Andrews University

Digital Commons @ Andrews University

Dissertations

Graduate Research

1981

A Study of Self-Concept of Hearing-Impaired Students as Compared to the Self-Concept of Normal-Hearing Students

Wayne K. Wright
Andrews University

Follow this and additional works at: <https://digitalcommons.andrews.edu/dissertations>

Part of the [School Psychology Commons](#), and the [Speech Pathology and Audiology Commons](#)

Recommended Citation

Wright, Wayne K., "A Study of Self-Concept of Hearing-Impaired Students as Compared to the Self-Concept of Normal-Hearing Students" (1981). *Dissertations*. 1564.
<https://digitalcommons.andrews.edu/dissertations/1564>
<https://dx.doi.org/10.32597/dissertations/1564>

This Dissertation is brought to you for free and open access by the Graduate Research at Digital Commons @ Andrews University. It has been accepted for inclusion in Dissertations by an authorized administrator of Digital Commons @ Andrews University. For more information, please contact repository@andrews.edu.

Seek Knowledge. Affirm Faith. Change the World.

Thank you for your interest in the

**Andrews University Digital Library
of Dissertations and Theses.**

*Please honor the copyright of this document by
not duplicating or distributing additional copies
in any form without the author's express written
permission. Thanks for your cooperation.*

INFORMATION TO USERS

This was produced from a copy of a document sent to us for microfilming. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the material submitted.

The following explanation of techniques is provided to help you understand markings or notations which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting through an image and duplicating adjacent pages to assure you of complete continuity.
2. When an image on the film is obliterated with a round black mark it is an indication that the film inspector noticed either blurred copy because of movement during exposure, or duplicate copy. Unless we meant to delete copyrighted materials that should not have been filmed, you will find a good image of the page in the adjacent frame. If copyrighted materials were deleted you will find a target note listing the pages in the adjacent frame.
3. When a map, drawing or chart, etc., is part of the material being photographed the photographer has followed a definite method in "sectioning" the material. It is customary to begin filming at the upper left hand corner of a large sheet and to continue from left to right in equal sections with small overlaps. If necessary, sectioning is continued again—beginning below the first row and continuing on until complete.
4. For any illustrations that cannot be reproduced satisfactorily by xerography, photographic prints can be purchased at additional cost and tipped into your xerographic copy. Requests can be made to our Dissertations Customer Services Department.
5. Some pages in any document may have indistinct print. In all cases we have filmed the best available copy.

University
Microfilms
International

300 N. ZEEB RD. ANN ARBOR, MI 48106

8205799

Wright, Wayne K.

**A STUDY OF SELF-CONCEPT OF HEARING-IMPAIRED STUDENTS AS
COMPARED TO THE SELF-CONCEPT OF NORMAL-HEARING STUDENTS**

Andrews University

Ed.D. 1981

**University
Microfilms
International** 300 N. Zeeb Road, Ann Arbor, MI 48106

Copyright 1981

by

Wright, Wayne K.

All Rights Reserved

Andrews University
School of Graduate Studies

A STUDY OF SELF-CONCEPT OF HEARING-IMPAIRED
STUDENTS AS COMPARED TO THE SELF-CONCEPT OF
NORMAL-HEARING STUDENTS

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

by
Wayne Wright
Summer 1981

A STUDY OF SELF-CONCEPT OF HEARING-IMPAIRED
STUDENTS AS COMPARED TO THE SELF-CONCEPT OF
NORMAL-HEARING STUDENTS

A dissertation presented
in partial fulfillment of the requirements
for the degree
Doctor of Education

by
Wayne K. Wright

APPROVAL BY THE COMMITTEE

Mercedes Dyer
Mercedes Dyer, Chairperson

6/17/81
Date approved

Lyndon G. Furst
Lyndon G. Furst

Peter Blitchington
Peter Blitchington

Fonda L. Chaffee
Fonda L. Chaffee

Terita Hagerman
Terita Hagerman

Robert A. Hillman
Dean,
School of Graduate Studies

ABSTRACT

**A STUDY OF SELF-CONCEPT OF HEARING-IMPAIRED
STUDENTS AS COMPARED TO THE SELF-CONCEPT OF
NORMAL-HEARING STUDENTS**

by

Wayne K. Wright

Chairperson: Mercedes Dyer

**ABSTRACT OF GRADUATE STUDENT RESEARCH
DISSERTATION**

**Andrews University
Department of Education**

**Title: A STUDY OF SELF-CONCEPT OF HEARING-IMPAIRED
STUDENTS AS COMPARED TO THE SELF-CONCEPT OF
NORMAL-HEARING STUDENTS**

Name of Researcher: Wayne K. Wright

Name and title of faculty adviser: Mercedes Dyer, Ph.D.

