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Self-concept of visually impaired adolescents: A comparative study of educational placement in public and residential schools

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University of Northern Iowa, 1993

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SELF-CONCEPT OF VISUALLY IMPAIRED ADOLESCENTS: A COMPARATIVE STUDY OF EDUCATIONAL PLACEMENT IN PUBLIC AND RESIDENTIAL SCHOOLS

A Dissertation
Submitted
in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Education

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July 1993

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Approved:

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ABSTRACT

The purpose of this study was to compare the self-concept of teen-age learners who were visually impaired and enrolled in public day schools with those who attended a residential school. The target population was those individuals with a primary functional visual impairment, in the age range of 12 through 18 years, and who were engaged in an academic instructional curriculum. Seventeen students at the Iowa Braille and Sight Saving School (IBSSS) were the residential population, whereas 15 visually impaired students who were receiving support services of the itinerant teacher for the visually impaired participated as the public school population. All known students in the state of Iowa, ages 12 to 18 years, with a primary visual impairment were given an opportunity to be included in the research.

In general, local itinerant teachers of the visually impaired were resources for securing necessary parent and student permissions, in administering the Piers-Harris Children's Self-Concept Scale in the primary learning medium, and in providing demographic information about each student. The researcher made the personal contacts with parents and students enrolled at IBSSS.

Demographic information included chronological age, grade placement, gender, age of onset of vision loss,

learning medium, causation of vision loss, presence of a secondary disability, years of services in the current placement, intelligence, and extent of itinerant teacher services. The two groups had (a) comparable average chronological ages and grade placements, (b) a high proportion of males, (c) vision loss since birth, and (d) comparable frequency of print and braille use. Non-residential students had received their present level of services for more years than residential students. No patterns regarding a specific secondary disability nor cause of vision loss were derived. Most public school students received itinerant services for two hours or less per week.

Using a two-tailed $\underline{t}$ test to compare the difference in the mean self-concept scores for the residential and public school visually impaired students, a $\underline{t}$ value of -1.07, df = 30, and $\underline{p} = .294$ was obtained and deemed not significant. When comparing the difference in the mean self-concept scores of those who used braille and print as the primary learning medium, a $\underline{t}$ value of -.18, df = 30, and $\underline{p} = .859$ was determined and considered not significant. The comparison of mean raw scores on the self-concept scale showed no significant differences in the visually impaired youth included in this study.

The results of this study had limited generalizability and were applied to the visually impaired teen-age population in a rural region where a functional definition of visual impairment was used. The results added information to the overall body of knowledge regarding the impact of educational placement on self-concept and the relationship between learning medium and self-concept among visually impaired youth.

ACKNOWLEDGEMENTS

I appreciate the direction and support from members of my committee, the assistance from the Graduate College, and the example of my peers. Also, I am indebted to the itinerant teachers across the state for their efforts in providing the raw data. I give special recognition to my family and friends who maintained their interest, gave me encouragement, and shared in my excitement. Finally, I thank my God for the ability and courage to set a goal and achieve it.

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CHAPTER I

EDUCATION AND VISUALLY IMPAIRED YOUTH

Introduction

While searching for a comparison of the self-concept of teen-age learners who were visually impaired and enrolled in public day schools with those who attended a residential school, the review of literature indicated the presence of limited data to distinguish the public school from the residential school visually impaired teen-age population.

There was a recurring conclusion that the effects of educational placement on personal and social adjustment, specifically self-concept, of visually impaired youth had not been adequately researched (Abidin & Seltzer, 1981; Cook-Clampert, 1981; Eaglestein, 1975; Thomas, 1979). Historically, the low prevalence of visually impaired school age children, and the diversity within that group, had impacted data collection and reliable research.

Visually impaired youth had participated in residential school programs and day school programs since education became an organized option for the general population. Although during earlier years, individuals endorsed education of the handicapped with the non-handicapped, the momentum from legislation and professional lobbyists for inclusion in the general education program did not exist (McIntire, 1985). With the current emphasis on mainstreaming from the Regular Education Initiative (Will, 1986) and the Individuals with Disabilities Education Act of 1990 (PL 101:476), this research addressed the issue of self-concept as one factor to be considered when making a decision to mainstream visually impaired children.

Purpose of the Study

The purpose of this study was to compare the self-concept of teen-age learners who were visually impaired and enrolled in public day schools with those who attended a residential school. Demographic characteristics of the two groups were compared.

Justification for the Study

A limited amount of research was available on the education and socialization of the visually impaired child (Eaglestein, 1975), and on the development of self-concept among visually impaired children (Cook-Clampert, 1981). Although approximately 90% of visually impaired children were educated within the public school setting (Alonso, 1990), physical integration did not necessarily mean social integration (Tuttle, 1984). The school was the second most important force, following the family, in shaping self-concept (Purkey, 1970). Since the two principle influences on self-concept were school and family, differences may appear due to the inherent variations of living with the family and attending school among the sighted, or residing in an institutional environment and being educated primarily with visually impaired peers.

Self-esteem was commonly viewed as one's feelings (Barksdale, 1972) or the beliefs and attitudes one had about the self (Canfield & Wells, 1976). Since self-concept involved learned attitudes (Canfield & Wells, 1976), the social environment of the visually impaired, either the family or residential population, may impact the self-concept.

Residential educational facilities for the visually impaired and the concept of mainstreaming the visually impaired within the regular education program existed for over a century in Iowa (Iowa Braille and Sight Saving School [IBSSS], 1992). For teen-age students who did not attend a residential school, services of the itinerant teacher and consultant for the visually impaired were provided within the framework of the public school setting. Although general guidelines which were to serve as a basis for decision making were provided by the Iowa Department of Education (Iowa Department of Education [IDOE], 1988), there was an absence of specific criteria to apply in determining the most appropriate educational program for the visually impaired.

Distinct traits and needs particularly related to the vision loss distinguished the visually impaired teen-agers in public day school and the visually impaired youth enrolled in residential schools. Whether or not self-concept was one of those characteristics was the focus of this research. The Guidelines for Programs Serving Students with Visual Impairments (IDOE, 1988) state, "students with visual impairments receive an education in a school program that fosters independence and self-worth" (p. 1), therefore it was expected that the Individualized Education Program decisions of multidisciplinary teams contributed to a positive self-concept of each student without regard for educational setting.

There was a general lack of research regarding benefits of educational options for visually impaired children (Cook-Clampert, 1981); and a general uncertainty existed about the amount of expected academic, social, and emotional change that was implied within an appropriate education (Abidin & Seltzer, 1981). Evaluations of outcomes of other possibilities, such as residential placement, were not readily available in the literature (Abidin & Seltzer, 1981), and the factors which affected outcome of placement were only vaguely and inconsistently identified in professional literature and not verified by research (Thomas, 1979). Overall, the efficacy of services to visually impaired children in any educational setting had not been adequately researched.

Since the Iowa Department of Education uses functional visual impairment rather than legal blindness to determine the presence of a visual impairment (Iowa Department of Education [IDOE], 1990b), there may be wide disparity in interpretation of the basis for program eligibility as a visually impaired child. Furthermore, the criteria on which decisions for public school or residential school placement was determined varied from team to team, and from school district to school district reflecting the lack of a standard by which consideration for services of visually impaired adolescents was determined (Koestler, 1976). A positive correlation between severity of vision loss and extent of special services could have a bearing on the educational placement and on individual self-concept.

Research Questions

The following research questions had been developed for this study.

1. What difference was there between self-concept of visually impaired students, ages 12-18, who attended public day schools and those who attended a residential school?
2. What difference was there between self-concept of visually impaired students, ages 12-18, and their learning mediums?

Assumptions

1. The cooperation of the majority or all of the Area Education Agencies permitted the broadest accessible population possible. With multiple levels of permission, i.e., AEA, parent, and student, it was assumed that those parents and students who agreed to participate in data collection provided a representative sample of the visually impaired population in schools across Iowa.

2. No validity studies for a visually impaired population had been reported by the authors, by other reviewers, nor by others who had used the Piers-Harris Children's Self-Concept Scale (Piers, 1984) in their research. It was assumed that an inventory normed on sighted was considered a reliable measure when used with visually impaired youth, a position which was supported by experts in the field of education of the visually impaired (Cook-Clampert, 1981; Mangold, 1982; Tuttle, 1984).

3. It was assumed that the selection of students was unbiased on those variables which were not measured.

Limitations

Population Selection

With a prevalence rate in the United States of one in every 1,000 school children or 0.1% of the school age population identified as visually impaired (Kirchner, 1988), and the existence of additional disabilities in 70% of all visually impaired children (Jan, Freeman, & Scott, 1977), the availability of subjects was limited. Among the most frequent concomitant handicaps were 80.2% with a mental disability, 38.9% with a speech disorder, and 35.1% with the effects of brain damage (Graham, 1968). Based on a survey of the 1962-63 school year, Jones and Collins (1965) reported that 94% of all residential school visually impaired children and 73% of public school visually impaired children had one or more additional handicaps. In 1965, there was a combined average of 3.18 disabilities per child among the visually impaired in residential settings (Wolf, 1967) and in a 1968 study completed and reported by Lowenfeld (1971b) there were 3.0 handicaps per child in California. There was a significant number of students reported on the state special education roster who received services on the basis of a visual impairment who also received services due to another identified disability.

The ratio of boys to girls who were visually impaired was 124:100 (Hatfield, 1972). As part of this study, information on gender was assembled.

There were 73 visually impaired students, ages 12-18, receiving special education itinerant teacher services in Iowa in 1990-91, according to official state records, as compiled by the Iowa Department of Education with reports from each Area Education Agency (AEA) (Iowa Department of

Education [IDOE], 1990a). The majority of visually impaired students in Iowa received services on the basis of a secondary visual impairment and a primary disability unrelated to loss of vision.

In the residential setting, the total eligible enrollment was 62, of whom 17 met the criteria for inclusion in the study. Those students in the residential population were from 8 of the 15 AEAs.

The entire eligible residential population was included in the study, whereas 15 of 73 visually impaired students represented the public school group. Although it was intended for all public school students to participate, uncontrollable factors reduced that population to 15. Essentially, the research population included all visually impaired students in the state who were of the appropriate age and whose instruction occurred in a general education academic program.

Criteria

Individual multi-disciplinary special education teams in the 15 AEAs across the state made independent professional judgments regarding the presence of a primary visual impairment. Students in the public day schools may have received special education services based on broadly different interpretations of eligibility, as was true of those who were recommended for residential school placement.

The basis for decision making offered by the Rules of Special Education (IDOE, 1990b) is ". . . to such an extent that they require special education" [670-12.3(281)]. By using the standard of functional vision loss rather than a legal definition, less consistency of identification occured. Over 300 school age students were reported to have received services on the basis of a visual impairment in 1990-91 (Iowa Braille and Sight Saving School [IBSSS], 1990), however 73 met the criterion for this study. The other visually impaired youth are either of pre-school or elementary age or have a visual impairment as a secondary disability. An absence of uniformity in characteristics and degree of special needs of the visually impaired students existed in the two educational settings. The presence of guidelines rather than specific criteria related to the inevitable discrepancies in determining eligibility and the type of services provided.

In order to apply a common definition of visual impairment, the sample was limited to one state. Other research studies identified populations according to legal standards which was the degree of visual acuity, while in the state of Iowa, the educational standard or functional vision was applied. Legal references identified degree of visual acuity and differentiated between visual impairment and partial sightedness, while the ability to use print or alternate means of presentation of written material specified educational needs in Iowa.

Volunteer Sample

Use of volunteer subjects, as in this study, complicated the interpretation and generalizability of results (Borg & Gall, 1989). Borg and Gall examined two issues which impacted selection of subjects related to volunteerism. First, as soon as one individual refused to participate, a volunteer sample was created. Second, with legal and ethical restrictions that require informed consent of human subjects, the potential for a sampling bias expanded. In spite of those conditions, educational research commonly used volunteers, knowing that volunteers may differ from nonvolunteers (Borg & Gall, 1989). This study relied on volunteer participation of AEA Directors of Special Education, AEA designated persons, parents, and students. Efforts to reduce bias are described in Chapter V.

Definitions

For purposes of this study, educational definitions outlined in the Rules of Special Education (IDOE, 1990b) and the Guidelines for Programs Serving Students with Visual Impairments (IDOE, 1988) were employed.

Itinerant Teacher

> The services provided by itinerant teachers in Iowa include, but are not limited to (a) direct instruction to develop new skills in students on an intensive short-term basis and/or a long term basis; (b) in-class service/consultation to model teaching techniques on a temporary basis; (c) on-going consultation on a regularly scheduled basis; and (d) consultation on an as-needed basis to provide support to teachers and parents, to adapt the learning environments, and to provide adapted materials. (IDOE, 1990b, p. 8)

References to the itinerant teaching model were frequent in research literature, so the concept of a specially trained professional who provided instructional or consultative expertise at periodic intervals represented a global definition which allowed for comparison of research data. The focus of interventions by the itinerant teacher, as offered by the state of Iowa and used in this research, may not be universal, but the concept of intermittent support services appeared consistently present.

Mainstreaming

Attendance within the regular curriculum of the general education program with services provided by itinerant personnel, which was the only delivery model offered to identified visually impaired students in secondary general education in Iowa. Within that setting, students were assisted by an educational aide or reader, had materials adapted to their reading and response medium, or received orientation and mobility instruction from the Iowa Braille and Sight Saving School (IBSSS) Outreach Department.

Residential School

The setting as provided at IBSSS was employed with the inference that it represented the conceptual residential school used in other research reports. Neither state nor federal regulations defined a residential school, so some descriptions from R. DeMott (personal communication, February 20, 1986) were used. Residential school was considered a 24 hour program, in a separate school setting, a distance from the child's home school and family, and for a special population.

Visual Impairment

"A physical disability, is characteristic of pupils whose vision deviates from the normal to such an extent that they require special education. Educational functioning and visual and adaptive skills are used in determining needs of pupils with visual impairments" (IDOE, 1990b, p. 6). The Guidelines (IDOE, 1988) elaborate and state, "For education purposes, a functionally blind student relies primarily on senses other than vision as the major source of sensory input and channel of learning" (p. 3).

Other research studies adhered to the definition of visually impairment, which according to the Social Security Act of 1935 and the American Printing House Register of

Legally Blind Pupils, was 20/200 or less acuity and 20 degrees or less field of vision in the better eye with the best correction (Kirchner, Peterson, & Suhr, 1988).

Since the Iowa Department of Education did not assemble data that differentiated the degree of vision loss, the students in this research were identified as functionally, but not necessarily legally visually impaired. The definition of functional vision loss

> assumes there is an educationally-significant near and/or distance acuity deficit or a field loss present, not limited to just one eye, to the extent that special services are needed to provide an appropriate education. This definition is an all inclusive term to describe all students requiring special education services who are functionally blind or who have low vision. (IDOE, 1988, p. 3)

Cratty, Peterson, Harris, and Schover (1968) referred to the visually impaired being considered plural, since it did not differentiate from those who were congenitally visually impaired, those who were visually impaired from birth, and those who were adventitiously visually impaired as a result of accident or disease. Visual impairment was one of the disabilities delineated in the Individuals with Disabilities Education Act of 1990 [101.(a)(1)(A)] as descriptive of children with disabilities. The more specific term of "visually impaired," was used in reference to all the subjects without regard to the degree of vision loss but with respect for the intent of the Education of the

Handicapped Act Amendments of 1990 (PL 101:147) and the preferred terminology of "children with disabilities" [101(a)(1)(A)].

Learning Medium

The mode through which a visually impaired child received information from the written page was considered to be the learning medium in this study. Among the learning mediums were tactual (braille), aural (tapes or a reader), and visual (large print).

Self-Concept

Innumerable theories and concomitant definitions of self-concept were reported in the literature, however, the position of the authors of the Piers-Harris, which was used in this research, was accepted. Self-concept was defined as a "relatively stable set of self-attitudes reflecting both a description and an evaluation of one's own behavior and attributes" (Piers, 1984, p. 1). Self-concept focused on the child's conscious self-perceptions, without attempting to infer feelings about self from observed behaviors or the reports of others.

Identical formal definitions were applied to all students in this study. The absence of universally accepted definitions of the constructs used should not diminish the merits of the research reviewed. The variable of interpretations and application of standards cannot be controlled, and must be considered characteristic of the difficulties in accomplishing reliable research regarding the visually impaired young persons.

Summary

The majority of visually impaired teen-agers participate in a public school general education program and were mainstreamed fully into the sighted educational system. The effects on self-concept of the visually impaired youth who were in the public school and those in a residential school had not been investigated nor strongly considered by those who recommended full inclusion of the disabled with the non-disabled. Within the two groups, other factors aside from vision may be significant, including separation from the home environment and their families. With family and school being two major factors that impacted self-concept, it was important to investigate the effects of those variables. Since a positive and realistic self-concept was fundamental for progress toward general happiness and satisfaction, this research intended to determine whether differences in educational placement caused differences in self-concept.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

Research on visually impaired school-age children was hampered by the diversity within that group. Along with the low incidence of visually impaired children, research was more difficult because of concomitant disabilities, health conditions, attitudes and adjustment of family members, degree of vision, visual condition, and visual abilities.

This review of literature included the history of educational options for visually impaired teen-age population, and a review of the criteria in determining placement in residential or public school settings. The nature of self-concept, its development, and factors related to self-concept were reviewed. A portion of the review addressed specific information about the self-concept of visually impaired youth and the impact of residential and public school placements on the self-concept of visually impaired teen-agers. A discussion of the use of volunteers and background information regarding the research instrument were included.

In order to present an overview of significant research on visually impaired youth and their education, studies which may appear to be out-dated were included due to the absence of the quantity of current research. The references which were from several decades ago continue to be cited in contemporary research reports as valuable sources of data.

History of Educational Programs for Visually Impaired Youth

Development of Options

Educating visually impaired children had taken various forms throughout the years, with the types of educational programs reflecting the general attitudes of society. The cycle included separation from society, a ward status, self-emancipation, and integration (Lowenfeld, 1973a). Separation involved either veneration or annihilation, whereas, in the ward status the visually impaired were protected and cared for by society. Through self-emancipation, visually impaired persons developed their own skills and set the stage for the contemporary efforts toward incorporation into society. Since the visually impaired were the first disability group for whom educational programs were provided, their services were more advanced than those for other types of disabilities which resulted in isolation of the visually impaired (Wilson, 1964).

