss of sight due to psychogenic reaction.

Visual Perception Dysfunction - the inability of the vision system to accurately access size, shape, and form

Visual Processing - the ability to assess, integrate, analyze and respond to visual input.

APPENDIX M

OCULAR MOTOR DYSFUNCTION

OCULAR MOTOR DYSFUNCTION

Definition:

Anomaly of the eye in which movement control is affected by the inability to follow and scan.

Symptomology:

1. Incoordination with inability to direct coordinated movement
2. Loss of place while reading
3. Difficulty following moving objects
4. Vertigo
5. Motion Sickness
6. Reduced Attention Span

Treatment:

1. Development of accurate fixation skills
2. Development of ocular pursuits and saccades
3. Coordinate ocular motor skills with manual motor skills
4. Integrate ocular motor skills and accommodation
5. Develop ability to sustain all visual activities without interference or fatigue

APPENDIX N

CONVERGENCE DISORDER, ACCOMMODATIVE LAG, AND STRABISMUS

CONVERGENCE DISORDER

Definition:

An anomaly of the binocular vision system characterized by an inability to converge the eyes.

Symptomology:

1. Diplopia
2. Asthenopia
3. Transient Blurred Vision
4. Reduced Near Visual Function
5. Abnormal Fatigue
6. Headache
7. Orbital Pain

Treatment:

1. Normalize nearpoint vergence
2. Develop fusional vergence ranges near and far
3. Eliminate suppression
4. Develop associated deficiencies of accommodation
5. Integrate accommodation and convergence
6. Normalize stereopsis
7. Integrate developed skills of convergence with information processing

ACCOMMODATIVE DISORDER (LAG)

Definition:

Nonrefractive deficiency of the vision system characterized by an inadequate ability to focus.

Symptomology:

1. Asthenopia
2. Transient Blurred Vision
3. Photophobia
4. Abnormal Fatigue
5. Headache
6. Difficulty sustaining near visual image
7. Dizziness
8. Abnormal Postural Adaptations
9. Orbital Pain

Treatment:

1. Develop amplitude of accommodative focus
2. Normalize sustained accommodation skills
3. Develop appropriate ranges of accommodation
4. Develop accommodative skills relative to age
5. Normalize accommodative and convergence integration
6. Develop accommodation and information processing skills

STRABISMUS

Definition:

A neuromuscular anomaly of binocular integration resulting in the failure to maintain two-eyed vision.

Symptomology:

1. Constant or occasional eye turn
2. Diplopia
3. Reduced depth perception
4. Head tilt
5. Covering or occluding one eye

Treatment:

1. Develop ocular motor stability
2. Develop visiospatial localization skills
3. Normalize accommodative differences
4. Establish fusion at all distances
5. Normalize accommodation and convergence integration
6. Develop oculomotor function with information processing skills

APPENDIX O

AMBLYOPIA

AMBLYOPIA

Definition:

Amblyopia is a syndrome characterized by deprivation of visual acuity and inhibition of information processing.

Symptomology:

1. Reduced acuity
2. Limited depth perception
3. Head tilt or postural deviance
4. Visual incoordination
5. Strabismus

Treatment:

1. Eliminate any refractive blur
2. Stabilize central fixation
3. Normalize acuity
4. Develop monocular visual skills
5. Develop spatial orientation
6. Eliminate suppression
7. Eliminate strabismus
8. Integrate visual function and motor response
9. Normalize binocularity

APPENDIX P

TECHNIQUES TO ENHANCE VISUAL PROCESSING PERFORMANCE

TECHNIQUES TO ENHANCE VISUAL PROCESSING PERFORMANCE

Visualization

Visualization is the ability of an individual to recognize and recall viewed information and symbols with maximum retention.

1. Flashing picture symbols and require child to reproduce or vocalize what is seen.
2. Pictures that are flashed progressively move from concrete to abstract (geometric shapes, letters, numbers).
3. Reproduction and/or description of objects reflecting a one quarter turn clockwise.
4. Present a symbol for two seconds then have child reproduce the symbol or verbally describe it. Then gradually reduce presentation speed (one second, one-half second) and ask the child to describe the symbol or reproduce it.

Directionality

Directionality is the internal awareness of an object in its appropriate spatial configuration.