Date completed: June 1981

Problem

One of the important problems for the handicapped child is whether he can develop an adequate self-concept. This is a significant problem for the hearing-impaired child in a regular school setting. If the development of a self-concept is contingent upon the ability to express needs, wants, and desires, what is the self-concept of a child who cannot describe his feelings? The present study attempts to measure the self-concepts of the

hearing-impaired students and to compare them to the self-concepts of the hearing students.

Method

The Piers-Harris Children's Self-Concept Scale was used to evaluate the self-concepts of 926 students of the Berrien County Day Program for Hearing-Impaired and the Berrien Springs Public Schools. Sixty-nine hearing-impaired and 857 hearing students in grades six through twelve were tested. A t-test was used to compare the means of the hearing-impaired and the hearing for each grade, the middle school, and the high school.

Results

There were no significant differences ($p < .05$) between the self-concept means for the hearing-impaired and the hearing students. Also, there were no significant differences ($p < .05$) between the national norm as established by the Piers-Harris Children's Self-Concept Scale and the means for the hearing-impaired and the hearing students.

Conclusions

The hearing and the hearing-impaired students have self-concepts that are not significantly different. These means are also not significantly different from the national norm as established by the Piers-Harris Children's Self-Concept Scale. The eighth- and ninth-grade

hearing students tend to have a higher self-concept with regard to happiness and satisfaction. The eighth- and ninth-grade hearing-impaired students tend to have a higher self-concept with regard to physical appearance. The high school hearing students tend to have a higher self-concept with regard to happiness and satisfaction and physical appearance and attitude than the high school hearing-impaired students do.

The hearing students and the hearing-impaired students have many self-concept factors that are very similar. The range of the self-concept scores for each group of hearing-impaired and hearing students is very similar.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	viii
Chapter	
I. INTRODUCTION	1
Statement of the Problem	2
Purpose of the Study	4
Significance of the Study	4
Berrien County Day Program for Hearing-Impaired	5
Statement of Hypotheses	7
Delimitation	8
Definition of Terms	8
Assumptions	9
Organization of the Study	10
II. REVIEW OF LITERATURE	12
Historical Perspectives of Self-Concept	12
Early writers on self-concept	12
Life space and self-concept	14
Subject and objective self	14
Self as an organizing influence	15
Defensive-enhancing functions of self	15
Discontinuity of unconscious and conscious self	16
Self and behavior	16
Evaluation of self and feelings for others	17
Hierarchy of needs and self-concept	17
Development of Individual Self-Concept	18
Parent-child interaction and environment	18
Father's influence on self-concept	20
Developmental stages and self-concept	22
Basic needs of the child and self- concept	22
Judging self-worth	23
Self-concept and social contacts	23
Formation of self-concept	24
Objectification of self-concept	25
Self-concept's influence of behavior	26
Teaching influences on self-concept	27

Self-concept in scholastic success	27
Self-concept during adolescence	28
Social environment and adolescent self-concept	
Adolescent stress and self-concept	31
Self-estimate and ego aspirations	31
Aspiration influence on self-concept	32
Unfinished adolescent tasks and self- concept	34
Measurement of Self-concept	35
Types of research on self-concept	35
Definition of self	35
Limitation of self-concept measurement	36
Validity of self-concept research	38
Early reports of self-concept research	38
Two recommended self-concept scales	39
Self-Concept Development of Hearing- impaired	41
Special needs of hearing-impaired	41
Self-concept and social adjustment	42
Somatopsychology and self-concept	43
Hearing-impaired self-concept and school	44
Adolescent stress and hearing-impaired self-concept	47
Hearing-impaired Education	48
Early beginnings	48
The Bell family contribution	49
Oral versus silent methods	50
Twentieth-century advances	51
Direction of hearing-impaired education	54
Summary	55
III. RESEARCH DESIGN	59
Null Hypotheses	60
Population for the Study	61
Instrumentation	61
Piers-Harris Children's Self-Concept Scale	61
Development of the scale	62
Validity	63
Reliability	64
Administration	65
Scoring	65
Procedure	65
Summary	66
IV. PRESENTATION AND ANALYSIS OF DATA	68
Presentation of the Data	68
Participants	68
Group and grade means	69
Comparison of grade, group, and national means	75