Prior to the establishment of special residential schools in the 1800s, the visually impaired were educated in schools for the sighted or in private schools, making education available for only a few bright and wealthy visually impaired children (Jan et al., 1977). Residential educational settings existed since 1784 when Valentin Hauy established the first institution for Blind Youth in Paris, which later became a model educational program throughout Europe and the United States. In the United States, the first special schools for the visually impaired opened almost simultaneously in Boston in 1832 (New England Asylum for the Blind, now called Perkins School for the Blind), in New York City when the New York Institution for the Blind (now called the New York Institute for the Blind) opened in March, 1832, and in Philadelphia when the Pennsylvania Institute for the Instruction of the Blind opened in 1833. The presence of residential schools for the visually impaired related to the prevalent attitudes of the elite attending boarding schools (Lowenfeld, 1971a).

In 1837, the first state school specifically for visually impaired students in the United States opened in Ohio, with the subsequent establishment of 30 public and private schools between 1832 and 1875. Residential schools were the sole resource for education of the visually impaired throughout the 19th century. Forty-nine existing residential schools were established before 1900, while nine states have never had a residential school (McIntire, 1985). By 1972, there were 50 to 55 residential schools in existence (Koestler, 1976). Inconsistencies in definitions of residential schools accounted for the estimated range rather than a definite number (Koestler, 1976).

The black children who were visually impaired were educated in separate segregated facilities so that by 1931 there were 10 separate residential schools under the shared administration with schools for white visually impaired children. Five schools for black children were independently administered (Koestler, 1976). In 1954, as a result of the Supreme Court decision of Brown v. Board of Education (34 U.S. 483), schools for the visually impaired became racially integrated (Koestler, 1976).

Samuel Howe, as early as 1866, advocated the need for alternatives to residential schools and the inherent hazards of institutionalization, but the actual impetus began in Scotland in 1872 when the Scottish Education Act included provisions for educating the visually impaired children with the sighted. Special school rooms were developed through a geographical grid design in Chicago in 1900; a model which spread to Cincinnati in 1905 and to New York and Cleveland in 1909. In this model, a special classroom within the regular education physical plant was designated for educating the visually impaired students (McIntire, 1985). Those special classrooms were initially referred to as "braille classes" and were influenced by incorporation of the visually impaired into society, the high regard for public education, and the recognition of importance of family life (Lowenfeld, 1973a). The separate braille classes evolved into resource rooms and ultimately into the itinerant teacher in public schools (Lowenfeld, 1973a).

Not until nearly a century after residential schools were established was the concept of mainstreaming seriously reconsidered (McIntire, 1985), when the increased prevalence of retinopathy of prematurity and rubella resulted in over population of residential schools. Due to the family background of middle class parents and nuclear units of these cases of visual impairment, additional pressure was applied to educate the children closer to the family unit (Lowenfeld, 1990).

In addressing the education of the visually impaired with the sighted, the American Foundation for the Blind recognized three educational options for the visually impaired:

> (a) Education in a public or private residential school for the blind, (b) Education with the sighted in public or private schools with a resource room or special class teacher available during the entire school day, and (c) Education with the sighted children in public or private schools with itinerant teaching services available at regular or needed intervals. (Pine Brook, 1954, p. 54)

To emphasize their philosophy of the need of a continuum, their basic premise was "that each blind child should be educated according to his individual needs and that not for a long, long time--if ever--will any one of the three types of education . . . eliminate the other two" (p. 54). Those alternatives continued to be evident in the research which focused on educational options for the visually impaired students.

Trends

Although mainstreaming visually impaired youth had been an option since the early history of public education in the United States, accurate data on prevalence of vision impairment and educational programs was difficult to secure. Five agencies assembled data on visually impaired school age children from various sources and for different purposes: American Printing House for the Blind, Model Reporting Area, National Center for Health Statistics: Health Interview Survey, National Society to Prevent Blindness, and U.S. Department of Education. In addition, definitions of visual impairment vary from state to state, to the extent that 16 different definitions of visual impairment were used in the United States (Koestler, 1976).

Regardless of the primary sources of information, the trend toward mainstreaming was clear. In 1910, 4.5% of visually impaired children attended public school (McIntire, 1985), and 48% in 1948 (Harley, Garcia, & Williams, 1989; McIntire, 1985) making the visually impaired the first students to be mainstreamed in the 1940s and 50s (Bishop, 1986). By 1972, between 61% (McIntire, 1985) and 68%

(Lowenfeld, 1975) of visually impaired students were enrolled in public school. In 1980, 80% (Roberts, 1986) to 95% (McIntire, 1985), of visually impaired students were in day schools, and in 1989, 82% were in regular education settings (U.S. Department of Education, 1989), with estimates upwards of 90% being currently educated in the mainstream (Alonso, 1990).

During these three decades, the residential school population dropped 16% and the public school population increased 105% (McIntire, 1985). Kirchner et al. (1988) and Tuttle (1987) reported that in 1963, 45% of visually impaired children were enrolled in residential schools whereas 24% were enrolled in 1978. A relatively constant ratio of 60% of school age visually impaired children attending public schools, and 40% attending residential schools existed (Koestler, 1976; Lowenfeld, 1973a). In spite of the disparity of available statistics, the trend toward greater mainstreaming of the visually impaired with sighted peers was evident.

The gradual decline of residential population and persistent increase in number of students in regular education had occurred throughout the United States. Traditionally, residential schools provided formal and informal instruction in orientation and mobility, personal care, and other skills that visually handicapped children needed in order to live independently as adults (Spungin, 1982). A broader range of services has gradually developed which related to meeting the educational needs of the visually impaired students within a regular education setting. Harley et al. (1989) reported the availability of service delivery models within local education agencies, as 93% of them having itinerant teacher services, 61% with resource room programs, 54% self-contained classes, 51% consultant services, and 5% in residential settings.

The Regular Education Initiative, which intended to bring together regular and special education (Will, 1986), affected the current professional orientation toward the merits of separate special classes in public school settings. Passage of Individuals with Disabilities Education Act in 1990 (PL 101:476) which amends Education of All Handicapped Children Act (PL 94:142), required "practices having the potential to integrate children with disabilities, to the maximum extent appropriate, with children who are not disabled" [6118(c)(1)(D)]. An issue that called for clarification was "Why students are being mainstreamed into the regular education environment (academic versus social reasons)" (Iowa Department of Education [IDOE], 1991, p. 7).

Placement Considerations

The scope of educational needs and educational programs for the visually impaired was more comprehensive and inclusive than for their sighted peers. The visually impaired was a small group who are more similar to than different from their non-handicapped peers, but they were often considered more different than what they really were (Scholl, 1987). Silverstein (1985) defined the components of education of the visually impaired as academic and vocational skills, self help, social, interpersonal, independent living, orientation and mobility, and play and recreation. Curricular needs required a dual curriculum composed of a traditional academic program along with a disability specific curriculum (Curry & Hatlen, 1988).

The child's social adjustment needed to be known before making a decision regarding placement (Elser, 1959), but social and emotional needs were generally overlooked and decisions were based on cognitive growth patterns (Head, 1980). Decisions to mainstream tended to be based on the assumption that visually impaired children learn appropriate social behavior simply by being in classrooms with sighted children (Hatlen & Curry, 1987). It was claimed that attending a public school program by remaining in the home enhanced social development (Crandell & Streeter, 1977). The degree of interaction with non-handicapped peers should be considered in program placement, but the amount of this interaction was inherently of no greater priority than any other need, whereas the meaning of the contact was important (Curry & Hatlen, 1988). Decisions to integrate were frequently based on physical inclusion and social aspects of the regular class were ignored (Elser, 1959).

The Guidelines for Programs Serving Students with Visual Impairments (IDOE, 1988) stated that the multidisciplinary team should consider factors

> such as (a) current level of functioning in special skills, (b) intensity and scope of instruction needed in special skills, (c) age at onset of visual impairment, (d) anticipated change in visual functioning as determined by an eye care specialist, (e) presence of other disabilities, (f) academic level in comparison to peers, (g) current level of independence, (h) potential level of independence in other environments, (i) vocational goals, and (j) family circumstances. (p. 5-6)

It added that "services to students with visual impairments are based solely on the needs of the students and are not based on current availability of services, geographic location, financial constraints, or other logistical considerations" (p. 7).

Thomas (1979) stated that before a decision of placement was made for a student, the visual condition, medical history, school history and rate of progress, and intellectual functioning and aptitude, should be considered. Since there were no consistent guidelines, the decision making process varied from team to team, school district to school district, and state to state, with decisions largely based on intuition, anticipations, intangible standards, or even on what services were currently available (Bishop, 1990).

From the legal perspective, Silverstein (1985) listed the factors which were considered by the courts and hearing examiners in determining the most appropriate educational placement: (a) existence of multiple disabilities; (b) intellectual ability and academic functioning; (c) social and psychological needs; (d) age, previous experience and training; (e) preferences of parents, local education agency and state education agency; and (f) special education and related services needed to meet the child's needs.

There was agreement that the learning needs of the visually impaired child included instruction in the areas comparable with their sighted age-mates, but also instruction in adaptations in all of the areas associated with adult independence. However, "there are no guidelines to assist decision-makers in recommending the best educational setting for each student" (Bishop, 1990, p. 350).

Residential School

Although the visually impaired students were a heterogeneous group (Hill, 1990), they had unique special education needs (Alonso, 1990; Scholl, 1987). In PL 94:142, it stated that removal from the regular education environment was to occur "only when the nature and severity of the handicap is such that education in regular classes with the use of supplementary aids cannot be achieved satisfactorily" [Sec. 612(5)(B)]. One interpretation of the least restrictive environment referred less to the physical boundaries of the educational setting than to the milieu where a child was least restricted in attaining potential for human growth and educational achievement (Miller, 1985).

A residential program was required when more than six hours of instruction was needed, when language deficiency precluded benefit from peer group and social interaction, and when social and emotional adjustments were poor in the mainstreaming setting (Silverstein, 1985). Education in residential school was justifiable only when the special problems required the use of concentrated specialized services that can be offered only where enough visually impaired children with similar problems can be brought together to warrant offering such services (Pelone, 1957).

The groups of students who tended to be in residential schools were those who had undesirable family situations; or for whom local services were not available; or who were poor prospects for public education facilities, or whose parents had a strong preference for residential schools (Cowen, Underberg, Verillo, & Berham, 1961). Bauman (1964) expanded the factor of parental influence and stated that residential schools were "a dumping ground for unwanted children, children the family is glad to have out of the home . . ." (p. 106). Lukoff and Whiteman (1970) reported the effects of parental expectations on residential placement. They found that, among those who became visually impaired during their childhood, 64% attended a special school when the family had low expectations of independence while 45% attended with medium expectations of parents, and 35% attended a residential school when family expectations were high. However, of those who were congenitally visually impaired, 52% of students with low parental expectations attended a special school, 64% of those whose parents had medium expectations attended a residential school, and 61% of those with high expectations were enrolled in residential schools. Family expectations and enrollment at a special school appeared to be dependent on the age of onset.

Residential placement was appropriate when a visual restriction was of sufficient severity that it interfered with normal progress in a regular education without some modifications (Scholl, 1986a) although the degree of visual loss to be eligible for residential school varied from state to state (Spungin, 1982). Although age of onset of the vision condition seemed to be a factor, placement in a residential school was seldom the function of vision alone (Lukoff & Whiteman, 1970).

Students in residential schools were typically those from remote and less populated areas, whose families preferred residential school, who could not fit into the local public school (Barraga, 1976), or who had more problems than reading (Morgan, 1944). No bias of gender in placement was known since about the same percentage of men and women whose visual loss occurred early in life attended residential schools (Bauman, 1963). Thomas (1979) found through his study of 61 visually impaired children in Detroit, that the most important factor in educational placement was chronological age, with the second most important factor being math score, and the third was availability of psycho-motor curriculum, with grade level, visual efficiency, and sex in descending order of importance and in combination with the first three factors.

Wide diversity existed when considering the criteria for placement in residential settings. However, the majority of prevailing reasons for placement were unrelated directly to the child's visual condition.

Public School

Data available on visually impaired students in the public school yield a scattered profile of the type of students. One of the major problems in education of the visually impaired child was the social effects of sightlessness (Harley, 1973), and this emotional isolation could be avoided if integrated recreation and vocational programs corresponded with academic learning (Wilson, 1964). With closer acquaintance between the sighted and visually impaired children, attitudes toward the visually impaired changed for the better (Lowenfeld, 1973b).

According to Lowenfeld (1971a), visually impaired children who were of at least average intelligence, who were fairly independent, and who were self confident were more likely to be in a regular school program. Thomas (1979) in studying 344 visually impaired students enrolled in Detroit determined that neither measured intelligence, learning medium, nor eye condition significantly influenced the mainstreaming of all children. However, he reported that as chronological age increased, the amount of mainstreaming also increased, and the degree of vision seemed to effect the extent of mainstreaming.

The visually impaired child must have met basic academic, social, and emotional prerequisites for mainstreaming and must be confident in the use of special equipment in order to be emotionally independent (Hubbard, 1983). She promoted reverse mainstreaming as an effective means of enhancing social development. Pelone (1957) found that mental age was among the factors determining success in mainstreaming, with computational math skills being another predictive factor.

No one disputed the desirability of regular classes, if such inclusion contributed most to the social, emotional, physical, and educational growth (Pelone, 1957). Yet the education provided for many visually impaired students in the mainstreaming may be insufficient and inferior to the education of their sighted peers and other handicapped learners (Alonso, 1990). An advantage of mainstreaming was that it allowed the visually impaired adolescent to compare his or her needs, interests, and fears with those of the non-disabled (Mangold & Mangold, 1983). It was generally accepted that the high school student with a solid foundation of special academic and communication skills should be able to handle a mainstreaming placement (Curry & Hatlen, 1988).

By studying expectations within regular education, Hill (1990) reported that elementary regular education teachers made an average of 16.78 modifications for visually impaired students, while secondary teachers made 7.91 modifications, which were both typical and substantial adaptations. He perceived that both practice and attitude of regular education teachers should be considered in making decisions to mainstream visually impaired children. Bishop (1986) concluded that the regular education teacher was the most important factor in successful mainstreaming of visually impaired children.

Wolman (1958) conducted research with children in a nursery school and kindergarten, and concluded that visually impaired children were so well integrated that an uninformed observer might not be aware of the handicap. Lowenfeld (1973b) reported that young children accept visually impaired schoolmates to a greater degree than older children. Jones, Lavine, and Shell (1972) studied students in grades four through six, and found that visually impaired children who were chosen in the sociometric device were selected by sighted children who were below the mean in acceptance and were socially isolated.

Bateman (1962) concluded that subjects who had known visually impaired children were more positive in their appraisals of those children's abilities than those who had not known visually impaired children. That acceptance increased in grades three through six and leveled off in grades six through eight. In general, urban children were more positive toward the visually impaired children than the rural classmates. However, Eaglestein (1975) found evidence that with increasing time in school, the visually impaired children experienced a certain degree of rejection and lowering of social status. Among high school students, the correlations indicated that the longer the visually impaired student was known by the classmates, the less likely he was to be liked and the less likely others were willing to interact academically with him (Eaglestein, 1975).

Wyder, Wilson, and Frunkin (1967) tested the hypothesis that the more positive information people had about the visually impaired population, the less handicapped the visually impaired were seen. Wyder et al. (1967) conducted research with 64 teachers and concluded that regardless of the information about visual impairment, the sighted perceived the visually impaired as more handicapped than visually impaired persons viewed their own visual impairment as a handicap. Steinzor (1966a) found that among elementary children in one school the greatest rejection of visually impaired occurred during the first contact in regular education classes, whereas the least rejection was evident when sighted peers had been in classes with some visually impaired children for one or more years but were no longer with them. In another elementary school, the greatest rejection was at the beginning of the year and by the end of the year, the visually impaired were perceived as the same as non-disabled peers. Among junior high students, there was no difference in attitudes of rejection of visually impaired peers regardless of whether or not there was immediacy of contact. However, cooperation was highest when visually impaired and sighted peers attended classes together.

The social environment of a visually impaired person appeared different from the social environment of a sighted person (Foulke, 1972). For interaction between visually impaired and non-handicapped children to be an outcome of mainstreaming, Hoben and Lindstrom (1980) concluded that encouragement would have to be explicit. That impression was based on their data showing that 41% of the visually impaired students spent unstructured time alone and 61% of the teachers reported that visually impaired students interacted less frequently than their classmates. Forty-seven percent of the visually impaired wanted to be approached while 40% did initiate interactions.

Advocates of mainstreaming purported the benefits for the whole child, yet there was no conclusive evidence that all needs of the child were considered in making the decision regarding mainstreaming. At the same time there was not clear evidence that supported integrated educational placements in themselves as assurances of educational or personal success (Bishop, 1990). Research on the efficacy of integrating visually impaired children with non-handicapped children received relatively little attention (Scholl, 1983), yet the practice was strongly encouraged.

There did not appear to be a standard set of criteria on which to determine success of mainstreaming visually impaired students in general education resulting in ambiguity regarding the merit of meeting the social, emotional, and academic needs of mainstreamed visually impaired children. Evaluative research was needed to determine whether and under what conditions mainstreamed education was successful (Scholl, 1983), and to establish a common basis on which to make decisions.

Nature of Self-Concept

The nature of self-concept had been defined and researched for nearly a century, yet it remained a construct in which there was persistent interest and debate. This review focused on selected theorists' perceptions and perspectives on self-concept.

May (1985) asserted that most of the definitions of self-concept as well as the studies had little if any correlation and therefore there was no vertical or cumulative data to support a single definition. He viewed self-concept as a psychological construct that had been created in order to study this highly intangible area. Winne and Marx (1977) defined self-concept as a unitary construct rather than one broken down into distinct subparts or facets in a nomological network. Battle (1981) clarified by stating that self-esteem was not dependent on any one factor, but on a combination of factors, while Wattenberg and Clifford (1964) specified two independent aspects of competence and personal worth.

Many experts noted that one's self-concept developed from observing what others think about oneself (Dion, Berscheid, & Walster, 1972; Murphy, 1960), while others viewed self-concept as the perception of oneself relative to the physical and social environment, or that which is not-self (Scholl, 1973). Self-concept can be seen as a social looking glass through which ideas and feelings about self emerged as a result of interaction with others (Wright, 1960) or the picture one had of oneself (Obiakor & Stile, 1989).

Coppersmith (1967) defined self-esteem as the evaluation a person made and maintained with regard to self. It expressed an attitude of approval or disapproval and indicated the extent to which a person perceived the self as capable, significant, successful, and worthy.

Self-concept, as defined by Perkins (1958), included the perceptions, beliefs, feelings, attitudes, and values which the individual viewed as describing oneself. It was the content of a person's perceptions and opinions about self, and it was the set of attitudes and beliefs that a person brought when facing the world (Coopersmith, 1981).