1. Goal: Ability to accurately respond to 8 of 10 commands.

Teacher instructs the child to move body right or left. Movement may be a turn, point, rotation, jump, etc.

2. Goal: Ability to accurately respond to 8 of 10 commands.

Teacher is asked to make a line from left to right or right to left the a circle to the right or left, a square to the right or left, etc. Have the child reproduce the symbol.

3. Goal: Ability to write numbers accurately and rapidly. Teacher is asked to write numbers on chalkboard, from left to right from 2 to 9 with eyes closed. Initially make numbers large and slowly and reduce size. Have the child reproduce the numbers.

4. Goal: Ability to write on verbal command. Teacher is to write letters on the chalkboard from left to right, using commonly reversed letters such as /g/, /D/, /d/, /F/, /f/, /h/, /J/, /B/, /b/, /L/, /M/, /P/, /p/, /s/, and /z/. Ask the child to reproduce the letters on the chalkboard. Letters should be presented slowly and only a few at a time.

5. Goal: To write letters and numbers accurately and rapidly.

Teacher is to write commonly reversed letters and numbers on paper then have the child reproduce these symbols. Present only a few unlike symbols at a time then gradually add symbols (letters and numbers) for the child to write. The child should be first presented with unlined paper then gradually introduce lined paper. The lined paper should also be presented in a graduated state.

VATKI WRITING TECHNIQUE

Visual Auditory Tactile Kinesthetic Integrated Techniques for increasing eye-hand coordination while participating in simultaneous writing tasks.

1. The teacher writes the word in large, flowing cursive letters on newsprint. (The child observes the method.) Letters should be at least six inches high. Say the word by syllables as it is written. Do Not Exaggerate syllable separation. Try to achieve blending. If the word is one-syllable, sound and blend the separate letters. Always pronounce the whole word after blending.
2. The child first traces the word with his finger, saying it as the teacher did. If more than one syllable words are used say the syllable in normal tone. Do Not Exaggerate. Look at the whole word after blending. Always pronounce it again. Then the child is to trace over the trace that the teacher has made with magic marker or crayon. Follow the same procedure as tracing with fingers. Sound, blend, and after looking at the whole word, pronounce it again. The number of times to trace will vary with the learning rate of the individual child.
3. The child now traces the word in the air, saying syllables or sounds in sequence, blending, and pronouncing.

If the child can not retain the kinesthetic memory of trace, or syllable order, repeat step 2 then step 3.

4. When step 3 is mastered have the child write on a strip of paper the word he has just learned. He should not look at the teacher's copy before writing, but remember the sequence and the kinesthetic feel of letter forms. If step 4 breaks down, go back to step 2 and repeat throughout until step 4 is mastered.

5. Now have the child close his eyes, get visual images and spell by syllables, breaking down each syllable into the individual letters: (t a n tan or t r a i n e r trainer).

6. At this stage the child writes the word on an unlined card in flowing large cursive letters. He says the syllables, etc. While writing and pronouncing the child combines modalities. The teacher is to print the word on the other side of the card.

7. Devise some system so that each child may keep his own cards available for systematic review or word games. During review again emphasize blending and pronouncing whole words.

8. Always try to find some way to associate the word with his present knowledge.

Note: During tracing activities always make sure that the child is centered with respect to the copy. Let the center of the word be even with his own midline. The child with midline problems will gradually move his copy over to the

side of the dominant hand. The head should be kept still and the eyes should perform the movement. Make certain that there is simultaneous input from vision, audition, voice, and hand: i.e. While the hand is tracing the letter, the eyes see it, the voice says it, and the ears hear it.

VISUAL PURSUITS

Eye training exercises for child diagnosed with oculomotor deficiency:

Materials needed: Pencil with bright eraser, thumb tacks, a nail, and string.

Goal: Accurate fixation through two complete cycles of figure eight and horizontal movements.

Task 1. Trainee extends arm, closes fist and raises thumb so that the nail is in full view. A small dot is placed on the nail. The trainee fixates on the dot, rotates the arm in a figure eight as well as horizontally in each direction. The trainee is to attempt to fixate dot and not lose it at any time. The trainee should receive instant feedback if fixation is lost by snapping fingers or by some other method.