Testing the Hypotheses	77
Self-concept Factors	82
V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS .	92
Summary	92
Overview of related literature	93
Population	96
Delimitation	96
Instrumentation	96
Results and discussion	97
Conclusions	101
Recommendations	102
APPENDIX A: THE PIERS-HARRIS CHILDREN'S SELF- CONCEPT SCALE	105
APPENDIX B: TEST RESULTS OF THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE . . .	112
SELECTED BIBLIOGRAPHY	150
VITA	165

LIST OF TABLES

1. Percentages of Middle-School Students Tested	70
2. Percentage of High-School Students Tested	71
3. Percentage of Total School Students Tested	71
4. Sixth Grade Means on Piers-Harris Children's Self-Concept Scale	72
5. Eighth Grade Means on Piers-Harris Children's Self-Concept Scale	72
6. Ninth Grade Means on Piers-Harris Children's Self-Concept Scale	73
7. Tenth Grade Means on Piers-Harris Children's Self-Concept Scale	73
8. Eleventh Grade Means on Piers-Harris Children's Self-Concept Scale	74
9. Twelfth Grade Means on Piers-Harris Children's Self-Concept Scale	74
10. Total Middle School Means on Piers-Harris Children's Self-Concept Scale	75
11. Total High School Means on Piers-Harris Children's Self-Concept Scale	75
12. Comparison of Grade Means and National Mean Using a t-Test	76
13. Comparison of Group Means and National Mean Using a t-Test	77
14. Comparison of Boys' and Girls' Means for Each Grade	78
15. Comparison of Boys' and Girls' Means for Each School	78
16. Comparison of Means of Hearing-Impaired and Normal-Hearing Students	79
17. Comparison of Means of Hearing-Impaired Students and the National Mean	80
18. Comparison of Means of Normal-Hearing Students and the National Mean	81
19. Comparison of Factors for Sixth Grade	82
20. Comparison of Factors for Eighth Grade	83
21. Comparison of the Discriminant Function in Eighth-Grade Hearing and Hearing-Impaired	84
22. Comparison of Factors for Ninth Grade	84
23. Comparison of the Discriminant Function in the Ninth-Grade Hearing and Hearing-Impaired	85
24. Comparison of Factors in Tenth Grade	86
25. Comparison of Factors in the Eleventh Grade	86

26.	Comparison of the Factors in the Twelfth Grade	87
27.	Comparison of Factors of the Middle School . .	88
28.	Comparison of Discriminant Function in Middle-School Hearing and Hearing-Impaired	89
29.	Comparison of Factors of the High School . . .	89
30.	Comparison of Factors for All Students	90
31.	Comparison of Discriminant Function of All Students in Middle School and High School . .	91
32.	Test Results of the Piers-Harris Children's Self-Concept Scale; Middle School, Grade 6 .	113
33.	Test Results of the Piers-Harris Children's Self-Concept Scale, Middle School, Grade 7 .	118
34.	Test Results of the Piers-Harris Children's Self-Concept Scale, Middle School, Grade 8 .	124
35.	Test Results of the Piers-Harris Children's Self-Concept Scale, Hearing-Impaired	129
36.	Test Results of the Piers-Harris Children's Self-Concept Scale, High School, Grade 9 . .	131
37.	Test Results of the Piers-Harris Children's Self-Concept Scale, High School, Grade 10 . .	136
38.	Test Results of the Piers-Harris Children's Self-Concept Scale, High School, Grade 11 . .	141
39.	Test Results of the Piers-Harris Children's Self-Concept Scale, High School, Grade 12 . .	146
40.	Test Results of the Piers-Harris Children's Self-Concept Scale, High School, Hearing-Impaired	148

ACKNOWLEDGEMENTS

Any student who completes a doctoral program must have a patient, understanding, knowledgeable, and encouraging chairman. For the writer, Dr. Mercedes Dyer has been all of these and more. Drs. Furst, Blitchington, and Chaffee have admirably been the supporting cast that helped to bring the study and the total program to fruition. Their expertise and encouragement have been greatly appreciated.