Epstein (1973) stated that the major motive of self-concept is unity as it determined what concepts were acceptable for assimilation into the overall personality. The two basic functions of self-concept were: (a) it organized experiences into a predictable sequence of action and reaction, and (b) it facilitated fulfilling one's needs in order to avoid disapproval and anxiety. A similar perspective was evident as Purkey (1970) identified important characteristics of the self as: (a) self was organized and dynamic; (b) self was the center of the personal universe; (c) everything was observed, interpreted, and comprehended from the personal vantage point; and (d) human motivation was the product of the universal striving to maintain, protect, and enhance the self.

Most personality theorists considered self-concept as highly important to personality and adjustment (Delafield, 1976), while psychologists agreed that a positive self-concept was a prerequisite to an individual's personal happiness and effective daily functioning (Cook-Clampert, 1981), and was an integral part of performance (Coopersmith, 1967). Expectations of certain attitudes and feelings toward oneself were rooted in one's self-concept (Wright, 1960). Jervis (1959) expressed the idea that self-concept was learned and seemed basic to personality structure, to the extent that self-concept was the core of an individual's personality. Self was learned and it became a perceptual screen through which subsequent impressions must pass (Canfield & Wells, 1976). Rapp (1974) determined that self-concept was a spherical concept based on all around feelings of trust, as it moves through a developmental sequence of dependency, independency, and interdependency.

Three aspects of self-esteem were described by Lowenfeld (1973b). First, there is a general self-esteem which remained somewhat constant and enduring over several years. Second, self-esteem may vary different areas of experience, and third, the judgmental process of adapting and modifying self-esteem may be conscious or unconscious. The major factors relating to the development of self-concept proposed by early theorists and as conceptualized by Coopersmith (1967) were: (a) the amount of respectful, accepting, and concerned treatment an individual received from the significant others; (b) the history of successes and the status and position held in society; (c) the interpretations and modification of values and aspirations according to experiences; and (d) the manner of responding to devaluation.

Piers (1984) used a global definition of self-concept and referred to "a person's self-perceptions in relation to important aspects of life" (p. 43). She established six theoretical assumptions about the nature of self-concept.

First, that self-concept was phenomenological in nature, and must be inferred from either behaviors or self report and cannot be observed; Second, that self-concept had both global and specific components; Third, that self-concept was relatively stable over time; Fourth, that self-concept had both self-evaluative and self-descriptive aspects; Fifth, that self-concept was experienced and expressed differently by children at various stages of development; and Sixth, that self-concept served an important organizational function and plays a key role in motivation. The self reporting scale used in this research was developed within that theoretical framework.

Development of Self-Concept

Several experts contended that the self-concept of visually impaired children developed as a result of the same influences and in the same sequence as that of sighted children (Hannimen, 1979; Mangold, 1982; Scholl, 1973), although the concept of self with visually impaired children was slower to emerge (Fraiberg, 1977). Formation of a self-concept was a crucial emotional developmental task for visually impaired children (Hazekamp & Huebner, 1989).

Vision was the primary means by which information about the world was initially determined and the means by which children learned to differentiate themselves from their environment (Maron & Martinez, 1980). During the formative years, the need for vision was essential for development of self-image. Therefore, the self-image of the visually impaired can be adversely affected by the lack of stimulation from inanimate things and people in the environment, the difficulty in separating self from the environment, the inability to imitate gestures and behavior, and the tendency to use self as a source of stimulation instead of external stimuli (Scott, 1969).

Supporting the notion that self-concept was learned, the lack of incidental visual input seemed to be a disadvantage for visually impaired children. Visually impaired children, like sighted children, internalized feelings, values, and expectations of the role models and adopted them (Maron & Martinez, 1980), while the visually impaired child tended to form expectations and roles according to those set by the social environment (Handel, 1960).

Coopersmith (1967) identified the basis of development of self-esteem as three primary factors: (a) total or near total acceptance by parents, (b) clearly defined and enforced limits, and (c) respect and latitude for individual actions that occur within the limits. To develop an adequate and realistic self-concept, one needed (a) love, security, and care; (b) a wide range of experiences that approximate those available to the sighted; and (c) experiences that include success and failure in order to learn self-appraisal (Scholl, 1973). Self-esteem was influenced primarily by two sources, the reflections of others, and the judgments of one's own competence (Tuttle, 1984).

Martinek and Zarchkowsky (1977) stated that the primary self-concept was formed with members of the family, while the secondary self-concept was formed from relationships developed outside the home. The degree of assimilating the two concepts into healthy expectations of the role in society were means to develop a positive self-concept. There was a basic need for the existence of family, school, and peer group relationships for a high self-concept (Martinek & Zarchkowsky, 1977).

The development of self-concept began at the time of conception as the reason for the pregnancy affected the immediate reaction to the new birth (Rapp, 1974). Heredity and body chemistry played a role in self-concept development, along with nutrition and physical exercise (May, 1985).

The major impact of a visual impairment on the development of the ego identity was the difficulty in distinguishing self from the non-self (Fraiberg, 1977). Deviations in ego development were not associated with any etiology of visual impairment, although abnormalities were associated with total or nearly total lack of sight from birth and a history of inadequate emotional stimulation in early months (Fraiberg, 1977). Research in ego development suggested that disruptive patterns of affective development probably had their beginnings during the first 18 months of life (Barraga, 1976).

Early hospitalization of visually impaired infants and the lack of eye contact were two significant factors related to development of their first meaningful relationship with the mother which formed the basis for future socialization efforts (Scholl, 1973). Multiple research reports documented the relationship between early parent child interaction and later affective development and indicated that visually impaired children with poor infant-parent relationships tended to become very aggressive and clingy or show marked dependence (Schuster, 1987).

Development of a positive self-concept in visually impaired children was more difficult than in the sighted since the loss of vision was considered defective in the visually impaired baby which caused some parents to withdraw. Because the first feeling of love occurred when the baby fixated on the mother's face (Robson, 1969), the lack of eye contact made the baby seem uninterested and unfriendly (Fraiberg, 1977). The fact that visually impaired babies vocalized much less, had less variety and frequency of facial expressions (Sommers, 1944; Wright, 1960), and smiled significantly less (Fraiberg, 1977) impeded establishing a basic relationship with a significant other. Cook-Clampert (1981) stated that overprotection and overassistance contributed to a lower self-concept by interfering with development of initiative, independence, and the realization of one's abilities. On the other hand, there were some parents who push the visually impaired child to be normal, so rather than attempt and fail, the child refused to try and developed feelings of inadequacy and worthlessness. In addition, the prolonged period of immobility during the first year of life represented a serious threat to ego development of the visually impaired child (Fraiberg, 1977).

Disagreement existed regarding the stability of self-concept throughout life, and particularly during adolescence. The literature failed to yield any specific information regarding stability of self-concept of visually impaired adolescents (Head, 1980). Self-concept, as measured by the Piers-Harris, is relatively stable (Piers, 1984), which may be an important dimension of personality (Brownfair, 1952). Martinek and Zarchkowsky (1977) reported that young children had relatively unstable self-concepts which began to stabilize in about second or third grade. By school age, self-concept was quite well formed and the behavior was determined by the beliefs and attitudes one had about self (Canfield & Wells, 1976). However, Scholl (1973) stated that self continued to evolve as the environment provided success and failure experiences that formed the basis for evaluation of oneself and what one can and cannot do, and that throughout life change was constantly occurring in self-concept as one perceived reactions of others.

Purkey (1970) determined that the expectations of significant others became internalized into self perceptions, and that even before 2 1/2 years the child had defined a relationship with the significant others. He further posited that some parts of the self-concept were peripheral to the core of the self and were therefore unstable, while other parts were central to the self and therefore highly resistant to change.

Engel (1959), after studying 1,972 adolescents in public school, found that self attitudes were relatively stable, although probably less so in childhood than in adolescence. Coopersmith (1967) reported that self-concept became relatively stable and enduring over a period of years. Adolescence was the normal period of greatest flux in self-concept (Davis, 1964), but after a point of maturity in adolescence, the self-concept crystallized (Meighan, 1971). Hill (1957) involved ninth, tenth, and twelfth grade students and concluded that attitudes toward self improved with chronological age, more so among the higher socioeconomic groups than among the lower socioeconomic subjects. Impact of environmental factors was evident as the self-concept took on attributes of the environment and vice versa (Rapp, 1974).

Self-concept developed in a rather systematic way, although due to the lack of visual feedback and visual interactions in infancy, the visually impaired child might be expected to be treated differently by significant others in the family and thereby develop a negative sense of self. The influences of the early years prior to formal school enrollment seemed of primary importance in establishing an openness to the other social environments.

Factors Affecting Self-Concept

Few aspects of a visually impaired child's early socialization were not profoundly affected by the presence of a disability. "The development . . . of the ability to communicate meaningfully with others, the emergence of a clear body image . . . self-concept development, and participation in interpersonal relationships--all of these things are markedly altered when vision is absent" (Scott, 1969, p. 1025). Research related to areas that were particularly relevant to this study on self-concept were reported.

Significant Others

Since the environment of the visually impaired child molded much of the self-concept, the attitudes of significant others in relation to historical attitudes had remarkable impact (Thomas, 1979). Coopersmith (1967) broadened the significant others concept and stated that self image was formed largely by the way one was treated by significant persons, the parents, teachers, and peers. The status of the visually impaired was determined in large measure by the attitudes and expectations of the milieu (Lukoff & Whiteman, 1970).

In groups of over and under achievers, there was a significant correlation between the expectations of significant others and the student self-concept (Brookover, Thomas, & Paterson, 1964). They concluded that experience of success was not needed as a prior condition to enhance self-concept, but the evaluations of others were sufficient to enhance the self and to increase achievement.

Family. Parents had the most influence in early life and in the development of the self-concept (Hannimen, 1979), and the emotional climate of the family was more important than economic or social factors, such as the amount of punishment, amount of time spent with parents, physical attractiveness, education, income, social class, and ethnic background (Purkey, 1970). A significant association between self-concept and the child's perception of each parent as loving has been established, whereas high self-esteem was a reflection of parents' acceptance (Mangold, 1982).

Early in the developmental process, reflections from others played an important role in shaping one's self-concept, and the majority of parents had difficulty accepting the child and the visual handicap (Sommers, 1944). For the visually impaired, emotional difficulties related more closely to the early home experiences and to their general background than to the visual deficit (Benton, 1951). Being accepted by the peer group as an adolescent hinged on being accepted by the family and the neighborhood (Scholl, 1973). Siblings described the visually impaired as needing more help than the sighted, showing no competition, and expressing more attitudes of kindness or aggression (Steinzor, 1967). Steinzor (1967) found that siblings of visually impaired youth had little contact with other visually impaired persons, had no real interest in learning about loss of sight, and talked very little about the loss of sight with the visually impaired sibling nor with others.

Visually impaired individuals made a wholesome personal and social adjustment when the early life provided reasonable economic, physical, and emotional security, when accepted by the family, and when the family faced the handicap in an objective way (Sommers, 1944). If significant others (family and sighted friends, not employers or other visually impaired persons) expected independence, the visually impaired child was likely to become independent (Lukoff & Whiteman, 1961).

The adjustment of the visually impaired child was closely related to parents' own personal and social adjustment to life with parental attitudes and actions being the most significant factors. Adjustment problems resulted from stimulus-poor social environment, with such overprotection being more detrimental than rejection (Sommers, 1944). An unrealistic self-image may be acquired due to an over-emphasis on abilities by family and peers (Scholl, 1974). When the visually impaired child was emotionally secure and felt accepted by the parents, the adjustment to school, to life, and to the handicap were wholesome and constructive (Hannimen, 1979). Feelings of negativism were definitely related to the physical loss experienced, but the greatest problem for the visually impaired child in forming a self-concept was the negativism within the miniature society of significant others (Meighan, 1971).

School. During the first years of school, feelings of acceptance and rejection became deep within the individual (Chapman, 1978). The influence of the school was clear, as it was viewed as the single most important force, after the family, in shaping self-concept (Purkey, 1970). Attitudes that visually impaired persons encountered in their immediate environment (school) were crucially related to social adjustment (Marsh & Friedman, 1972). Attitudes toward visual impairment by sighted school personnel and students were important because (a) they conditioned the environment; and (b) they influenced the expectations for academic achievement, standards of conduct, and the extent to which the visually impaired were seen as desirable schoolmates and friends in extracurricular activities (Marsh & Friedman, 1972).

Among a group of nursery school children, there was a direct correlation between the teachers feelings toward the visually impaired child and the acceptance by the group (Wolman, 1958). Among 309 educators who rated handicapping conditions, visually impaired students were the least preferred to delinquents, but there was a trend toward a positive correlation about how much one knew about the exceptionality and the acceptance (Murphy, 1960).

Behavior

A child's overt actions may be an expression of perceptions of self and the extent of overall behavioral adjustment. There seemed to be a consensus regarding the relationship between self-concept and behavior as summarized by Combs (1952): "The possession of a particular concept of self tends to produce behavior that corroborates the self-concept with which the behavior originated" (p. 668).

Fitts (1972) concluded that self-concept was a significant variable in human behavior, and Coopersmith (1967) identified a close relationship between self-esteem and individual behavior. The lack of vision affected the way a person thinks (Monbeck, 1973), the behavior (Foulke, 1972; Monbeck, 1973), and restricted the range of behavioral possibilities (Foulke, 1972). Coopersmith (1967) described self-esteem as the most important requirement for effective behavior, and Delafield (1976) established a close link between good adjustment and high self-esteem. The motive behind all behavior was the maintenance and enhancement of the perceived self (Purkey, 1970), which made self-concept of such significance that it was the most important variable in psychopathology and therapy (Larson, Boyle, & Boaz, 1984).

In general, positive self-concept would be expected to be negatively correlated with emotional and behavioral difficulties (Piers, 1984), although May (1985) stated that a positive self-concept did not necessarily mean the absence of maladaptive behaviors.

Anxiety

Deprivation of the visual area appeared to be the greatest sensory stressor and hampering of movement is clearly a secondary handicap (Bauman & Yoder, 1966), but Hardy (1968) found no significant difference between visual acuity and anxiety scores among the 122 visually impaired students in a residential setting. A negative self-concept was closely related to anxiety according to several reported studies that used the Tennessee Self-Concept Scale (Fitts, 1972). Except for sixth grade girls, Bledsoe (1964) found a negative correlation between anxiety and self-concept among the fourth through sixth grade subjects. These studies confirmed the evidence that negative self-concepts were closely related to anxiety.

Jervis (1964) held the position that there was very little anxiety among visually impaired persons because public expectations were low making it easy for the visually impaired to measure up. However, Dean (1957b) used the Taylor Manifest Anxiety Scale, and found that the visually impaired, as a group, had high anxiety.

Patterns of development of locus of control in visually impaired children were similar to those with normal sight (Parsons, 1987). In a small sample of residential students, internal locus of control for positive academic events increased significantly with age (Parsons, 1987). Using 34 individuals, average age of 16.4, in a residential setting for the visually impaired in Arkansas, locus of control was found to be significantly related to self-concept, with external control being related to low self-esteem (Roessler & Boone, 1979).

Skills and Abilities

Self-concept had a crucial role in all areas of striving (Chapman, 1978), including governing the way an adolescent came to terms with new problems and opportunities in personal and working life. Jervis (1964) reported self-concept as a basic need to feel adequate, to feel competent, and to feel effective as human beings as part of the self as part of a process. Feelings of self-concept and social competence were dependent on the ability to demonstrate the same skills as sighted peers (Barraga, 1976). In addition, successful students had higher self-esteem scores than less successful peers (Battle, 1981).

Success experiences were necessary to develop an adequate self-concept, but failures were necessary to develop a realistic self-concept (Scholl, 1973). Because society views loss of sight as a seriously debilitating handicap (Rogow, 1970), public expectations for visually impaired individuals were low, therefore, it was easy for the visually impaired to maintain feelings of adequacy

(Bauman & Yoder, 1966). Some visually impaired adolescents sought perfection because they believed their sighted peers were perfect (Mangold, 1988), made fewer mistakes, and performed at an overall higher level (Parsons, 1987). McIntire (1985) found that children with a visual impairment often believed their sighted peers functioned much more effectively than they did and often attributed their failures to the visual deficit. Visually impaired youth have attributed responsibility for their successes and their failures to others (Parsons, 1987). However, because of their inability to perform some common school tasks, visually impaired youth perceived themselves as devalued or incapable (Hazekamp & Huebner, 1989). Avoidance of the visually impaired was studied by Schulz (1975), as he reported the tendency of the general population to assign less value to contributions of visually impaired persons and thus to avoid them.

Creative persons had high self-esteem as do persons who assumed active roles in social groups and those who moved more directly and realistically toward personal goals (Coopersmith, 1967). Children with high self-esteem believed they were good at many different things as a result of the self-esteem rising because of comments made about their overt actions (Mangold, 1982). Agreement existed as

Shaw and McCuen (1960) reported that more successful students tended to evaluate their worth more positively.

The visual impairment placed the child at a disadvantage in the areas of sensory stimulation, concept formation, and communication (Scholl, 1973). Using matched pairs of 11 to 13 year sighted and visually impaired children she found a significant difference in concept development. Visually impaired children functioned primarily at the concrete and functional level, had deficiencies in abstract concept formation (Zweibelson & Fisher Borg, 1967), and found it difficult to develop new solutions to problems due to their rigidity of thinking (McAndrew, 1948a).

In spite of their appearance of self-confidence, testing showed that visually impaired individuals had very little confidence in their abilities (Benton, 1951). Children with visual impairments were often delayed in acquiring skills of independence and self-concept (Parsons, 1987).

There is no overall agreement regarding the relationship of self-concept and intellectual level. Bledsoe (1964) established a positive correlation between intelligence, achievement, and self-concept in boys in grades four through six in Georgia. Coopersmith (1967) established a .28 correlation of intelligence and self-esteem for pre-adolescent males. In his studies, Battle (1981) determined a .70 correlation between self-esteem and perception of ability among subjects in grades one through eight, with no significant correlation between self-esteem and intelligence.

Body Image

The physical self was the first component of self-concept (Tuttle, 1984), and a good body image was the core of a healthy self-concept (Tuttle, 1987). One's knowledge of body image and the many culturally desirable social skills were integral parts of one's self-concept and affected by "legal blindness" (Schuster, 1986). Because body image was usually acquired through vision, and since the natural development of tactile and verbal skills was later, the formation of body image was delayed in the visually impaired child (Scholl, 1973).

The "role of physical appearance in the formation of a strong self-concept is well documented" (Head, 1980, p. 67). Conversely, "the literature often regards blindness as a hindrance to establishing a body image, but no valid research has demonstrated this as a fact" (Cook-Clampert, 1981, p. 236). The loss of vision retarded the development of physical skills especially those learned by imitation, and had an indirect effect on physical or personal appearance (Scholl, 1974).