Goal: The ability to hold fixation for one complete cycle (small to large).

Task 2. Trainer places pencil 16 inches from trainee. Trainee is to fixate eraser while trainer moves eraser in spiral starting 1" in diameter to 2" in diameter; clockwise and counter-clockwise.

Goal: The ability to hold fixation for one complete cycle.

Task 3. Trainee faces a wall and follows an imaginary bug as it crawls up the corner of the wall, crosses the ceiling, goes down the wall, and across the floor. The trainee should make every effort to visualize the bug and the trainer can slow down or speed up the bug verbally as well as reverse its direction.

Goal: The ability to make 20 rotations with the maximum thickness of the line one-half inch.

Task 4. Trainee stands at chalkboard and makes a circle 12" in diameter and attempts to keep the chalk on the original circle line for 20 rotations clockwise and counter clockwise.

Goal: The ability to hold fixation for one complete cycle.

Task 5. As in Task 2 except making a figure eight pattern vertically and on its side with size varying from 4" to 15".

Goal: The ability to hold fixation for one minute of movement and be aware of the two strings that are seen.

Task 6. Trainer places a 12" piece of string on eraser of pencil with thumb tack. The trainee holds the pencil in the right hand and the string to the nose in the left hand. The trainee is to look at the end of the string on the eraser at

all times and rotate the pencil in circles of figure eights and lines.

Goal: The ability to hold fixation for 20 rotations clockwise and counter clockwise.

Task 7. Trainee looks at an object and rotates his head 10 times clockwise and counter clockwise. Trainee should keep face forward and ears should bend over toward the shoulders rather than rotate the face.

Goal: The ability to hold fixation for one minute of movement.

Task 8. As in task 2, except movements are random (no pattern) as well as move closer then farther from the trainee.

Goal: The ability to hold fixation for one minute of movement.

Task 9. Trainee extends arm and rotates in circles. With eyes closed the trainee attempts to follow the hand moving. When this is mastered the trainee should attempt to rotate eyes while closed without hand as if following an imaginary fly.

Goal: The ability to accurately circle eraser four of five times.

Task 10. As in tasks 2, 5, and 8 except trainee is to attempt on command to circle the eraser with a pipe cleaner. The pipe cleaner is not to touch eraser as inserted.

CONVERGENCE TRAINING ACTIVITIES

Convergence training is designed to develop the ability of the eyes to converge and diverge. i.e. to assist the eyes to move inward for near-centered tasks.

Push-Ups

1. Get a detailed object, such as a tongue depressor, with a sticker on it and slowly move it towards the child's eyes simultaneously asking them to follow the detailed object as it approaches the nose.
2. Question the child to determine if the target is blurring, doubling, or a clear single image.
3. Repeat this process several times for two to three minutes.
4. Cover one eye. With the same detailed object repeat the activity described in previous steps, watching the movement of the eye as the object approaches the nose.
5. Cover the oposite eye. Repeat the procedure.

Note: In these exercises it is important that the eye or eyes move in smoothly.

APPENDIX Q

POST PARENT QUESTIONNAIRE

Post Parent Survey

1. How many children are in your household?

2. How many children are diagnosed with disabilities?

3. How many children receive remedial/treatment services?

4. List the service agencies available to you in your community.

5. Which agencies provide services to your family?

6. Do you know other families that could benefit from community-based service agencies?

APPENDIX R

POST TEACHER SURVEY

Post Teacher Survey

1. Describe the term orthoptics.

2. Describe two remedial techniques that you use when working with your student whose diagnosed with visual deficiencies.

3. Do you have knowledge of the following terms?

	YES	NO
Supression	_____	_____
Amblyopia	_____	_____
Convergence	_____	_____
Divergence	_____	_____
Oculomotor Dysfunction	_____	_____

4. Define the following terms:

Developmental Vision Disorder -

Ocolomotor Dysfunction -

Convergence Insufficiency -

Accommodative Disorder -

Suppression -

Visual Processing Disorder -

Strabismus -

Divergence -

Amblyopia -

Visio-Spatial Integration -

5. Why is the skill of eye-hand coordination important?

6. Do you have access to adequate information regarding visual processing dysfunction?

YES NO

7. Do you need additional information concerning visual deviances?

YES NO