Special accolades go to the Berrien Springs Public Schools and the Berrien County Day Program for Hearing-Impaired for their cooperation throughout the study. A special note of appreciation goes to the high school and middle school English teachers for their assistance in the testing.

The untiring and unending support of my wife, Hazel, has always been the catalyst that helped me to reach my goal. Her patience and longsuffering is greatly appreciated and esteemed. I am eternally grateful for her support.

For all who have contributed to bringing this dissertation to completion, I want to express my sincere appreciation.

CHAPTER I

INTRODUCTION

There are many factors which may exert an enhancing or detrimental influence in the ability of a child to achieve success in the world. One such factor is self-concept. A child's self-concept is formed on the basis of how others respond to the child, what the child thinks of himself, and what the child would ideally like to be (Gordon, 1968; Quandt, 1972, p. 5).

All children need feedback from their relatives and friends because of a lack of experience and because defense mechanisms can warp their self-perceptions (Lugo & Hershey, 1979, p. 147). Since self-perceptions or self-concept is learned, not inherited, attitudes toward the self can be altered when one encounters a positive experience with people and life (Van Pelt, 1976, p. 27). Much of this positive experience is through a child's interaction with his parents. The parents' loving and caring for him are a strong contributing factor to the foundation on which all future reliable behavior is built, for it influences how the child feels about himself (Van Pelt, 1976, p. 75).

There are many difficulties that are the result of the consequences of faulty perceptions that people have of themselves (Crafts, 1975). Results of recent studies indicate that academic ability is associated with academic success of the student at individual different grade levels (Brookover, Erickson, & Joiner, 1965; Wylie, 1974). At the same time, psychologists are very interested in the self-concept as it affects a person's occupation, academic success, and interpersonal relationships (Brookover et al., 1965).

Statement of the Problem

One of the main problems of the handicapped child is whether or not the child can develop an adequate self-concept in the regular school setting. This is an especially big problem for the hearing-impaired child in a regular school setting. Can the child be expected to have a self-concept that is as good as that of the normal-hearing child? In the Berrien County Day Program for Hearing-Impaired, teachers and administrators have taken the position that the hearing-impaired child can develop a self-concept that is as adequate as the normal-hearing child in the Berrien Springs Public Schools. Also, the hearing-impaired child can develop a self-concept that is as good as or better than the norms for each grade level.

An interesting fact about human behavior is that

whether the self-concept is good or bad, if the treatment a person receives is consistent with his self-concept, that concept is fortified (Kiestler, 1973, p. 1). Unquestionably, teachers, along with parents, relatives, and other students, can have a great deal to do with the development of the child's self-concept (Kiestler, 1973, p. 7).

A child's self-concept usually goes through three stages of development. The first stage in the development of the self-concept is the parents' treatment of the child; the second is the child's perception of society's evaluation of the child's family, including himself; the third is the child's accumulation of experiences with success and failure. At any age, success in human relationships is just as important as experience with other kinds of achievement (Kiestler, 1973, p. 75).

The problems for the hearing-impaired child are particularly concerned with the development of an adequate personality structure and with the establishment of an appropriate system of interpersonal attitudes and relationships (Rodda, 1970, p. 10). Because of a lack of information about the interaction of the hearing-impaired child and his environment, interpretation of the differences found between the hearing-impaired child or various categories of the hearing-impaired child and the hearing child must be tentative.

There is an obvious need for careful, detailed observation of the behavior of the hearing-impaired child in naturalistic settings to determine whether environmental challenges for the child are different from those for the hearing child and the extent to which such differences require different modes of adaptation (Moore, 1978, p. 103).

This also raises the question: If the development of an adequate self-concept is contingent upon the ability to express needs, wants, and desires (Mead, 1934), what is the self-concept of the child who cannot describe to his parents or teachers his individual feelings about his environment (Moore, 1934, p. 105)? The lack of verbal communication between the hearing-impaired child and the child's peer group may present problems that could result in the development of a lower self-concept.