A mental image of one's body structure or body image was of extreme importance in the development of a satisfactory concept of one's self, as well as vital in order to avoid a distorted self-concept (Davis, 1964). He identified two major stages in developing a body image: (a) realizing that the mother was not an extension of the self, and (b) differentiating oneself from others and from the environment. Weitzman (1986) referred to the important link between body image, self-esteem, and general performance.

Canfield (1986) expanded the notion about feelings toward the body, and added that one must feel good about the body, not just how it looked, but how it functioned, how it felt, and how the person felt in it. Besides physical appearance, per se, a person's voice, gestures, posture, and performance expressed self-esteem (Coopersmith, 1981).

Operating from the premise that body-cathexis was believed to be integrally related to the self-concept, Secord and Jourard (1953) concluded that the body and the self tended to be cathected to the same degree. Through studying 116 institutionalized dependent and/or neglected adolescents, ages 11 to 18, with the Piers-Harris Children's Self-Concept Scale, Brunn (1975) indicated that self-concept and body cathexis were closely related. Weinberg (1960) concurred with the correlation of body cathexis and self cathexis, but the correlation was greater for males in his study of college students.

Meaningful leisure time activities greatly enhanced self-esteem as well as the awareness of what the body was able to do with encouragement and practice (Mangold, 1982). Physical fitness impacted on body image, on self-concept, on emotional health, which in turn impacted on one's ability and willingness to cope productively and positively with life's exigencies (Weitzman, 1986). Cratty and Sams (1968, p. 7) stated that "it is reasonable to assume that his feelings about himself are related to the quality and quantity of movement he perceives his body capable of making." An awareness of the orientation, position, and structure of the body in space was thought to be a basis for successful mobility (Chorniak, 1977), while facility in mobility training significantly enhanced self-esteem (Welsh, 1972). If pathways to human attachment were not found, essential conditions for ego formation were lacking with coordination of ear and motor systems being another vital impediment (Fraiberg, 1977).

The person's physical appearance was the personal characteristic most obvious and accessible to others in social situations with the focal point being the facial region, specifically the eyes. Therefore, social intercourse may be more difficult between the sighted and the visually impaired due to the cultural expectation of maintaining eye contact (Dion et al., 1972).

There was a consensus of theories demonstrating a positive relationship between the body image and the self image. Since the visually impaired child cannot visually perceive body characteristics, self-concept may be negatively affected.

Achievement

A great deal of research indicated that "self-concept is positively related to academic success" (Yauman, 1980, p. 30) and that the "importance of a healthy self-concept as it relates not only to academic success but to overall adjustment is well recognized" (Yauman, 1980, p. 34). Purkey (1970) summarized literature related to self-concept and achievement and concluded that "there is a persistent and significant relationship between the self-concept and academic achievement" (p. 27). A positive correlation was established between performance quality and esteem (Erickson & Nosanchuk, 1984), and increased perceptions of self-concept correspond with increased cognitive learning (Purkey, 1970). Wattenberg and Clifford (1964) reported that kindergarten children's feelings about themselves were a better indicator of reading readiness than scores on intelligence tests.

When controlling for ability, there was a significant relationship between self-concept and grade point average among a group of 1,050 seventh grades identified as under and over achievers (Brookover et al., 1964). However, Meighan (1971) found no significant correlation between the self-concept of the visually impaired and their academic achievement.

Socialization

Eaglestein (1975) stated that education and concomitant socialization of the visually impaired child had not been the focus of much investigation. Visual impairment was usually a neutral factor of socialization of the child (Thomas, 1979), although Klich and Wierig (1971) found that emotional adjustment ratings showed a significant relationship with clique membership among visually impaired adults. The conclusion from the 400 studies reported, was that interpersonal behavior was predictable from the self-concept (Thompson, 1972). It was through social interaction that standards for self-evaluation are developed and present self-evaluations are formed (Wylie, 1979).

It was not possible to determine a clearly "blind personality" (Chorniak, 1977) although perceptions of society tended to be generalized to all visually impaired persons, and lack of social acceptance for the visually impaired was associated with academic underachievement, physical incapability, and social maladjustment (Obiakor & Stile, 1989). Through communications, members of society acquired beliefs regarding the significance of visual impairment, which influenced the behavioral interactions between the sighted and visually impaired people (Foulke, 1972).

Visual impairment deprived the person of critical avenues of social interaction, the non-verbal communication (Scholl, 1974), and since the visually impaired child had less control of social interactions because of lack of eye contact there was a tendency to turn attention inward (Tait, 1972). Many visually impaired young women exhibited a shocking lack of social skills, as they were delayed in coming to emotional and social maturity not because of the visual impairment but due to lack of exposure to models and of guidance from support systems (Mangold & Mangold, 1983).

Visually impaired adolescents had little difficulty with companions of the same sex, but had difficulty in relationships in heterosexual adjustments (Wright, 1960). While junior high visually impaired youth experienced an attitude of superiority by the sighted, the sighted persons, in general, tended to avoid those who were visually impaired or showed reluctance to meet them in a close personal relationship (Steinzor, 1966a). Within the public school setting, the visually impaired were found to rank in the middle of the acceptance continuum for a variety of handicaps (Jones et al., 1972; Lowenfeld, 1973b).

Striving for social status and social approval were a good part of self-esteem (Janis, 1954), as was group membership (Purkey, 1970; Scholl, 1986b), a more or less permanent social group (Coopersmith, 1967), a knowledge of being a member of a social group (Brown & Williams, 1984), and the child's reference group (Piers, 1984). Brookover, Thomas, and Paterson (1964) concluded that the self-concept was influenced more by community opinion than a reflection of a specific significant other. Scholl (1973) supported the social interaction theory and stated that self-concept developed as a result of experiences provided by the environment and the feedback offered by one's peers. What was experienced as self was a reflective product of social interaction (Cottrell, 1969).

Socialization and stigmatization of society affected self-concept of the visually impaired (Mancil, 1987). Fitts (1972) reported on his 1954 study in which he found some relationship between self-concept and the accuracy of social perceptions, but a strong relationship between self-concept and the nature of social perceptions. He found that individuals with high self-concepts see themselves as similar to others or exhibit an "assumed similarity."

It was difficult to over estimate the impact of significant others in the early environment (Purkey, 1970). Purkey added that the need for unconditional acceptance and feelings of being wanted, liked, valued, and healthy, contributed to the child becoming a reflection of the treatment. The mastery of the environment was an intrinsic motivation for children in order to have greater control over the world (Coleman, 1983).

Harley (1973) found that maladjustment was a result of the self-concept imposed on the visually impaired by attitudes of sighted persons in the home, school, and community. He stated that the visually impaired accepted others' judgments of deficiency and devaluation and therefore devalued self which can lead to adjustment problems (Harley, 1973).

Visual handicaps of any kind jeopardized the individual's chances of making a good social adjustment, which was secondary to the emotional factors that go hand in hand with any physical handicap (Benton, 1951). Any maladjustment was due to attitudes of sighted persons toward the visually impaired, and the emotional stress placed on them by the sighted in social situations (Hannimen, 1979). Mayadas (1975) contended that to be accepted, the children with a visual impairment acquiesced to sighted expectations and molded their self-images in ways that may or may not be in agreement with their own abilities.

The visually impaired child was handicapped in initiating social contacts and in knowing whether or when there were acceptance and acceptability (Scholl, 1973). Curry and Hatlen (1988) reported that many young adults who were visually impaired did not have skills to initiate conversations, dress appropriately for interviews or work, or ask for or refuse assistance. Overall high school graduates with a visual impairment were weak in social and emotional functioning (Hatlen, LeDuc, & Canter, 1975; Morrison, 1974). Emotional and social problems occurred in the visually impaired because of reactions around them, not the disability itself (Sommers, 1944).

Self-Concept and Visual Impairment

Most findings indicated that visually impaired adolescents as a group showed somewhat higher incidence of personal and social maladjustment (Hazekamp & Huebner, 1989), and lower self-concept (Obiakor & Stile, 1989) than their sighted peers. The self-concept of visually impaired and sighted adolescents appeared essentially similar (Lowenfeld, 1973b) although there may be special problems because of lack of sight (Lowenfeld, 1959).

Visually impaired and sighted teen-agers had similar educational aspirations although as a group the visually impaired had lower occupational expectations (Bush-LaFrance, 1988). Sommers (1944) concluded that the visually impaired and sighted adolescents worried about the same problems, but with different emphasis. The visually impaired sought security and independence, while the sighted wanted a happy marriage and a home.

Conflicting conclusions emerged regarding adjustment of visually impaired children as compared with their sighted peers (Maron & Martinez, 1980). Obiakor (1986) found only minor differences between the groups and concluded that school experiences affect both groups in similar ways. The visually impaired group was significantly happier and more satisfied than non-handicapped peers (Coker, 1979). Other research reports indicated no difference in self-concept between the sighted and visually impaired (Jervis, 1959; Zunich & Ledwith, 1965). Visually impaired teen-agers scored significantly lower on the family scale, lower on the moral/ethical scale, but not significantly lower on the physical, personal, and social scales (Beaty, 1991). On the contrary, Brieland (1950) reported that visually impaired children were less well adjusted but there was not a significant difference regarding home adjustment. Poor adjustment on all subscales was recorded by Meighan (1971) with the identity score being the lowest.

Cook-Clampert (1981) stressed that there was a severe lack of research on the development of self-concept among visually impaired children, and little was known about the detriments to the personality development of a visually impairment (Warren, 1984). Some researchers questioned whether the visually impaired child can develop an adequate and realistic acceptance of self, including distinguishing between the self and the non-self, due to the lack of feedback from the mirror, and the inability to perform by imitation (Scholl, 1974).

Loss of sight was the most universally dreaded of all disabilities (Koestler, 1976), was regarded as secondary only to loss of life (Mayadas & Duehn, 1976), and was the most severe of all physical disabilities (Handel, 1960; Scott, 1969). A visual impairment primarily interfered with physical ability and the ability to allow emotional energy to drain off gradually (McAndrew, 1948b). It was a loss that seriously affected cognitive, social, and economic functions of the individual (Lowenfeld, 1964b). The inability to use visual cues was taken as an all-pervading disability that extended to emotional and sociobiological functioning, and more than any other aspect de-humanized the visually handicapped children, placed them in a separate category and isolated them from normalcy (Mayadas & Duehn, 1976).

Behavioral studies (research as well as observations) provided increasing evidence that visual impairment, uncomplicated by other disorders of either organic or environmental nature did not cause developmental disturbances (Lowenfeld, 1971b). Since the effect of a visual impairment on emotional adjustment may be cumulative, maladjustment had a positive correlation with the number of years of being visually handicapped (Morgan, 1944). The visually impaired children matured through the same developmental process as sighted peers, and maladjustment of the visually impaired was not due to the visual impairment per se (Hannimen, 1979).

Visual impairment was not an all encompassing behavioral trait, but sociocultural variables affected the behavior of visually impaired people just as they affected the sighted (Mayadas & Duehn, 1976). However, threats to one's self-image were generally self-imposed (Mangold & Mangold, 1983) rather than externally imposed.

Acceptance of one's disability was an important step toward adjustment, to the extent that the most successful handicapped persons were those who had an adequate self-concept (Wright, 1960). Awareness of being visually impaired was paralleled by the recognition of the necessity of adjusting to the sighted, their standards, and their ways (Steinzor, 1966b). It was necessary for handicapped persons to view limitations in an objective and realistic manner, without loss of self-esteem (Benton, 1951), and it was important to accept the self as a person first, then the visual impairment as part of adjustment to life (Scholl, 1973).

Problems of being visually impaired included dependency on others, the need to develop good coping skills and adapting behaviors, the need to maintain a positive self-esteem in spite of predominantly negative reflections, and the need to control situations and make decisions about events in their lives (Tuttle, 1984). In addition, it was more difficult for a person who was visually impaired to master the environment (Bauman, 1964; Jervis, 1964; Lowenfeld, 1964a), which was considered one major facet of positive self-concept. The emergence of self-concept developed out of the child's recognition of its impact on the environment and the people and objects in it, and one of the most debilitating effects of loss of sight may be the feeling of not having control of those environments (Rogow, 1970). Those limitations due to restrictions of environmental experiences had serious consequences on the development of self-concept (Rogow, 1970).

Mangold (1982) stated the formation of high self-esteem in visually impaired children appeared to parallel that of their sighted counterparts, and the factors that influenced the development of self-esteem seemed to be identical for all children, regardless of prevailing handicap. She added that most standards for behavior and personal management associated with self-concept were also appropriate for the visually impaired and should not be lowered. In the stages of development of self image, lack of sight created increasingly greater difficulties for the visually impaired child (Scott, 1969).

Lack of sight caused some detachment from the physical world, and to a lesser degree to the social world which affected ego development (Lowenfeld, 1973b). The emotional consequences of loss of sight must be recognized, but there was no inevitable link between a visual impairment and specific personality patterns or maladjustment in the individual (Lowenfeld, 1973b). Although physical disability had a profound effect on the person's life, the psychological aspects of a disability may be more handicapping than the physical aspects (Wright, 1960).

The visually impaired derived their self-concept more from what they could and could not do, and from feelings of being different or inferior with respect to play with the sighted. Although the visually impaired students wanted to be in school and learn with the sighted, they preferred to play with the visually impaired (Steinzor, 1966b).

Emotional maladjustment can be a high risk in the case of the visually handicapped child (Chapman, 1978).

In a great majority of visually handicapped, fears, worries, and anxieties were present, and these individuals tended to become easily discouraged (Benton, 1951), and exhibited maladjustment by being unfriendly and aloof, self pitying, hypersensitive, and prone to anger (Monbeck, 1973). Benton (1951) described the visually impaired as being insecure and depressed, tending to daydream, having feelings of inferiority, lacking initiative, and tending to discouragement, while they had a well developed sense of humor and used practical jokes as an outlet for unconscious hostile aggression (Benton, 1951). Visually impaired individuals tended to be passive (Burlingham, 1965), had expressionless faces and toneless voices, were physically isolated, and developed less differentiated and more rigid personalities (McAndrew, 1948b).

The "backwardness" of visually impaired children was related more to a failure to develop adaptive hand behavior, as a substitute for functions of the eye, than to the absence of vision itself (Rogow, 1975). The severe limitation of feedback, the lack of richness of detail, and the fact that tactile and auditory senses did not become as dominant in the visually impaired child as the vision did for the sighted child related to the lack of adaptive hand behavior (Rogow, 1975).

Adolescents wanted to become independent, but the nature of the visual disability made them dependent (Schuster, 1987), although, adapting the environment reduced dependency (Mayadas, 1972). Lowenfeld (1975) pointed out the importance of positive experiences by stressing that if a strong positive self-concept had been established from infancy and an understanding of the causes of people's responses had developed, the visually impaired child did not feel inferior and resisted unnecessary dependence, but accepted assistance when it is required.

The absence of accurate feedback made it difficult to learn appropriate behavior, to develop social skills, and to know what others really think of the visually impaired person (Richardson, 1969). The effects of a visual impairment related to the degree of disability and the age of onset (Sommers, 1944), although Hannimen (1979) stated that those who are totally "blind" adjust more quickly to the handicap.

Scholl (1973) agreed with parallel developmental stages, but pointed out the existence of developmental lags among the visually impaired in certain areas, certain skills, or attributes. Cook-Clampert (1981) perceived that the most fundamental aspect of the visually impaired child was the self-concept which determined the respect and concern of the significant others, the history of successes and failures, the value and aspirations, and the ability to handle devaluing judgments.

As a result of reviewing research relating physical disability and self-concept, Head (1980) concluded that a physical disability, in some instances, had a pronounced effect on the development of self-concept, while Wright (1960) reported that self-esteem was threatened by any disability. On the other hand, Fitts (1972) concluded that physical disabilities were seemingly less related to self-concept than psychiatric disabilities. Due to lack of vision there was general difficulty in developing a positive self-concept (Scott, 1969), but the impairment itself limited development of a functioning personality which related to the fact that visually impaired children had poor self-concepts (Kurzhals, 1970). Lowenfeld (1973b) reported there was no inevitable link between visual impairment and specific personality patterns or maladjustment.

Warren (1984) perceived that, as a result of the sensory restrictions, the visually impaired child was more self oriented and became more egocentric and interested primarily in sensations connected with the body. A child's perceptual and motor development, which were difficult for visually impaired children, were closely related with emotional condition and to ego formation (Fraiberg, 1977).

Jervis (1959) interpreted his conclusions that visually impaired persons tended to either exaggerate their positive attributes or were forced to be negative, and due to their extreme reactions they were likely to have difficulty in normal adjustment. Visually impaired students tended to overemphasize certain strengths which resulted in an unrealistic and inflated self concept (Hazekamp & Huebner, 1989). On formal self-reporting techniques which required self-evaluation, visually impaired students tended to distort their responses so they looked good (Dean, 1957a), and were especially susceptible to rationalization and self-deception (Sommers, 1944). Atypical patterns and extreme scores were frequently found among the responses of visually impaired youth (Brown, 1939; Jervis, 1959; Zunich & Ledwith, 1965).

Frustration and its impact seemed to be an area in which persistent inferences were made. Visually impaired persons tended to have more frustrations and anxieties (Cook-Clampert, 1981), but seldom overtly expressed their responses to the frustrations (Jervis & Haslerud, 1950). In reaction to frustration, the visually impaired tended to have more physiological responses to frustration and to make more intropunitive comments and fewer extrapunitive and impunitive remarks (Jervis & Haslerud, 1950). Children with a visual impairment experienced frustration at each level of development in the formation of self-concept because of the lack of vision since it limited both direct and indirect contact with reality (Schuster, 1987). Jastrzembska (1973) found that the passivity of visually impaired children may be caused in part by the frustration experienced and their limited means of release.

The disability and incapacitation common among the visually impaired had their origin not in the physical condition, but in the impact of the individual on society and its attitudes (Cutsforth, 1966). Society had its emotional attitudes not towards visual impairment itself, but toward the reaction pattern of the visually impaired towards themselves and their own condition (Cutsforth, 1966).

The visually impaired were more sensitive to failure (McAndrew, 1948a), had a higher incidence of introversion (Brown, 1938), maintained fears of abandonment and rejection (Rogow, 1970), and generally experienced less health, social, and emotional adjustment (Brieland, 1950; Jervis, 1959). Miller (1970) described the visually impaired as being more apprehensive about the future, having more awareness of the need to get along, and being less able to control outbursts of temper or aggression.