Purpose of the Study

The purpose of the study is to ascertain if the hearing-impaired students at the Berrien County Day Program for Hearing-Impaired have developed self-concepts that are as adequate as that of the hearing students of the Berrien Springs Public Schools. Also the study compares the self-concept scores of the hearing-impaired students and hearing students with the national norms as established by the Piers-Harris Children's Self-Concept Scale.

Significance of the Study

Cooley writes that certainly the discovery of self-image is one of the most important finds of this century (1922). Even though the student does not realize it, the student carries a mental blueprint or picture of himself. All of the child's actions and emotions are consistent with the imagined self-image. The child acts like the sort of person the child thinks he is. A child simply cannot do otherwise, and the person who thinks he is a failure will fail. At the same time, the person who sees himself as a success will have a much greater chance of succeeding (Cooley, 1922).

The self-image is the foundation stone of one's whole personality. Because of this, experiences and environment seem to verify the self-image, and as a result, create a vicious or pleasant cycle for the individual and his life (Cooley, 1922).

This research ascertains to what extent the hearing-impaired student has developed a self-concept that is equal to or superior to the self-concept of the hearing student. It does this by comparing the self-concept of the hearing-impaired students of the Berrien County Day Program for Hearing-Impaired with the self-concept of the hearing students of the Berrien Springs Public Schools.

Berrien County Day Program for
Hearing-Impaired

Approximately 130 children and youth with an educationally disabling hearing loss are enrolled in the Berrien County Day Program for Hearing-Impaired. This program is operated within the framework of the Berrien Springs Public Schools. Students come from the Michigan counties of Berrien, Cass, and Van Buren. They range in age from infants of less than one year old to high-school graduates. The students use the facilities of the Berrien Springs Public Schools. However, due to their handicap, they attend school one hour longer than the hearing students. This gives them the opportunity to receive special speech instruction or other needed classes. The hearing-impaired students, where appropriate, are mainstreamed into regular classrooms. The amount of mainstreaming for each student is determined by the school psychologist, the teacher of the hearing-impaired student, the head teacher of the hearing-impaired, and the parents of the hearing-impaired student. The hearing-impaired students also share the common experiences and facilities of physical education classes, cafeteria, restrooms, and extracurricular activities with the hearing students.

The current director of the hearing-impaired school, Andrew Gattenbein, started the school in 1963 with fifteen children. Since then over 250 children have

attended the school. These include children from eighteen states and eight countries. The Berrien County Day Program for Hearing-Impaired maintains a fleet of station wagons and small schools buses to transport those students who live outside of the Berrien Springs Public School District and do not ride the regular buses of the district.

The school from its beginning has used the oral method of teaching the hearing-impaired. The philosophy of the school states:

. . . since the children are going to live in the hearing world they must know how to communicate with people they must come in contact with. The success of the school is determined by the success of its students. Presently, students are attending college, working as laborers, and in general filling various types of occupations that any typical high school graduate would. (Gattenbein, 1980)

Statement of Hypotheses

The hypotheses are stated as research hypotheses rather than as experimental hypotheses. Significance for all hypotheses is tested at the .05 level. This research tests the following hypotheses:

1. There is no significant difference between the self-concept of the hearing-impaired students of the Berrien County Day Program for Hearing-Impaired and the students of the Berrien Springs Public Schools.
2. There is no significant difference between

the self-concept of the hearing-impaired students of the Berrien County Day Program for Hearing-Impaired and the national norm as established for the Piers-Harris Children's Self-Concept Scale.

3. There is no significant difference between the self-concept of the hearing students of the Berrien Springs Public Schools and the national norms as established for the Piers-Harris Children's Self-Concept Scale.

Delimitation

This study is limited to the students of the Berrien Springs Public Schools and to the hearing-impaired students from Berrien, Cass, and Van Buren counties of Michigan that attend the Berrien County Day Program for Hearing-Impaired.

Definition of Terms

Some of the terms used in this research study have special meaning and are defined as follows:

Self-concept. Self-concept is the person's total appraisal of his or her appearance, background and origins, abilities and resources, attitudes and feelings which culminate as a directing force in behavior (LaBenne & Green, 1969, p. 10). In this study, the term is used synonymously with self-image and self-esteem.

Hearing-impaired student. Any student that has a hearing loss greater than twenty decibels is a hearing-impaired student (Furth, 1973, p. 8).