Visually impaired children were inclined to be more passive, to score consistently lower on tests of appropriate social behavior and societal norms (Vander Kolk, 1981), and to have mannerisms which set them apart socially from their peers (Scholl, 1974). Jervis (1964) alleged that the person with a visual impairment tended to rationalize inadequacies and feelings as a result of the physical defect and was likely to be overprotected by the sighted. A child who cannot see found it easy to become passive and disinterested in the surroundings and developed self-stimulating behaviors (Chorniak, 1977), while the difficulty in differentiating reality and fantasy may prolong relating or comparing objects with the self rather than with the external world (Warren, 1984).

A special need of visually impaired children was that of aggression and defiance in order to achieve and attain self respect (Cutsforth, 1966). Kemp and Rutter (1986) evaluated conversations and concluded that, visually impaired people behaved normally for the most part in social interactions, and perceived themselves as effective in social encounters.

The visually impaired had culturally imposed expectations of helplessness, dependence, and uselessness (Scott, 1969), with a psychosocially imposed mix of pity, guilt, and fear (Mancil, 1987), attitudes of pity and sympathy (Monbeck, 1973), fear (Marsh & Friedman, 1972; Wright, 1974), and uneasiness (Wright, 1974). Sighted persons were uncertain about how to behave around the visually impaired, in part because of the lack of response to non-verbal cues (Kemp & Rutter, 1986). Obiakor (1986) indicated that, in general, handicapped persons experienced a wider range of predominantly negative reflections from others which resulted in lowered self-esteem, and visually impaired persons had lower self-concepts which reflected their lack of social acceptance. There was nothing inherent in a visual impairment that caused much of the behavior of visually impaired persons since the behavior was influenced by the world in which the visually impaired person lived. Society's social roles and expectations assigned to those with a visual impairment often influenced the self-concept of the visually impaired person, and may cause the disability to be a primary identification for the person and over-shadow other attributes (Handel, 1960).

Variations in self-concept and gender exist. Visually impaired females were slightly better adjusted socially than visually impaired males (Sommers, 1944; Brieland, 1950; Zunich & Ledwith, 1965). Greater incidence of introversion was reported among visually impaired females (Brown, 1938). Bauman (1963) found that visually impaired females viewed a visual impairment as an inconvenience and minimized its effects while visually impaired males tended to see lack of sight as negative or neutral. It appeared that a physical disability had somewhat different meanings and consequences for boys than for girls, with boys seeing the functional aspect and girls seeing the cosmetic effects (Richardson, 1969).

From the research, visually impaired youth were described as viewing their disability differently, tending to be poorly adjusted which was not necessarily related to the loss of vision, having more difficulty in developing self-image because of restrictions of access to the environment, having difficulty in responding to expectations of society, and tending to internalize feelings more than externalize expressions of feelings. Nevertheless, the stages of development of self-concept and factors which contributed to positive or negative self-concepts were comparable whether the children were sighted or had a visual impairment.

Self-Concept and Educational Placement of the Visually Impaired

Even when visually impaired children entered school at the usual age they were often seriously retarded in social, emotional, and intellectual development as a result of overprotection (Komisar & MacDonnell, 1955). Further, a large number of visually impaired children were never adequately involved in the educational program due to entering school either emotionally disturbed or intellectually unprepared (Parmelee, 1966).

Substantial variations in the kinds of attitudes which visually impaired children assimilated were expected according to whether they go to a residential school for the visually impaired or to ordinary public schools (Scott, 1969). Yet no distinct conclusions can be made from the research which was intended to determine the effects of educational placement on visually impaired children. The literature was basically inconclusive as to what school placement was most advantageous for the visually impaired (Coker, 1979).

Petrucci (1953) found considerably greater maladjustment among visually impaired students in residential schools than those in day schools, while Bauman (1964) reported poorer adjustment to the existence of a visual impairment in a public school with the difference being based more on vision than on the school setting.

Bauman (1964) concluded that the residential school group had more anxiety and insecurity, more difficulty at home and with their parents, and more social and emotional problems than those who were in public schools, yet there was no difference between groups on items relating directly to school. Non-residential students tended to show greater assertiveness in social behavior than residential students (Mayadas, 1975).

Morgan (1944) suggested that perhaps maladjusted visually impaired students in public schools were those who were more inclined to be enrolled in residential schools. Magleby and Farley (1968) theorized that many students who would otherwise have failed, developed positive self-images and the motivation and confidence to succeed at a residential school. They found that students in a residential school were better educated, and had a more positive outlook on life.

Residential males were better adjusted and had higher intelligence quotients than residential females (Cowen et al., 1961). Educational achievement of visually impaired children in special education programs had generally shown some academic retardation (Harley, 1973), while among residential students, there was an inverse relationship between intelligence quotient and maladjustment (Morgan, 1944). Komisar and MacDonnell (1955) reported significant gains in scores on intelligence tests of students at a residential school after one year of attendance. The greatest gains were among those with an IQ below 90. Students tended to have extremes of scores with a higher percentage at the higher and lower ends of normal distribution and fewer cases in the middle range.

Lukoff and Whiteman (1970) studied 165 individuals and concluded that attendance at a residential school was the most important factor influencing social role and lifelong patterns. It increased the number of those who achieved a modest level of independence, and lessened the likelihood of achieving the most independent social role (Warren, 1984). Bauman (1963) interviewed 434 persons, of whom 15% of the women and 23% of the men felt that attending a residential school had a bad effect on them socially. Considering social acceptance as a variable related to self-concept, those who attended a residential school reported that more of their friends were visually impaired than if educated in a public setting, although few visually impaired persons limited their friendships solely to other visually impaired persons (Lukoff & Whiteman, 1970). Residential students appeared more prone to regimentation through control of organizational variables (Mayadas, 1975), and manifest anxiety increased with age among visually impaired high school students in residential school (Hardy, 1968) and they had low social status in regular class settings (Chorniak, 1977).

Using the Adolescent Emotional Factors Inventory, 150 visually impaired teen-agers in residential school were compared with the same number in the public school. Although there was no significant difference between the two groups on the total score, there were significant differences on some individual items (Bauman & Yoder, 1966). In a study involving 167 visually impaired adolescents in grades 7-12, ages 13-18 years, in the Northeast, there was no significant difference in adjustment according to educational placement (Cowen et al., 1961).

Through studying 97 visually impaired students in grades four through six, McGuiness (1969) concluded that visually impaired children in a public school setting may feel more compelled to develop greater orientation and mobility skills in order to achieve acceptance and to be included with sighted classmates. He found that public school resource rooms and itinerant teacher programs facilitated social integration, social maturity, and independence and were significantly superior to the residential school. However, there was no significant difference in the effect between resource room and itinerant teacher programs. There was no significant difference in the number of friends among the groups, but the residential school was more effective in fostering friendships and activities with visually impaired friends and the itinerant teacher model was more effective in encouraging activities and friends with sighted friends. There was no significant difference among the number of passive activities nor in locus of control.

Schindele (1974) identified matched pairs of fifth and sixth graders and concluded there was no significant difference in social adjustment of visually impaired students integrated into public school or full attendance at a residential school. Within the public school, there was no significant difference in social adjustment depending on provision of resource room or itinerant teacher services. She reported a strong positive correlation between social adjustment and intelligence in integrated schools, and found a negative relationship of age and adjustment, with the older students being less well adjusted.

More likenesses and no systematic or consistent differences were determined in personality attributes or adjustment among the visually impaired in residential settings, or the sighted, and the visually impaired in public schools (Underberg, Benham, Verillo, & Cowen, 1961). Miller (1970) reported there was no significant difference in the anxiety of the visually impaired students in special classes or in regular classes, although the anxiety levels were higher for 11th and 12th grade students than for 9th and 10th grade students. Forty percent of the reported anxiety was directed toward social competencies, personal appearance, and adjustment to the physical fact of loss of sight.

McGuiness (1969) studied locus of control of 139 visually impaired students in three educational settings and concluded there was no significant difference among the three groups. Land and Vineberg (1965) compared 18 visually impaired children in the residential school in Tennessee, 18 visually impaired children in a public school in Atlanta, Georgia, and 18 sighted children in a Nashville elementary school, and found no difference in locus of control between residential or public school attendance, but both groups were significantly more external than their sighted peers. In both visually impaired and sighted groups, the locus of control became more internal with greater mental age. Greater variability of scores emerged within the group of visually impaired students but there were no differences that could be attributed to the degree of visual loss.

Head (1979) used the Tennessee Self-Concept Scale for grades 7-12 in various school placements and found no evidence to suggest that the self-concept of adolescents varied as a result of class placement. He found indications that lower, but not statistically significant, mean scores occurred for itinerantly placed visually impaired high school students. Higher mean self-concept scores were recorded for students in residential placement.

Bauman, Platt, and Strauss (1963) concluded that girls in residential and public school settings showed significant differences on 7 of the 10 scales favoring the public school students, whereas there was barely a significant difference on one of the 10 scales between the groups of boys. No differences according to age were evident.

Coker (1979) reported that visually impaired children had an overall positive self image regardless of the type of school, and that their happiness and satisfaction were not affected by enrollment in a particular type of school. He researched using the Piers-Harris Children's Self-Concept Scale, and found the total mean self-concept was higher for residential school children than those in public day school, but there was no significant difference in overall self-concept. There was a lack of anxiety in both groups and both groups had positive perceptions of their behavior. Students who had attended both residential and public school programs showed the best social adjustment, while those who attended public school only showed the least adjustment (Crandell & Streeter, 1977).

Volunteer Population

In spite of distinctive traits which distinguished volunteer and nonvolunteer groups, "nearly all educational research must be conducted with volunteer subjects" (Borg & Gall, 1989, p. 227). In this study, the recommendations of Rosenthal and Rosnow (1984) were considered and utilized to encourage maximum participation.

Characteristics of Volunteers

Characteristics of the population which responded could not be accurately assessed, but Rosenthal and Rosnow (1975) delineated situational determinants associated with volunteer samples. They found that the subjects' interest and expectation of favorable evaluation related highly with willingness to volunteer, whereas the importance of the task, persons' feeling level, and material incentives had considerable, but lesser effect on volunteering. Of least relationship were recruiter characteristics, aversive tasks, normative expectations, prior acquaintanceship, and public or private commitment. The impact of any or all of those factors or a blend of those determinants on the population in this study could not be distinguished, but the potential includence was recognized.

Self-Concept of Volunteers

Research addressing volunteer samples who had been part of self-concept studies yielded patterns. Variability of measured self-concept of volunteer and nonvolunteer populations were reported by Rosenthal and Rosnow (1975) and they described studies which concluded that volunteers had higher self-esteem and other studies that concluded that lower self-esteem existed among the volunteers. Of 34 studies they reviewed, 44% found volunteers to be more maladjusted whereas 26% found volunteers to be better adjusted. However, when "adjusted" was psychometrically defined rather than clinically, subjects were better adjusted. Piers (1984) defined self-concept in psychometric terms. The type of measure employed as part of research on self-esteem was not a major determinant of the outcomes (Rosenthal & Rosnow, 1975), so the specific instrument, Piers-Harris Children's Self-Concept Scale, was not expected to have influenced participation.

Recommendations to Improve Participation

Rosenthal and Rosnow (1975) used their assessment of literature dealing with situational determinants of volunteering and made ten recommendations to improve participation. Each was identified and the corresponding efforts used in this research was described.

1. Make the appeal as interesting as possible. Through oral and written correspondence, an attitude to create interest was communicated. Due to the low incidence of professionally trained persons who work with children who were visually impaired, there was an intrinsic higher level of interest. The association of the researcher with the state school for the visually impaired and the relationship the itinerant teachers had with the school as a resource should have enhanced the interest.

2. Make the appeal as nonthreatening as possible. The technique of Piers-Harris has been commonly used as part of

routine evaluations of special education students. Teachers and parents were reminded that the confidentiality of cases was maintained and that no individuals were personally identifiable thereby averting any abuse of the information.

3. State the theoretical and practical importance. Concurrence regarding the importance of the research was gained from most professional staff and AEA administrators, but did not seem to be effectively communicated to pertinent students and parents. The pragmatic impact was not equally perceived by the public school and residential school students and their parents.

4. State the potential benefits to others. The impact of the study on affecting educational placement decisions and contributing to an understanding of the affective effects of educational placement were stated. However, the importance of participation was highly variable. Some AEAs responded in a timely fashion. Others expressed, "What do we get out of it?" and declined to participate.

5. Offer payment or small courtesy gifts. A summary of the results was offered to each participant. Other tangible reinforcement was considered, but not offered.

6. Have the request made by a person of status as high as possible. Within each AEA, the results were made by a person deemed most appropriate by the AEA Director of Special Education. The request to the itinerant teacher was

made by the AEA Director of Special Education although there was no attempt to determine or report any feedback on the degree of follow through. In the initial correspondence, association with and support of the University of Northern Iowa, Iowa Braille and Sight Saving School, and the Department of Education were outlined.

7. Avoid research tasks that were stressful. The self-concept inventory was routinely used in special education evaluations of public school students, and had not evoked special stress when completed with students having other handicapping conditions. The additional parent contact was not viewed as threatening.

8. Communicate the normative nature of volunteering. This information was emphasized in the initial correspondence with AEA administrators, and communicated directly to the contact persons.

9. Have someone known to that population make the appeal. The itinerant teacher made the appeal, and familiarity was assumed. However, adequate familiarity did not necessarily exist because of staff turnover and extent of direct services provided.

10. Adjust to situational norms regarding volunteering being a public or private commitment. Willingness on the part of students to participate remained totally private and confidential. Although names of the participants were

required on the permission sheet, all data used for research were coded. Subsequent individual contacts could not occur since the resident school remained unknown.

Nonresponse

Rosenthal and Rosnow (1984) analyzed the effects of research results due to the bias of nonresponse.

> The proportion of the population who fail to participate and those who volunteer to participate can be computed, but statistics cannot be derived about those who fail to respond. Therefore, bias was suspected but the estimate of its magnitude cannot be determined. (p. 160)

Instrumentation

The Piers-Harris yielded a global self-concept score. Independent researchers had used the scale with exceptional children including groups of mentally disabled, learning disabled, gifted, behavior disordered, and chronically ill, with no consistent findings reported (Piers, 1984). Wylie (1979) reviewed existing literature and reported that a majority of studies did not support a relationship between age and self-concept nor between gender and self-concept. A number of studies correlating total self-concept and intelligence used the Piers-Harris and the Wechsler Intelligence Scale for Children verbal scale, and reported correlations ranging from .00 to .28. A similar range of correlation was reviewed by Wylie (1979).

The validity of using an instrument normed on the sighted population had been questioned by some educators.

However, Cook-Clampert (1981) and Tuttle (1984) stated there was no need for a special psychology of the visually impaired. Tuttle went further in taking the position that the development of a positive self-concept was the same whether persons were visually impaired or sighted. Mangold (1982) concurred that the formation of high self-esteem in visually impaired children appeared to parallel that of their sighted counterparts, and the factors that included the development of self-esteem seemed to be identical for all children, regardless of prevailing handicap.

Numerous efforts to develop and norm an instrument to measure the adjustment of visually impaired youth had been attempted, e.g., Anxiety Scale for the Blind, Adolescent Emotional Factors Inventory, Sentence Completion for Use with the Visually Handicapped, A Social Maturity Scale for Blind Preschool Children, and Body Image Screening Test for Blind Children (Vander Kolk, 1981). Scholl (1987) commented that tests specifically designed for the visually impaired were few, yet they were critical since the use of instruments standardized on other populations was questioned. Sommers (1944) stated that personal and social adjustment of the visually impaired could not be measured or compared with the sighted using an instrument normed on the sighted. However, Tuttle (1984) recommended that visually impaired youth be compared with their peers, without regard for degree of vision. Since there was no instrument which measured self-concept of visually impaired children, and since there was no professional agreement as to the need for such a technique, it was concluded that an instrument normed on sighted persons was an appropriate measure in this research.

Summary

There is limited research which compared the self-concept of visually impaired youth and educational placement. Of the research available, results did not develop into a pattern indicating that self-concept was more negatively or positively affected by placement in residential school or public school settings.

The reported data had conflicting conclusions, perhaps due to research design, measurement device, or other uncontrolled variables. Factors which impacted the findings were in the basic definitions of terms, i.e., visual impairment, residential school, or that most research on self-concept is methodologically flawed and of little functional importance (Cook-Clampert, 1981). Through review of numerous research studies on factors relating to self-concept, Wylie (1974; 1979) concluded that avoidable conceptual and methodical flaws were common.

Little research was available in which the subjects were homogeneous regarding a rural background within a single geographic region, and when the same rules and regulations of special education were applied. With limitations as recognized and described, this study assisted in the ongoing need to accumulate information relative to making placement decisions and evaluating the efficacy of educating visually impaired youth in residential or public school settings.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

Introduction

The purpose of this study was to compare the self-concept of visually impaired teen-age learners who were enrolled in public day schools and those who attended a residential school. Due to the low incidence of a visual handicap, all visually impaired students from the state of Iowa, whether enrolled in a public day school or a residential school, were eligible for this study.

Identifying information about each student's vision and educational history was assembled in order for the variation between the populations to be described. Data included learning medium, chronological age, grade placement, age of onset, cause of vision loss, secondary disability, intelligence quotient, and extent of services related to the visual impairment (Appendix M).

The current emphasis on mainstreaming children with disabilities developed from an academic perspective rather than taking into account the personal and social adjustment. Through researching differences in self-concept of the visually impaired who were receiving their educational programs in residential and public school settings, the effects of educational placement on affective adjustment was analyzed.

Consent and Approval

Permission for this study was given by the Human Subjects Review Committee of the University of Northern Iowa (Appendix A). The support of the Iowa Department of Education, through the Iowa State Consultant for the Visually Impaired (Appendix B), was secured, in addition to administrative permission from the Superintendent of IBSSS, AEA Directors of Special Education (Appendix D), and the building principal within the public school when recommended by the AEA. Parent written permission was required for all students, including those 18 years (Appendix H, I), and each student was also required to give written consent (Appendix J). Permission from the publisher, Western Psychological Corporation, was granted in order to adapt the Piers-Harris to braille and large print (Appendix C).

Along with granting permission for research within the AEA, each Director of Special Education designated a person (Appendix D) who was the contact between the researcher and the students, and who assisted in collection of data. The AEA representative served as the intermediary in securing permissions from the public school students, whereas the researcher secured the necessary permissions from IBSSS subjects.

Design and Limitations

The research was a causal-comparative design to establish the relationship between self-concept and educational placement, and between self-concept and learning medium of secondary visually impaired students who were functioning at cognitive and educational levels which corresponded with an academic curriculum. The accessible population was limited due to the low incidence of visually impaired school-age children and the selection criteria for inclusion in this study.

The IBSSS population is the total residential enrollment between the ages of 12 and 18 years. The non-residential group encompassed volunteer participants from the population of all visually impaired students who met the criteria for receiving special education in Iowa according to the rules and regulations pertaining to the visually impaired.

With the selection criterion of a primary visual impairment, the effects of other handicapping conditions were diminished. The target population was the visually impaired teen-agers from rural regions who were in an academic curriculum.

Method

Population

Two groups of visually impaired students were studied. All subjects were attending school and had been identified, by state reporting records, as eligible for special education services on the basis of a visual impairment.

All visually impaired secondary students within the residential setting who were enrolled in the IBSSS credit based program were considered, the accessible residential population. All secondary students from 15 Area Education Agencies who were on the special education roster as having a visual impairment represented the non-residential accessible population. All subjects were involved in an instructional curriculum which was primarily academic, with instructional modifications due to the loss of vision.

Identification and Selection

All visually impaired students in the state of Iowa who were identified as having a primary visual impairment, between the ages of 12 through 18 years, and who were enrolled in special education services according to the Department of Education and listed on the state roster were eligible for participation in this study. All such students currently enrolled in academic programs at IBSSS were involved as the residential group. The non-residential group consisted of volunteer subjects identified from the state 1990-91 data base (Appendix R). All visually impaired students in the non-residential population, ages 12 to 18, were included in the study.

All students in this study had been determined eligible for special education services by local and AEA personnel in accordance with state and federal rules and regulations. All were initially identified as visually impaired by their local and AEA personnel, and the appropriateness of their eligibility and placement was monitored annually by AEA representatives. The state and federal guidelines and standards which were used as a basis for the multidisciplinary decisions were uniform for the IBSSS and public school students. The situational variability in interpreting those rules was common although a degree of uniformity existed because of following a single set of rules and regulations.

Seventeen students and their parents at IBSSS gave permission for participation in the study. Thirteen permissions were given immediately and a single follow-up phone call resulted in consent of the remaining four. There was a potential for 73 non-residential student participants, of which 15 provided data.

Attempts to Expand Population

Response to the initial request for permission from AEA Directors was timely from nine AEAs, with an additional four

AEAs providing permission after a subsequent letter (Appendix E) and phone call. Securing permission from the remaining AEA required an additional written correspondence (Appendix F) and three phone calls.

Birthdates of the public school group were selected from the state roster which records students receiving special education services according to primary disability. After securing permission for the research in the respective AEA from the Director of Special Education, information was forwarded to the contact person, who was the itinerant teacher in 11 AEAs and a supervisor in the remaining AEAs. In all, but the AEA which subsequently withdrew their intentions to participate, the itinerant teacher became the primary contact. An introductory letter (Appendix K, L), a letter to each parent (Appendix I), Identifying Information sheet for each student (Appendix M), a permission sheet (Appendix J), and return postage were provided for each birthdate. Within a reasonable time and with few contacts there were responses from nine AEAs which involved 33 students so all data and information from those AEAs were processed. Three AEAs had indicated students who remained on their class roster and were available for participation. There was no response from the remaining AEA. Closure on all non-residential students was achieved with a total of 27 follow-up phone contacts and six written correspondences (Appendix N, O, P, Q).

Instrument

The Piers-Harris was the chosen instrument in conducting this research. Research on self-concept and its relationships with other characteristics, conditions, and disabilities frequently used the Piers-Harris as its measure of self-concept.

The Piers-Harris "focuses on children's conscious self-perceptions, rather than attempting to infer how they feel about themselves from their behaviors or the attributions of others" (Piers, 1984, p. 1). "It measures an individual child's self-evaluative attitudes and behaviors which have a bearing on self-concept (Piers, 1984, p. 2).

The Piers-Harris was an 80 item, self-reporting instrument on which children were asked to indicate whether each statement described their perceptions using dichotomous "yes" or "no" responses. Approximately one-half of the items were worded positively and one-half negatively in order to reduce the possibility of response patterns indicating a desire to please or to be socially acceptable. Scores range from 0 to 80 on the total self-concept index, which is the single most reliable score. Raw scores can be converted to percentile rank, stanine score, and normalized

T-scores, but the raw score was used exclusively in this study.

The Piers-Harris was intended for use with children, grades 4 through 12, with a reading level of approximately third grade. Test-retest reliability scores for the total score range from .42 on a study of mentally retarded-emotionally disturbed children over an 8 month period to .96 over 3 to 4 week time span with children having mild and moderate articulation disorders. The test-retest reliability data for the age group most comparable with those presently being studied was .69. Internal consistency scores ranged from .88 to .93. Numerous empirical studies have established positive correlations with other similar measures of self-concept (Piers, 1984).

Since there was no instrument which measured self-concept of visually impaired children, and since there was no professional agreement as to the need for such a technique (Cook-Clampert, 1981; Mangold, 1982; Tuttle, 1984), it was concluded that an instrument normed on sighted persons was appropriate for this research. The Piers-Harris was transcribed into braille and large print, with no modifications of any items. The transcribed format was comparable with the regular print protocol, and students indicated each response by marking the "yes" or "no" on the booklet. Directions for administration were printed on the front of each protocol so standard instructions were given. When a student required a braille copy, a print copy was also provided to assist in the administration by the itinerant teacher.

Confidentiality

Individual confidentiality was guaranteed by codifying all information that was assembled about each subject. The individual was identified by use of a code which included the number of the AEA and child's birth date.

Data Collection

Using data from the state annual special education report (IDOE, 1990a), the population of visually impaired students in the public school was determined. The students were identified by birth date to the designated AEA representative who named the student and made the needed personal contacts. A letter describing the research (Appendix I) and the permission forms (Appendix J) were provided to each parent by the AEA contact person. Parent and student permissions regarding participation were in place before data was assembled. The Identifying Information sheet (Appendix M) was completed by the AEA person and returned to the researcher with the permission forms. If a parent or student declined to participate, there was a place for the refusal on the permission form.

In order to identify the characteristics of the sample, demographic data was assembled. That information included date of birth, gender, grade placement, age of onset of visual loss, learning medium, cause of vision loss, presence of secondary disability, intellectual level, and extent of itinerant teacher services (Appendix M). Each student's code was used as the only means of differentiating research data.

The Piers-Harris and appropriate answer sheets were provided in the student's primary learning medium as specified on the Identifying Information report. Materials were mailed to the AEA personnel who scheduled a time and monitored completion of the Piers-Harris. Responses and testing materials were returned to the researcher by the designated person. Data on IBSSS students was assembled by the researcher following the same procedure as employed in the public school population.

Data Analysis

A causal-comparative design was employed with subjects asked to respond to the Piers-Harris. The differences in the total score were compared with educational placement and learning medium.

All participants completed the Piers-Harris so all scores were included. If demographical information were incomplete, the student was included in analysis using the remainder of the available information.

For each subject, data entry included the total Piers-Harris raw score, grade placement, chronological age, gender, age of onset, cause of vision loss, learning medium, extent of itinerant teacher services, secondary disability, and intelligence quotient. Frequency data and descriptive statistics were calculated with subgroups of gender, age, grade level, educational placement, age of onset, amount of itinerant teacher services, and intelligence level.

A two-tailed t test determined if the observed difference in self-concept between the groups according to educational placement and learning medium resulted from chance or if it represented a true difference. The significance level was established at .05. Normal distribution of scores was assumed when a t test was employed. However, violating that assumption was not problematic and would not appreciably affect the outcome of the statistical test (Shavelson, 1988).

CHAPTER IV

RESULTS

Introduction

This study compared the self-concept of visually impaired youth in public and residential school settings. All teen-age visually impaired students who were eligible for special education services were considered for inclusion.

The results of this study were effected by the response among public school students. The public school population was secured from the 1990-91 state roster which listed students according to their primary disability to determine eligibility for special education services. The birthdates corresponding to 73 students listed on the state roster indicated the presence of a primary visual impairment and provision of services from the itinerant teacher of the visually impaired. Within the residential setting, all 17 students meeting the criteria were included in the residential group.

Identification Procedure

Directors of Special Education from 14 AEAs were provided a description of the research and other pertinent information in order to make an informed decision about participation. The state roster identified no students in AEA 3. All AEA Directors consented to involvement in the research and designated a contact person. With the exception of one AEA, the itinerant teacher of the visually impaired became the contact person so written and phone exchanges were made with that teacher. Although AEA 13 originally agreed to participate, they declined to identify students or approach parents. Although numerous telephone calls and written correspondence follow-up contacts were made they chose not to be included in the study. The itinerant teacher in each remaining AEA was sent an introductory letter, a letter to each parent and a permission page for each student in their AEA.

Initially, there were 73 students identified on the state of Iowa roster of visually impaired special education students receiving services through the local public schools and AEAs. From this population AEA 13 with 10 students declined to participate; 21 students listed on the state roster were no longer in the district; and 11 students were not eligible as they had either graduated, had services terminated or had a special reason not to be approached. Six parents refused permission to participate, and there were ten students from whom the lack of response was interpreted as refusal by the itinerant teachers. Consequently the remaining 15 volunteer students represented the non-residential group. Since 31 of the students who were originally listed continued to receive services on the basis of a visual impairment, the 15 subjects who participated in this study represented 48.4% of the available population. Seven AEAs provided the research sample, whereas they represented 57.5% of the population identified from the 1990-91 state roster. Table 1 indicated the status of responses by each AEA.

In an attempt to achieve broader public school participation, numerous phone calls and written contacts were made with the designated persons. The least number of personal contacts was two in AEAs where responses were expedient and the greatest number was 14 contacts with one AEA. Oral and written communications occurred over an 11 month period.

In order to expand the public school available population, designated persons were asked to identify other students who met the research criteria, but who did not appear on the state roster. They indicated that there were no other students. While services for some students included provision of modified materials, or a quarterly or semi-annual consultative contact, there were no direct student contacts which precluded their involvement in the research sample.

All students from the residential school, representing eight AEAs, gave permission and were included in the study. Thirteen permissions were given immediately and a single

Table 1

Number and Type of Response by AEA

AEA	State Roster Total (<u>N</u> = 73)	Research Sample (<u>n</u> = 15)	Parent Refusals (<u>n</u> = 16)	Not on AEA Roster (<u>n</u> = 21)	Other Reason (<u>n</u> = 21)
1	3	0	2	1	0
2	6	0	5	1	0
4	3	0	1	1	1
5	3	0	3	0	0
6	3	0	0	1	2
7	4	2	0	1	1
9	3	0	0	3	0
10	5	3	1	1	0
11	21	4	3	9	5
12	4	2	1	1	0
13	10	0	0	0	10
14	4	1	0	2	1
15	2	2	0	0	0
16	2	1	0	0	1

follow-up phone call resulted in consent of the remaining four. Table 2 shows a proportionate distribution according to AEA of available students and those included in the

Table 2

State Roster Students and Student Participants by AEA

AEA	State Roster (N = 73)	Public School (n = 15)	Residential School (N = 17)
1	3 (5%)	0	2 (12%)
2	6 (10%)	0	0
4	3 (5%)	0	0
5	3 (5%)	0	0
6	3 (5%)	0	0
7	4 (6%)	2 (13%)	0
9	3 (4%)	0	3 (18%)
10	5 (8%)	3 (20%)	1 (6%)
11	21 (33%)	4 (27%)	6 (35%)
12	4 (6%)	2 (13%)	2 (12%)
13	10 (14%)	0	1 (6%)
14	4 (6%)	1 (7%)	1 (6%)
15	2 (3%)	2 (13%)	1 (6%)
16	2 (3%)	1 (7%)	0

study. In the final sample, five AEAs had 80% of the public school and 65% of the residential school participants.

Characteristics of Population

Chronological Age

Table 3 represented the sample according to chronological age rounded to the whole year, i.e., age 12 included any student between 12 years and 13 years without regard for number of months. Although no controls were employed to equalize age, the distribution was proportionately comparable. For the total research population, the median age was 15.1 while the mode was 17 years, whereas the mean was 14.9 years for public school participants and 15.2 for residential students. Age distribution and average age were comparable between the two groups in this study, with the greatest age frequencies being 15 to 17 years.

Grade Placement

In Table 4, the grade placement range was 6 through 11 with no subjects in grade 12. Grades six and seven had comparable representation whereas grades eight and nine had greater proportion in the residential school, and the public school had greater representation in grades 10 and 11. The mean grade placement, in years and tenths of years, of each group (public school = 8.7, residential school = 8.4) was comparable.

Table 3

Subjects By Chronological Age

Chronological Age	Public School (n = 15)	Residential School (N = 17)
12	1	2
13	3	1
14	2	3
15	3	2
16	3	3
17	3	6
18	0	0

Table 4

Subjects According to Grade Placement

Grade Placement	Public School (n = 15)	Residential School (N = 17)
6	2	3
7	3	2
8	2	4
9	2	4
10	4	2
11	2	2
12	0	0

Gender

Frequencies showed a predominance of males in both settings in Table 5. Hatfield (1972) determined a ratio of 124:100 male to female. The ratio in this study was 22:10 which was a disproportionate representation of males. Rather than 55.5% of the subjects being males, as expected from Hatfield (1972) ratio, there were 68.8%.

Table 5

Subjects by Gender

Gender	Public School (*n* = 15)	Residential School (*N* = 17)
Female	5	5
Male	10	12

Since the ratio was proportionate in both settings, the research population had another common factor of gender, along with chronological age and grade placement.

Age of Onset

Birth was the overwhelming age of onset, regardless of the educational placement, as reported in Table 6. Twenty-eight or 87.5% of the students experienced the vision loss at birth. The extent of previous visual experiences would not be a determining differentiating factor for more positive or negative self-concept.

Table 6

Subjects By Age of Onset of Vision Loss

Age of Onset	Public School (n = 15)	Residential School (N = 17)
Birth	13	15
Before Age 5	1	2
5 to 12 Years	0	0
13+ Years	1	0

Causation

Data about causation of the visual impairment were gathered. However, for most of the subjects, several reasons related with the loss of vision although no patterns were established. Due to multiple responses, no meaningful means to compile that information could be designed nor interpretations offered.

Secondary Disability

Table 7 demonstrated that students in the residential school were more likely to have a secondary disability than if in a public school and visually impaired. Although it was not currently viewed as the primary handicapping condition the secondary disability was identified by local special education personnel prior to enrollment at the residential school. When analyzing any specific disability area no pattern of secondary disability existed.

Table 7

Specific Secondary Disability

Secondary Disability	Public School (*n* = 15)	Residential School (*N* = 17)
Learning Disability	0	3
Mental Disability	1	2
Behavior Disorder	0	1
Other	1	1
None	13	10

The conditions under which the secondary disability was identified may have affected results. For IBSSS students, any disability which existed prior to enrollment in the residential school was considered a secondary disability without regard for a current re-certification of that disability. With the non-residential group, the existence of a current secondary disability was reported.

Years in Current Placement

As evident in Table 8 the mean for years of residential programming was 5.1 years, whereas the mean was 7.6 years in the public school. The years of services for residential

Table 8

Years of Present Services

Years of Present Service	Public School (n = 15)	Residential School (N = 17)
1	0	2
2	1	4
3	2	1
4	0	2
5	1	2
6	0	0
7	2	2
8	2	0
9	1	1
10	0	1
11	1	2
12	4	0
13	1	0

students related to the number of years in the present placement without regard for services prior to residential placement.

Although the information was not secured, special education services would have been provided for students who ultimately were recommended for residential school placement, since the recommendation must be justified by local special education personnel. Itinerant teacher services was the interpretation applied to public school students. Some notations were made that indicated there had been services for a greater number of years but the exact length was not known.

Extent of Itinerant Services

For public school students, the time for itinerant teacher services each week was reported. Table 9 showed that the majority of students receive 2 hours or less of weekly direct services and no student received more than 3 hours.

Intelligence

Scores from an individually administered intelligence scale, either Wechsler Intelligence Scale for Children-Revised verbal scale or Wechsler Adult Intelligence Scale-Revised verbal scale, were available for seven of the public school students and for all residential students. The basis for limited scores among the non-residential group was undetermined. The distribution was reported in Table 10, with the range in intelligence scores of residential school between 60 and 110 and a mean score of 91.4, while the public school range was 90 to 160 and a mean score of 123.3.

Table 9

Length of Weekly Services

Time	Number of Students (n = 15)
Less than 60 minutes	8
Between 60 and 120 minutes	5
Between 120 and 180 minutes	2
Between 180 and 240 minutes	0
Between 240 and 300 minutes	0
More than 300 minutes	0

Reported scores among the non-residential group were limited by number of cases, but those which were reported demonstrated a significant variation from the normal distribution. Within the seven scores four were more than one standard deviation above the mean and no score was below the average range. In the residential group, no students were more than one standard deviation above the mean, but five were more than one standard deviation below the mean. In neither group was there a normal distribution, but the skewedness was in opposite directions.

Table 10

Intelligence

Range of Intelligence Quotient	Public School (n = 15)	Residential School (N = 17)
<69	0	1
70-84	0	4
85-100	1	6
101-115	2	6
116-130	1	0
131-145	2	0
>146	1	0
No score	8	0

The standard deviation for the residential group was 13, as compared with 21 for the public school group, with the standard error being 3 and 8, residential and public school, respectively. A correlation of measured intelligence and self-concept was not possible due to the limited population which was less than the 30 cases recommended by Borg and Gall (1989). No statistical relationship between reported intelligence and self-concept was derived for the populations in this study.

Research Questions

The results are reported in answer to the proposed research questions. SPSS/PC + Studentware (Norusis, 1988) was used for statistical analysis and interpretation, with technical assistance provided by the Center for Social and Behavioral Research, University of Northern Iowa.

1. What difference was there between self-concept of visually impaired students, ages 12-18, who attend public day schools and those who attend a residential school?

Using a two-tailed *t* test, an analysis showed in Table 11 the relationship between type of school setting and the mean raw score on the Piers-Harris. Results showed that 29% of the time the difference would be -1.07 if the two population means were equal. The observed probability level indicated that the means of the two groups were not significantly different in terms of self-concept.

2. What difference was there between self-concept of visually impaired students, ages 12-18, and their learning medium?

Due to the functional definition of visual impairment that was applied in Iowa, it would be expected that an

Table 11

Raw Scores on Self-Concept Scale

School	Mean	Std. Dev.	Std. Error	df	t value	p
Public	58.13	12.32	3.18			
Residential	62.88	12.76	3.09			
				30	-1.07	.294

individual who used braille would have less usable vision than one who used large print. Therefore, the difference of vision loss and self-concept was the focus of this research question.

Large print was the learning medium of more residential students while braille was preferred by more public school students. Taken together, there was an equal number of learners in this study who used braille and who used print. Frequencies were reported in Table 12.