Teachers of the hearing-impaired. Teachers who have received special training at the university level so they can work more effectively with the hearing-impaired students.

Berrien Springs Public Schools. A tax-supported school district comprising fifty-two square miles located in central Berrien County, Michigan. It serves about 2200 students in grades kindergarten through twelve.

Hearing students. Students attending the public schools who have no measureable hearing loss or have a loss that is less than twenty decibels.

Attitude. Attitude is a more or less stable set or disposition of opinion, interest, or purpose involving expectancy of a certain kind of experience and readiness with an appropriate response (Drever, 1952, p. 123).

Behavior. Behavior is the total response which a person makes to a situation with which the individual is faced (Drever, 1952, p. 28).

Assumptions

The basic assumption of this study is that the self-concept is influenced by growth, maturation, experience, and environment. It is also assumed that a

student's self-concept is influenced by his positive or negative association with his family, peers, other adults, and teachers. Another assumption is that a student, when responding openly and honestly to a self-report inventory, is aware of his self-concept even though the student may not know it by this term (Wylie, 1961, p. 313).

Since the student knows himself, it is assumed that the student can give the most accurate picture of his self-concept. Even though a student would have a tendency to overestimate or underestimate himself on some items, "those traits on which a student would have the most objective evidence, on a basis of permitting him to compare himself uniformly to others, are usually the most accurately estimated. . . ." (Wylie, 1961, p. 314).

Organization of the Study

The organization of the study is as follows: Chapter I includes the introduction, statement of the problem, purpose of the study, significance of the study, description of the Berrien County Day Program for Hearing-Impaired, statement of hypotheses, delimitation, definition of terms, and assumptions.

Chapter II gives the review of literature which is divided into historical perspective of self-concept, measurement of self-concept, development of individual self-concept as it pertains to the hearing-impaired

individual, and hearing-impaired education.

Chapter III describes the research design, null hypotheses, description of population, and the instrument used in the study.

Chapter IV presents the data of the study.

Chapter V summarizes the findings of the study and presents the results, recommendations, and conclusions.

CHAPTER II

REVIEW OF LITERATURE

In this chapter the literature relevant to this study of self-concept is reviewed. The review is organized into the following areas: historical perspectives of self-concept, development of individual self-concept, measurement of self-concept, self-concept as it pertains to the hearing-impaired individual, and hearing-impaired education.

Historical Perspectives of Self-Concept

Early writers on self-concept

One of the early leaders of psychology, William James (1890, p. 191), gave the concept of self an important place in his psychological writings. He considered ego the individual's sense of identity. In addition to this global concept, he felt that self included spiritual, material, and social aspects. James gave the self a dynamic quality in terms of seeking one's self-preservation.

About half a century after James' writings, a number of theorists began to establish and to state their concepts of self. All used the term self as having one

of three meanings: (1) a dynamic process; (2) a system of awareness; (3) an interrelated process and awareness (LaBenne & Greene, 1962, p. 2).

Freud (1943) gives the ego a central place in his theory of personality structure. However, Freud pays little attention to self-image. Rather, for him the ego is a functional agent or executive of the personality which makes rational choices and controls action in a healthy person.

Allport (1937) articulates on the interaction of the self as both object and process with a measure of clarity. He avoids the use of the term self so that he would not be an agent of the prescientific psychology. Allport calls the ego or self functions the controlling functions of the personality. He states that the terms self and ego should be used as descriptive adjectives to indicate the controlling function of the personality.

Mead (1934) makes the concept of self a major part of his theoretical writing on the philosophy of society and describes in detail how the self is developed through transaction with the environment. Mead further states that personality is determined by social-psychological factors. Various selves are differentiated by the specific set of responses in different social settings.

Life space and self-concept

According to Lewin (1939), the self-concept represents a life-space region which determines present belief about one's self. The term life space is a psychological concept meaning the individual's universe of personal experience or a space in which he or she moves. Life space can be considered a complex internal mechanism which produces behavior. All of the variables that determine the direction of behavior lie in the life space of an individual. To predict behavior, one must know the life space of an individual when the behavior is to occur.

Subjective and objective self

Lundholm (1940) distinguishes between a subjective self and an objective self. The subjective self is mainly what a person comes to think of himself or herself. The subjective self can be changed by the experiences that result from the interactions with others. The objective self is the outward behavior that actually can be measured.