For the analysis, all print learners were combined. Using a two-tailed t test, the difference in self-concept between braille and print readers would occur 85.9% by chance alone. With the small t value and the large observed significance level as reported in Table 13, there appeared to be nearly equal population means.

Table 12

Learning Medium

Learning Medium	Public School (n = 15)	Residential School (N = 17)
Regular Print	2	0
Large Print	5	9
Braille	8	8
Audio Tapes/Reader	0	0

Table 13

Learning Medium and Self-Concept

Learning Medium	Mean	Std. Dev.	Std. Error	df	t value	p
Print	60.25	12.8	3.2			
Braille	61.06	12.77	3.19			
				30	-.18	.859

CHAPTER 5

DISCUSSION

Introduction

In order to contrast the self-concept of students with visual impairments within a residential setting and in a public school, the accessible group at IBSSS was 17 individuals, whereas there were 73 individuals listed as enrolled in public school settings. Due to lack of response and utilization of a volunteer sample, the public school or non-residential group was 15 subjects. Borg and Gall (1989) indicated a need for a minimum of 15 cases in each group in causal-comparative research. Although the groups are 15 and 17, public school and residential respectively, the attrition from the initial non-residential population reduced the population significantly.

Nonresponse

Rosenthal and Rosnow (1984) analyzed the effects of research results due to the bias of nonresponse.

> The proportion of the population who fail to participate and those who volunteer to participate can be computed, but statistics cannot be derived about those who fail to respond. Therefore, bias is suspected but the estimate of its magnitude cannot be determined. (p. 160)

In the present study, the nonresponse of public school subjects was ten students which represented 32.3% of the 31 students available for consideration. The failure to respond occurred within three AEAs and included the entire available subjects in two of those AEAs. As indicated by the contact persons, nonresponse was considered a refusal to participate in the study.

Volunteer Sample

Borg and Gall (1989) state, "Nearly all educational research must be conducted with volunteer subjects . . . volunteer subjects are likely to be a biased sample of the target population . . ." (p. 227). The subjects of this study were less than would be indicated by the State of Iowa roster of visually impaired students receiving special education services. Elements of the volunteer sample process were reported.

In order for data to be gathered for this study, the need for informed consent required multiple levels of formal permission: AEA, parent, and student. In addition, commitment was required of the person designated by the AEA director, who most often was the itinerant teacher for the visually impaired. The available population was reduced primarily at the points of parent formal permission and informal consent to commitment by the itinerant teacher.

Lesser participation occurred in some regions due to the degree of contact between students who were visually impaired and itinerant teachers. Teacher comments indicated that although the students were on the caseload the individuals may not receive direct services nor may there be personal interaction with the student or parent. Rather, there may have been a quarterly consultation or had an on-call monitoring arrangement which meant there may be contact with school personnel, but not with the student or parent. In other instances, AEA personnel provided materials to the educational staff rather than to the student. Since, the itinerant teacher was included as a support service in the child's Individual Educational Plan (IEP), it was assumed that both the teacher and the parent had annual involvement when the IEP was developed.

Reports of Contact Persons

Across the AEAs, the itinerant teachers expressed varying levels of interest. On the whole there was greater frequency of consent when the teacher was enthusiastic and optimistic than in AEAs where the itinerant teacher expressed a laborious attitude and reluctancy toward approaching the students and their parents. The frequency with which itinerant teachers had personal contact with students and the teachers' years of tenure within the AEA were factors having potentially negative affects.

Summary of Findings

Results were reported on the basis of responses from public school candidates in seven AEAs and all of the residential school students. Of public school students who were located and immediately available, there were 48.4% who agreed to participate. Twenty-one of non-residential students were not on the AEA roster and an additional 21 were not included for other reasons. Overt parent refusals occurred with five students with the remaining 11 refusals inferred from the lack of response in three AEAs. The research populations included 17 from the residential setting and 15 from the non-residential group.

Students from 5 AEAs provided 80% of the data for the public school group and 65% the residential group. There were representatives from 7 AEAs in the total non-residential group, with the residential group encompassing students from 8 AEAs.

Piers (1984) reported that there were no systematic differences in self-concept related to age and grade placement. Public school and residential school individuals in this study tended to be comparable in terms of those variables of age and grade placement. The average age for non-residential was 14.9 years and for residential students it was 15.2 years. The distribution within each group was comparable indicating the two groups were essentially alike regarding age. Minimum difference was evident when comparing the average grade placement, as the average for residential students was 8.4 as contrasted with the public school average of 8.7 year. Common characteristics of age and grade placement identified the two groups as similar.

A pattern of gender similarity also emerged, with a disproportionate number of males in each group. The frequency of males exceeded what would be expected, according to Hatfield (1972). Vision loss occurred at birth for most students in both groups. Taken together 28 of 32 participants experienced loss of vision at birth. More than two-thirds of students with a visual impairment were male while more than four out of five experienced the vision loss at birth. The two populations were more alike than unlike in the four areas of age, grade placement, gender, and age of onset.

The existence of a secondary disability was more common among residential school students with seven from the residential school, two from the public school. No pattern of specific secondary disability existed. Reporting discrepancies may be relevant since if a secondary disability was present at the time of enrollment at IBSSS, the fact was included in the data. No effort was employed to verify the present existence of the same disability. Among the public school group, two subjects had received or were receiving services for another disability.

Students within the residential setting had residential services for fewer years (mean of 5.1 years) than public school students had services of itinerant teachers (mean of 7.6 years). In general, there was a reverse distribution pattern so that the majority of residential school students (11 of 17) had been enrolled five years or less, while the majority of non-residential students (6 of 15) received itinerant services for 11 years or more. When surveying the extent of weekly services, 92% (13 of 15) of the public school students received direct services two hours or less per week. It appeared that on the average, public school students received itinerant teacher services for more years that students were enrolled in a residential school, and they were more likely to receive direct services two hours or less each week.

Seven of 15 students had scores from individually administered intelligence tests. Piers (1984) and Battle (1981) reported no significant correlations between self-concept and intelligence, with the range being from .00 to .28. Intellectually, public school students had an average measured verbal intelligence of 123.3 (range from 90-160) as contrasted with the average of 91.4 (range from 60-120) for residential students. Reports were not available for all public school students so the extent of representative nature of those for whom there was data cannot be determined.

In comparing the self-concept of residential and public day school students, the mean scores, standard deviations, and standard errors resulted in a .294 observed probability level and a t value of -1.07. That is to say, 29.4% of the time a difference of at least this size occurred when the two population means were equal. Little evidence was found to substantiate a significant difference between the means of the two groups.

Learning medium was grouped into print and braille with an equal split within the research subjects, 16 of each, print and braille. Within the non-residential group, slightly more than half of the students used braille, while slightly less than half used braille among the residential students. Two public school students used regular print. When testing the means with a t test, a t value of -.18 and observed probability level of .859 were derived indicating no statistical difference in the mean scores. The difference would occur by chance 85.9% of the time.

The characteristics of two groups of visually impaired youth from different living environments, i.e., home and residential setting, and two contrasting educational settings, i.e., with sighted and with visually impaired, had remarkable similarities. There was little difference in average age and grade placement, proportion of males and females, age when the vision loss occurred, and frequency of each learning medium. Differences in reported intellectual levels and years of service in the present placement may be real differences or may have resulted from interpretations of the reporters. A significance in the extent of services was contrasted when a full day services would occur within the residential setting and less than two hours a week in the public school.

Conclusions

Caution in generalizing the results must be employed due to the sample size. However, since all known students in the state of Iowa, ages 12 to 18, with a primary visual impairment were given an opportunity to be included in the research, the sample must be considered exhaustive. Using the educational definition of visual impairment related with functional vision restricted expansion of the target population to those in which legal definitions were applied.

Results of this research suggested the lack of statistical differences among students with visual impairments with regard to educational placement. The patterns which described the research subjects were that most were (a) male, and (b) had a vision loss since birth, and on the average were (a) between 14.9 and 15.2 years of age, and (b) placed between 8.4 and 8.7 grade placement. Half used braille for the learning medium.

Information assembled through this research served a population in which visual impairment was described in terms of functional loss of vision and the need for special modifications for learning. Students resided in rural areas in which there were two major service delivery models, residential school and services from an itinerant teacher for the visually impaired. Results of this study indicated that self-concept was neither negatively nor positively affected, to a significant degree, by mainstreaming of these groups of secondary students. Evidence supported conclusions asserted by Head (1979) and Coker (1979) that there was no significant difference in global self-concept of visually impaired students according to educational placement.

Implications

Research with low incidence disability categories necessitated small research populations. The results of this study had limited generalizability and were applied to the visually impaired population in a rural region where a functional definition of visual impairment was used. The limited amount of current research about self-concept and educational placements of visually impaired students contributed to the importance of this study. The results added valuable information to the overall body of knowledge regarding the impact of educational placement on self-concept and the relationship between learning medium and self-concept among visually impaired youth. With the present emphasis on full inclusion, this research added information about the social effects of mainstreaming which assisted educators in making informed decisions regarding appropriate educational placements for visually impaired students. To realize the full merit of this study it must be considered along with other research involving students who require highly specialized services because of loss of vision.

Questions

Unanswered questions remain as a result of the current study.

1. How might the public school participation have been altered if itinerant teachers had input regarding the research methodology or if the researcher had made a personal explanation of the research goals and procedures to each teacher?

2. What difference in response might there have been if the method were modified so the researcher made direct contact with public school personnel or with students and parents individually? Or what might have been done for a higher rate of response?

3. What reporting discrepancies accounted for the number of students on the state roster who were not present within an AEA? One-third of students listed were not found in the identified AEA.

4. What were the key factors to account for the difference in parent and student response between public and residential schools?

5. What elements accounted for the disparity of response and lack of response from one AEA to another?

Suggestions for Future Research

Difficulties in securing a homogeneous population presented a serious obstacle to deriving results which had the capability of being generalized. Further research on the social implications of educational placement was clearly warranted as evident by the lack of recent studies. Recommended areas of research are:

1. Develop a longitudinal study to assess the long range effects of placement in either a public day or a residential school.

2. Focus a study solely on learning medium and self-concept which could provide a broader base of population.

3. Select a limited number of students, who are in the public school but who intend at some time to enroll at a residential school, and conduct single-subject research regarding changes in self-concept.

4. Use a matched-pair design to provide valuable information about self-concept, if it were possible to match students on enough characteristics.

5. Contrast self-concept of students in different educational settings in various regions where functional and legal definitions of visual impairment might be studied.

6. Analyze differences of other variables according to intensity of direct services, e.g., full-time in a residential setting and two hours or less in the public school.

Summary

This study analyzed differences in self-concept that existed according to educational placement. No significant differences in self-concept and educational placement were determined nor was there any significant difference in self-concept and learning medium. Some descriptive information regarding the teen-age visually impaired population as a whole in this state was assembled. Conclusions of this study can be used to describe students who received services through the current special education delivery system of the state. Results of this study contributed to a broader body of knowledge which when taken as a whole offered insights and understandings of visually impaired teen-agers and assisted in making educational decisions based on research.

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APPENDIX A

Human Subjects UNI Approval Letter

The University of Northern Iowa

April 11, 1991

Ms. Sheila D. Kielly
1109 East 3rd Street
Vinton, IA 52349

Dear Ms. Kielly:

Your project, "A Study of Self Concept of Visually Impaired Adolescents in Different Educational Programs", which you submitted for human subjects review on April 10, 1991 has been determined to be exempt from further review under the guidelines stated in the UNI Human Subjects Handbook. You may commence participation of human research subjects in your project.

Your project need not be submitted for continuing review unless you alter it in a way that increases the risk to the participants. If you make any such changes in your project, you should notify the Graduate College Office.

If you decide to seek federal funds for this project, it would be wise not to claim exemption from human subjects review on your application. Should the agency to which you submit the application decide that your project is not exempt from review, you might not be able to submit the project for review by the UNI Institutional Review Board within the federal agency's time limit (30 days after application). As a precaution against applicants' being caught in such a time bind, the Board will review any projects for which federal funds are sought. If you do seek federal funds for this project, please submit the project for human subjects review no later than the time you submit your funding application.

If you have any further questions about the Human Subjects Review System, please contact me. Best wishes for your project.

Sincerely,

Norris M. Durham, Ph.D.
Chair, Institutional Review Board

cc: Dr. John Somervill, Graduate Dean

APPENDIX B

State Consultant Letter of Support

STATE OF
IOWA
TERRY E. BRANSTAD, GOVERNOR
DEPARTMENT OF EDUCATION
WILLIAM L. LEPLEY, ED.D., DIRECTOR

October 17, 1991

Ms. Shiela Kielly
c/o Iowa Braille and Sight Saving School
1002 G Avenue
Vinton, IA 52349

Dear Ms. Kielly,

I have reviewed the research proposal that you plan to have serve as the basis for your doctoral dissertation at the University of Northern Iowa. The results of a comparison of the self-concept between residential school and public school educated visually impaired teenagers would be a valuable contribution to knowledge in the field of educating students who are blind or visually impaired. I am in support of your efforts and can be called upon to provide any assistance I can.

Best of luck with your research.

Sincerely,

Ian Stewart

Ian Stewart, Ph.D.
Consultant, Visual Disabilities

GRIMES STATE OFFICE BUILDING / DES MOINES, IOWA 50319-0146

APPENDIX C

Permission for Transcription from WPS

WPS WESTERN PSYCHOLOGICAL SERVICES
Publishers And Distributors Since 1948

May 19, 1991

Shiela D. Kielly
School Psychologist
Iowa Braille and Sight
Saving School
1109 E. 3rd Street
Vinton, Iowa 52349

Dear Ms. Kielly:

We have processed your license fee for the adaptation and reproduction of WPS materials. Enclosed is WPS Invoice #401094, serving as your license to adapt the Test Booklet for the Piers-Harris Children's Self-Concept Scale (PHCSCS) (W-180A) to braille and to large print, and to reprint up to 25 copies of each adaptation (for a total number of 50 copies), subject to the terms outlined in my letter to you of April 4, 1991.

With regard to my April 4 letter, the following is the copyright notice that must appear in its entirety on each PHCSCS adaptation:

> "Items from the Piers-Harris Children's Self-Concept Scale copyright © 1969 by Ellen V. Piers and Dale B. Harris. Adapted and reprinted by permission of the publisher, Western Psychological Services, 12031 Wilshire Boulevard, Los Angeles, California 90025."

Your interest in the PHCSCS is appreciated, and we look forward to hearing the results of your research. If WPS can be of additional assistance, please feel free to contact us.

Sincerely yours,

Susan Dunn Weinberg
Assistant to the President
Rights and Permissions

SDW:se
Enclosure

12031 Wilshire Boulevard • Los Angeles, California 90025 • (213) 478-2061 • FAX (213) 478-7838

APPENDIX D

Letter to AEA Directors of Special Education

1109 E. 3rd St.
Vinton, IA 52349
October 24, 1991

AEA Directors:NOT ON DESKTOP AEA Directors:NOT ON DESKTOP
Director of Special Education/Supervisor of Visually Impaired Services
AEA Directors:NOT ON DESKTOP
AEA Directors:NOT ON DESKTOP
AEA Directors:NOT ON DESKTOP

Dear Director/Supervisor:

I am in the process of completing my dissertation as part of the Ed.D. program at the University of Northern Iowa, under the direction of Dr. Marion Thompson. I am studying the measured self concept of visually impaired students, ages 12-18, who are enrolled in residential and public schools in Iowa.

The low incidence of persons with a visual impairment limits the availability of empirical data regarding the relationship of self concept and educational placement. Through completing this study, I hope to provide some insights that will assist in making professional judgments about the educational programs of the visually impaired students.

To complete the research, I am seeking the available demographic data for each student (see enclosure) and the completion of a self concept inventory. The entire process should not exceed 45 minutes per student, which would include addressing the parent permission, completing the demographic data, and supervising individual completion of the self concept inventory. I will provide all needed materials in the child's reading medium and according to each response mode. I have made a random selection of students who were identified as visually impaired on the state roster in December, 1990 and it appears that AEA Directors:NOT ON DESKTOP students from your AEA were selected.

I request your support, as apparent through your written agreement. I will then contact your Itinerant Teacher(s) for the Visually Impaired with whom I may coordinate collection of the above described research data. Please indicate your decision on the following page, and provide the needed information in order to contact the proper AEA representative(s).

Enclosed is a letter of support and encouragement from Dr. Ian Stewart, Iowa State Consultant for the Visually Impaired. Upon completion, the results of the research will be available for your review, should you state an interest.

Thank you in advance for your prompt response to my request.

Sincerely yours,

Shiela D. Kielly
School Psychologist, Iowa Braille and Sight Saving School

APPENDIX E

Second Request to AEA Directors

1109 E. 3rd St.
Vinton, IA 52349
December 9, 1991

AEA Directors:NOT ON DESKTOP AEA Directors:NOT ON DESKTOP
Director of Special Education/Supervisor of Visually Impaired Services
AEA Directors:NOT ON DESKTOP
AEA Directors:NOT ON DESKTOP
AEA Directors:NOT ON DESKTOP

Dear Director/Supervisor:

I am writing to follow up a November 13, 1991, correspondence in which I described my intentions for research as part of the doctorate program at the University of Northern Iowa, and asked your consent for AEA participation. My records indicate I have not heard from you, so I repeat my request to include some visually impaired youth from your AEA. I am studying the measured self concept of visually impaired students, ages 12-18, who are enrolled in residential and public schools in Iowa.

Since visual impairment is such a low incidence handicapping condition, the availability of empirical data is limited. Using the state roster from December, 1990, only students with a primary visual impairment were included in the sample. Through my selection procedure, AEA Directors:NOT ON DESKTOP student(s) from your AEA have been selected. Provision of some demographic information about the student's vision and educational status, and completion of a self concept scale by the student will be involved in data collection.

I request your support, as evident through your written agreement. Subsequently, I will communicate with the person you designate in order to collect the necessary data. Please indicate your decision on the following page, an provide the needed information in order to contact the proper AEA representative(s).

Your cooperation is sincerely appreciated. and the results of the research will be available for your review, should you indicate an interest.

Sincerely yours,

Shiela D. Kielly
School Psychologist, Iowa Braille and Sight Saving School

APPENDIX F

Third Request to AEA Directors

1109 E. 3rd St.
Vinton, IA 52349
March 30, 1992

Dear ,

I am writing regarding my previous requests to involve visually impaired students in your AEA in research as part of my doctoral dissertation. I am comparing self concept of visually impaired teenagers in the residential school and public schools. Greater detail is provided on the enclosed letter which is a copy of ones sent earlier.

I request your support, as evident through your written agreement. Subsequently, I will communicate with the person you designate in order to collect the necessary data. Please indicate your decision on the following page, an provide the needed information in order to contact the proper AEA representative(s).

Your cooperation is sincerely appreciated, and the results of the research will be available for your review, should you indicate an interest. If you have questions or concerns, please call me.

Sincerely yours,

Shiela Kielly
IBSSS School Psychologist

APPENDIX G

Permission and Contact Person from AEA

AEA AGREEMENT FOR RESEARCH

AEA Directors:NOT ON DESKTOP AEA Directors:NOT ON DESKTOP
AEA Directors:NOT ON DESKTOP

I understand the scope of the proposed research and the purpose for \ it is intended. I agree that the AEA personnel serving visually impai youth may be involved in the data collection.

Director/Representative of Special Education

Date

The appropriate person(s) to contact is/are:

Name

Address

City and Zip Code

Phone

I understand the scope of the proposed research and the purpose for \ it is intended. I <u>do not</u> agree that the AEA personnel serving visually impaired youth may be involved in the data collection.

Director/Representative of Special Education

Date

Please return your decision in the enclosed stamped, self-addressed envelope as soon as possible. I sincerely appreciate your cooperation

APPENDIX H

Letter to Parents of IBSSS Students

1109 E. 3rd St.
Vinton, IA 52349
April 26, 1991

Dear Parent(s) of ,

I am completing my dissertation through University of Northern Iowa and plan to study the self-concept of visually impaired students in residential schools and public schools. I am asking parents of all IBSSS students, ages 12 to 18 years, who are in the academic program, to give permission for their child to participate in the research. Each student will also be asked for written agreement.

For the child to be involved would mean responding to a self-concept inventory and taking a short achievement test. In addition, I would review their file for information such as when the vision loss occurred, the cause of their vision loss, and an intelligence quotient from the most recent test. Contact with the student would take about 30 minutes of total time which would be after school hours and would not interfere with other scheduled activities. All results would be used for research only and the student's identity would be coded to assure they would be anonymous. If you are interested, the results could be available after completion of the study.

The research is under the direction of Drs. Marion Thompson and Lee Courtnage, Department of Special Education, and has the support of Ian Stewart, State Consultant for the Visually Impaired, and Dennis Thurman and Ivan Terzieff of IBSSS. We hope the research will contribute valuable information that can be used in making educational decisions regarding the visually impaired youth in Iowa.

You may address questions or concerns to me at the above address or by phone in the evenings at 319-472-4682. Questions about your rights may be directed to the Graduate College, University of Northern Iowa, 319-273-2748.

I ask that you indicate your decision on the following page and return it to me in the enclosed stamped self-addressed envelope. I will ask the students for their permission unless you prefer to discuss it with him/her.

Thank you in advance as I anticipate your prompt response to this request.

Sincerely yours,

Shiela Kielly
IBSSS School Psychologist

APPENDIX I

Letter to Parents of Public School Students

1109 E. 3rd St.
Vinton, IA 52349
February 3, 1992

Dear Parent(s) of a Visually Impaired Child in Who Was Born ,

I am working on my dissertation through University of Northern Iowa and plan to study the self-concept of visually impaired students in residential schools and public schools in Iowa. I want to include students from the Iowa Braille & Sight Saving School (IBSSS) and from public schools across the state. Students to be included would be in the age range of 12 to 18 years, have a primary visual impairment, and are receiving services of the AEA itinerant teacher for the visually impaired while in the academic program. Your child was selected from coded records at the Iowa Department of Education. I ask you and your child to give permission to participate in the study.

For the child to be involved would mean responding to items on the Piers-Harris Children's Self-Concept Inventory. In addition, an AEA staff member would provide file information such as when the vision loss occurred, the cause of the vision loss, extent of services from a vision specialist, presence of a secondary disability, and an intelligence quotient from the most recent test. Contact with the student would take about 30 minutes of total time and would be at a time agreeable among you, your child, the AEA personnel, and your child's school. All results would be used for research only and the student's identity would be coded to assure they and their responses would be anonymous. If you are interested, the results could be available after completion of the study.

The research is under the direction of Drs. Marion Thompson and Lee Courtnage, Department of Special Education, and has the support of Ian Stweart, State Consultant for the Visually Impaired, and Dennis Thurman and Ivan Terzieff of IBSSS. We hope the research provides valuable information for making educational decisions regarding the visually impaired youth in Iowa.

You may address questions or concerns to me at the above address or by phone in the evenings at 319-472-4682. Questions about your rights may be directed to the Graduate College, University of Northern Iowa, 319-273-2748.

I ask that you indicate your decision below and return it to the AEA person who contacted you. The AEA person will ask the student for permission unless you prefer to discuss it with him/her.

Thank you in advance as I anticipate your prompt response to this request.

Sincerely yours,

Shiela Kielly, School Psychologist
Iowa Braille & Sight Saving School

APPENDIX J

Parent and Student Permission

AEA: Contact persons AEA:NOT ON DESKTOP
Student : Contact persons AEA:NOT ON DESKTOP

PERMISSION FOR SPECIAL STUDY

Dissertation Research
Self concept of visually impaired youth at IBSSS and public school

Parent permission

I am aware of the nature of the project and I understand what it means for my child to be involved.

_____I agree for my child to participate in the research as described.

_____I do not want my child to participate in the research as described.

Parent Signature____

Date __________________________

≈≈

Student agreement

I am aware of the nature of this project and I understand what it means to participate.

_____ I agree to participate.

_____I do not agree to participate.

Student Signature ____

Date _______________________________

Please, return the permission to the AEA personnel involved with visually impaired students. Thank you!

APPENDIX K

Introductory Letter to Contact Person

1109 E. 3rd St.
Vinton, IA 52349
February 3, 1992

Contact persons AEA:NOT ON DESKTOP Contact persons AEA:NOT ON DESKTOP
Contact persons AEA:NOT ON DESKTOP
Contact persons AEA:NOT ON DESKTOP
Contact persons AEA:NOT ON DESKTOP

Dear Contact persons AEA:NOT ON DESKTOP,

Thank you for your willingness to participate in the dissertation research about visually impaired youth in Iowa. I am at the point of gathering preliminary information, after which the Piers-Harris Children's Self-Concept Scale will be sent to you. Only students in the academic programs who are considered as having a primary handicapping condition of visual impairment should be included.

I have included the birthdates of those students from your AEA, a letter to the parents of each student, a permission sheet, and the Identifying Information sheet. I do not have access to student names, so I am providing the birthdates for you.

Contact persons AEA:NOT ON DESKTOP
Contact persons AEA:NOT ON DESKTOP Contact persons AEA:NOT ON DESKTOP
Contact persons AEA:NOT ON DESKTOP Contact persons AEA:NOT ON DESKTOP

Please use the birthdate to identify the child and give the parents the enclosed letter which describes the nature of the research and asks for their permission. In addition, the student is asked to agree to the research along with the parent.

When permission from the parent and student is provided, please complete the enclosed Identifying Information sheet and return the permissions and the information sheet to me in the enclosed stamped self-addressed envelope.

The only remaining step is completion of the self-concept scale. After receiving the permission and identifying sheets, I will be sending the scale in whatever reading medium is marked on the Identifying Information sheet. All materials will be provided.

I realize that some students who have been selected may not be in your AEA any longer graduation or some other reason. If a child is not available or is not in the academic educational program, please indicate that information on the information sheet and return it to me. That child will not be eligibile for inclusion in the research. If some information is not available, i.e. intelligence quotient, please indicate it is "not available" rather than leaving it blank.

If other questions arise, please phone me at 319-472-4682 (Home), 319-472-5221 (Work). Thank you very much. I look forward to sharing this new research with you.

Sincerely yours,

Shiela Kielly
IBSSS School Psychologist

APPENDIX L

Letter Accompanying Piers-Harris

1109 E. 3rd St.
Vinton, IA 52349
March 30, 1992

Dear _____,

Thank you very much for your work in getting permissions and providing information about your student.

Enclosed is the Piers-Harris Children's Self-Concept Scale in braille for your student with a birthdate of March 30, 19xx. By marking on the inventory, the student selects "yes" or "no" for each item. The directions are also written in braille on the second page. Please supervise your student while s/he completes the scale and glance it over to make sure each item is marked.

Call me with any questions. Enclosed, you will find a return address label for your use in returning the completed test to me in this same envelope. Thank you again!

Sincerely yours,

Shiela Kielly

APPENDIX M

Identifying Information

IDENTIFYING INFORMATION

(A) Student code______________________

(B) Date of birth __________________ (C) Sex F(1) M(2)

(D) Grade placement ______

(E) Age of onset of visual impairment ___birth(1) ___before age 5(2)

____ age 5 to 12 years(3) ____age 13 + years(4)

(F) Primary learning medium (Select <u>one</u>)

____regular print (1) ____large print(2) ____braille(3) ____audio tapes (4)

(G) Cause of vision pathology

____insult to eye, head, brain(1)

____congenital defect(2)

____eye or brain tumor(3)

____cataracts(4)

____inflammation or infection of eye or body(5)

____optic atrophy (7)

____retrolental fibrophasia(6)

____glaucoma (9)

____myopia, albinism, nystagmus, or strabismus(8)

____other (11)

____retinopathy of prematurity(10)

____not known (12)

(H) Is there/has there been an identified secondary disability? Yes No

Which one? LD MD BD Other______________________________

(I) Special education service model

(1)itinerant services For how many years? ______

Number of minutes per week: _____less than 60(a)

____ between 60 and 120 (b) _____between 120 and 180 (c)

_____between 180 and 240 (d) _____between 240 and 300 (e)

_____more than 300(f)

(2)residential program For how many years______

(J)Latest individual intelligence quotient: Test ____________________

Score(s)___________

Person providing information ______________________________________

* *

To be completed by researcher

Piers Harris raw scores

I _____(K) II_____(L) III_____(M) IV _____ (N) V _____ (O) VI _____(P)

Total _____ (Q)

APPENDIX N

Follow-up Letter to Contact Person

1109 E. 3rd St.
Vinton, IA 52349
August 23, 1992

Dear _____,

Thank you for all of your efforts last year to assist in researching the self-concept of teen-agers who are visually impaired. As the year ended, there had been no response from three students from _____. In meeting with my dissertation committee this summer, they want me to try to have responses about all of the public school students, so I am writing again. What I am asking is your impression of the status of those persons whom I know you talked with so many times last year. Do you think their lack of response means they are not interested or do you think they would agree if asked one more time?

I will list their birthdates and on the line beside the birthdate I ask that you indicate how you see their status. If you are optimistic about getting permission, the final deadline is October 1, 1992. Simply indicate one of the following statements to let me know where they stand: 1) Their lack of response probably is a refusal, 2) It's worth contacting them again this fall, or 3) Send me the materials again.

January 6, 19xx____

August 14, 19xx____

October 12, 19xx____

I very much appreciate all of your work last year and look forward to having the results to share with you.

Enclosed is an envelope that you can use to bring closure about your students. Again, thank you so much.

Sincerely yours,

Shiela Kielly
IBSSS School Psychologist

APPENDIX O

Final Follow-up Letter to Contact Person

1109 E. 3rd St.
Vinton, IA 52349
October 9, 1992

Agnes Peters
Arrowhead AEA
1235 5th Ave. South
Fort Dodge, IA 50501

Dear Agnes,

I am writing to follow up on our recent phone conversation regarding the inclusion of students with a visual impairment from Arrowhead in my research on self-concept. I thought perhaps my last correspondence had been misplaced so I am enclosing another copy. Please indicate your impressions, which you indicated were the parents lack of response was interpreted as a refusal, and return to me as soon as possible. For your convenience I have enclosed a stamped, self-addressed envelope.

Ag, I do appreciate your efforts and will include you in the mailing of a summary of the results.

Sincerely yours,

Shiela Kielly
IBSSS School Psychologist

APPENDIX P

Follow-up Letter to AEA 13

1109 E. 3rd St.
Vinton, IA 52349
August 23, 1992

Becky Zorn
Loess Hills AEA
P.O. Box 188
Council Bluffs, IA 51502

Dear Becky,

I am writing in follow-up of the communications last year regarding collecting research data for teen-agers who are visually impaired. To review, you were asked to request parental and student permission, provide some historical information about each student, and supervise completion of a self-concept inventory. As the year ended, there were no responses from or about students in Loess Hills. In meeting with my dissertation committee this summer, they want me to try to have responses about all of the public school students, so I am writing again.

At this point, I am asking if you wish to be involved in the research. The deadline is October 1, 1992. If you choose to participate, the following birthdates are of students whom you would be asked to approach.

September 25, 19xx
August 13, 19xx
September 3, 19xx
October 9, 19xx
June 27, 19xx
April 23, 19xx
July 24, 19xx
September 27, 19xx
March 9, 19xx
April 14, 19xx

It would be beneficial if students from Loess Hills AEA were included in the sample, but I also realize it may not be possible. Please indicate your intentions and return in the enclosed stamped, self-addressed envelope.

Thank you for considering the project as I anticipate coming to closure about Loess Hills students.

Sincerely yours,

Shiela Kielly
IBSSS School Psychologist

______I understand the research and would like new materials to be sent for the above identified students

______I understand the research but do not feel we can be involved.

____
Signature Date

APPENDIX Q

Final Letter to AEA 13

1109 E. 3rd St.
Vinton, IA 52349
October 9, 1992

Becky Zorn
Loess Hills AEA
P.O. Box 188
Council Bluffs, IA 51502

Dear Becky,

I regret writing again, but I am seeking closure regarding research involving students who are visually impaired in Loess Hills AEA. I am enclosing a copy of the last letter and ask you to pay particular attention to the bottom of the page. Since the timeline cannot be extended, it will no longer be possible for your students to be considered as part of the dissertation population which studied the self-concept of students with a visual impairment. However, I am asking that you indicate your decision by marking the appropriate choice and signing your name.

For your convenience, I have enclosed is a stamped, self-addressed envelope. Please return as soon as possible.

I wish you well on your research in conjunction with a university in Omaha. Any new information about special needs children is certainly welcome.

Sincerely yours,

Shiela Kielly
IBSSS School Psychologist

APPENDIX R

1990-91 State Roster

DECEMBER 1, 1990 EHA SERVED COUNT

GRAND TOTAL EHA-B 12-1-90

AGE/DISAB	MENTAL	HEARING	DEAF	COMM DIS	SPEECH	VISUALLY	BEHAV	ORTHO	OTH/DD/NC	LEARNING	DEAFBLIND	MULTI S/P	TOTAL	AGE/DISAB	PERCENT
UNDER 1	13	1	0	0	0	1	0	22	55	0	0	1	93	UNDER 1	0.154%
ONE	41	9	0	0	5	7	0	65	182	0	0	3	312	ONE	0.518%
TWO	115	19	0	29	77	4	8	66	168	0	0	12	498	TWO	0.827%
SUB 0-2	169	29	0	29	82	12	8	153	405	0	0	16	903	SUB 0-2	1.499%
THREE	312	27	0	161	315	15	58	87	6	15	0	16	1012	THREE	1.680%
FOUR	385	34	0	230	832	7	112	110	1	22	0	34	1767	FOUR	2.934%
FIVE	488	45	1	168	1564	13	147	78	33	66	0	23	2626	FIVE	4.360%
SUB 3-5	1185	106	1	559	2711	35	317	275	40	103	0	73	5405	SUB 3-5	8.975%
SIX	576	42	1	52	1774	12	201	103	66	260	0	42	3129	SIX	5.196%
SEVEN	622	58	2	28	1743	12	265	88	111	896	0	44	3869	SEVEN	6.424%
EIGHT	767	44	0	36	1762	8	362	91	85	1651	0	47	4853	EIGHT	8.058%
NINE	769	70	1	14	1556	14	429	84	88	2209	0	38	5272	NINE	8.754%
TEN	843	76	2	19	962	12	491	85	106	2503	0	47	5146	TEN	8.545%
ELEVEN	839	62	0	11	475	10	554	68	65	2674	0	42	4800	ELEVEN	7.970%
SUB 6-11	4416	352	6	160	8272	68	2302	519	521	10193	0	260	27069	SUB 6-11	44.948%
TWELVE	786	45	0	9	258	17	634	60	62	2628	0	43	4542	TWELVE	7.542%
THIRTEEN	838	40	0	17	144	11	749	61	57	2583	0	44	4544	THIRTEEN	7.545%
FOURTEEN	801	51	0	9	77	11	827	51	33	2310	0	27	4197	FOURTEEN	6.969%
FIFTEEN	767	49	1	3	58	11	841	57	37	2229	0	30	4083	FIFTEEN	6.780%
SIXTEEN	723	47	0	2	29	9	730	47	15	1981	0	30	3613	SIXTEEN	5.999%
SEVENTEEN	708	43	0	2	24	10	536	58	11	1531	0	28	2951	SEVENTEEN	4.900%
SUB 12-17	4623	275	1	42	590	69	4317	334	215	13262	0	202	23930	SUB 12-17	39.736%
EIGHTEEN	609	35	0	1	11	3	257	41	9	927	0	47	1940	EIGHTEEN	3.221%
NINETEEN	293	11	0	0	1	1	58	22	0	250	0	37	673	NINETEEN	1.118%
TWENTY	131	1	0	0	2	0	15	24	0	36	0	33	242	TWENTY	0.402%
TWENTYONE	33	0	0	0	0	0	1	15	0	2	0	10	61	TWENTYONE	0.101%
SUB 18-21	1066	47	0	1	14	4	331	102	9	1215	0	127	2916	SUB 18-21	4.842%
TOT 0-21	11459	809	8	791	11669	188	7275	1383	1190	24773	0	678	60223	TOT 0-21	100.000%
CHECKTOT	11459	809	8	1.313%	11669	188	7275	1383	1190	24773	0	678	60223	CHECKTOT	
[illegible]	19.028%	1.343%	0.013%	0.000%	19.376%	0.312%	12.080%	2.296%	1.976%	41.135%	0.000%	1.126%	100.000%		
3-21	11290	780	8	762	11587	176	7267	1230	785	24773	0	662	59320	59320	
[illegible]	19.032%	1.315%	0.013%	1.285%	19.533%	0.297%	12.251%	2.073%	1.323%	41.762%	0.000%	1.116%	100.000%		
22+	2	0	0	0	0	0	2	12	1	0	0	1	18		
TOTAL 0-22+	11461	809	8	791	11669	188	7277	1395	1191	24773	0	679	60241		
[illegible]	19.025%	1.343%	0.013%	1.313%	19.371%	0.312%	12.080%	2.316%	1.977%	41.123%	0.000%	1.127%	100.000%		
AGE/DISAB	MENTAL	HEARING	DEAF	COMM DIS	SPEECH	VISUALLY	BEHAV	ORTHO	OTH/DD/NC	LEARNING	DEAFBLIND	MULTI S/P	TOTAL	AGE/DISAB	