Symond (1951) incorporates the psychoanalytic theory of Freud and the social philosophy of Mead. This combination gives theory in which the ego is a group of processes while the self is a manner in which the individual reacts. Symond also cautions that a person may be unaware of his true self-conceptions due to unconscious

distortions. In other words, what a person says may not necessarily agree with the individual's unconscious self-evaluation.

Self as an organizing influence

Cattell (1950, p. 131) considers the self the principle organizing influence exerted upon man which gives stability and order to human behavior. There is a difference between the concept of self and the sentiment of self. The sentiments of self-regard are the most important influences in man. Cattell continues by saying that sentiments are the "major acquired dynamic trait structure which causes individual[s] to pay attention to certain objects, or class of objects, and to feel and react in a certain way without regard to them." He also introduces the process of self-observation. The self which a person must rationally admit to is the actual or real self, while the self to which a person aspires is the ideal self. This means that the self is both an object and a process.

Defensive-enhancing functions of self

Murphy (1947, p. 142) expands the objectified self and delimits the self process to "defensive-enhancing functions." Self is defined as the individual known to the individual. This comes from the person's conceptions and perceptions of a person's total being,

including the frustrated self and the ideal self. The defense mechanisms are then the ego processes. This gives the ego the major function of protecting or enhancing the self-concept.

Discontinuity of unconscious and conscious self

Rogers (1951) believes in the discontinuity of the unconscious and conscious. The implications are that only when the information about the environment is admissible to awareness does it influence behavior. Rogers continues:

As long as the self-Gestalt is firmly organized, and no contradictory material is even dimly perceived, then positive self-feelings may exist, the self may be seen as worthy and acceptable, and conscious tension is minimal. Behavior is consistent with the organized hypotheses and concept of self-structure. (p. 191)

The consistency between behavior and self-concepts indicates the dual role of self: self as object and self as process.

Self and behavior

Snygg and Combs (1949, p. 15) claim that "all behavior, without exception, is completely determined by and pertinent to the phenomenal field of the behaving organism." This means a person's behavior is the result of how the situation is perceived and how the person is at the moment of action. As Snygg and Combs state that "the self is composed of perceptions concerning the individual

and this organization of perception in turn has vital and important effects upon the behavior of the individual" (p. 470).

Evaluation of self and feelings for others

Froom (1939) is one of the first to observe the close connection between a person's evaluation of self and feelings for others. Froom notes the importance of self-love for human happiness and considers low self-esteem and excessive feelings of humility a form of neurosis.

Neo-Freudians like Horney and Sullivan have extended psychoanalytic theory in a direction useful to the self in psychopathology. Horney (1936, 1950) gives an understanding of the neurotic forms of self-love and self-alienation. Sullivan (1947, p. 33) indicates that the self is made up of reflected appraisals. Initial personifications of good-me, bad-me, and not-me by the developing infant as a result of his interactions with significant others gradually evolve into a self-system. This self-system is important as a concept for understanding the problems of one's interpersonal relations--positive or negative--in the functions and the relationships with others (p. 53).

Hierarchy of needs and self-concept

In Maslow's (1954, 1959) hierarchy of needs, a

positive level of self-esteem is the final prerequisite for self-actualization. Once the individual's self-esteem is achieved, he is free to concentrate on actualizing his potential. Self-esteem is also considered to be a primary component by Coopersmith (1976) and Purkey (1970).

This historical review of the major theorists gives a background of the development of the self-concept and some of the components of self-concept.

Development of Individual Self-Concept

Parent-child interaction and environment

Wylie states that all personality theorists who are concerned with the constructs involving the self place great importance on the parent-child interaction in the development of the child's self-concept (1961, p. 121). Woolsey (1975, p. 8) writes: "The most important shaping factor in our personality is our environment during the first two or three years of our life." Ainsworth and Bell (1969) suggest that early experience can have a significant effect on later development of the child. This early experience exerts its influence by setting up patterns of perception, expectation, and action which interact with other environmental influences to set up continuities in the development process across wide segments of the developmental years (p. 162).

David and Appell (1969, p. 183) discovered that this interaction is also a means of showing expression of emotional attitudes. The spontaneous impulses and behavior of the child produce strong feelings in the mother. Her reactions to the different areas of the child's behavior create patterns in the child's behavior and patterns for their development. In all areas, the emotional attitudes of the mother and the child tend to correspond or be similar.

Psychoanalytic-oriented theorists have universally stressed the importance of the early environmental influences upon the personality of the child. Anna Freud (1943, pp. 65-113) stresses that the children taken out of London during the Second World War were not so upset by the hazards of the war as they were by the separation from their parents. She postulates that the emotional relationship of the young children to their parents is significantly related to personality development.

She also observes that the children under the age of three forget their parents within a short time but that the older children do not. The children, in time, experience negative feelings toward their parents. If these children are separated from their parents at an early age, they internalize as correct their destructive powers. This arouses an intolerable anxiety which could interfere with normal ego development. Anna Freud notes

that the ability to love is learned at this early age and that later love relationships follow this problem of early childhood. Therefore, if early relationships with parents are absent, the ability to love may be absent and subsequent relationships may have a tendency to be weak and shallow.

Father's influence on
self-concept

Coopersmith (1969, pp. 87-90) suggests that the father and his work history may have a profound effect on the self-esteem of the children. In the effective, interpersonal environment of children, a father's doubt about his powers assume considerable significance. The relationship between self-esteem and regularity of employment is one of the important factors that affects children and their attitudes toward their parents. This in turn has an effect on the children's self-concepts.

Another factor which affects the self-esteem of children is the father's intermittent absence from the home. This does not lower the children's estimate of themselves, but results in an uncertainty about how valuable they are. This may result in defensive reactions, especially if the mother states that the father is unable to provide occupational stability (Coopersmith, 1969, p. 89). The resulting uncertainty of confused children as to their value is reflected in their sensitivity to

criticism and public self-aggrandizement. This suggests that defensive reactions are likely to result from uncertain self-esteem rather than a low opinion of worth. One can conclude that the father's occupation is one of the major determinants of a family's status and that this status can have an effect on the status and the self-esteem of children (p. 92). However, the importance of this status should not be overwhelming and should not be considered the only factor affecting the self-esteem of the children. Coopersmith found too many exceptions for this to be considered the most important factor in the lives of the children.

Coopersmith (1969, p. 256) also reported that the "parents of children with high self-esteem are more attentive and concerned about their lives outside their families; they are more likely to spend time with their children than are the parents of children with less self-esteem." The main difference is that the families of children with high self-esteem are marked by well-defined limits of behavior and clear statements of rights and privileges. They also have a greater tolerance for self-expression and less drastic forms of punishment. In short, they have a more democratic style of family life.

A number of factors play important roles in the development of self-concept. Hurlock (1967, p. 655) states that, in general, these factors have high prestige

in the eyes of the peer group. Some of the factors involving the family and self-concept are controllable, while many others are not.

Developmental stages and self-concept

Erickson's writings on the psychological stages of development substantiate the writings of Anna Freud. He states that if trust is not developed during infancy, children suffer ego impairment and have difficulty identifying closely in intimate relationships in their adult life. The ego problem associated with the failure to accomplish the developmental tasks of Erickson's developmental periods has been widely reported. The periods of genital (ages 4-5), latency (6-12), and puberty and adolescence (ages 13-18) are of special interest to this study. These periods may result in the dichotomous ego qualities--initiative versus guilt, industry versus inferiority, and identity versus role confusion--being poorly developed. The resulting effect could cause problems for the adult relationships in later life (Erickson, 1950).

Basic needs of the child and self-concept

Yamoto (1972, p. 188) writes that there appears to be several basic needs which must be fulfilled if a child is to consider himself a worthy person. These

needs are met in the reciprocal love relationship between parent and child. The prime parental behaviors which make up the relationship of love and which appear to have the greatest effect on self-esteem are: (1) consistent acceptance with respect and concern, and (2) freedom with high self-regard within carefully defined limits. The person with high self-regard usually has experienced a combination of these qualities.

Judging self-worth

Felker (1974, p. 57) noted that during the pre-school period, the child begins to judge self-worth partly on the basis of the child's competence with objects, with peers, and with adults. The child who has not developed a sense of belonging and security that accompanies such a sense is likely to be hindered in moving out into the wider world. Security provides the basis for the confidence that the child can meet the world without excessive fear. Once a child steps out into the wider world, the competence which develops tends to enhance the beginnings of positive self-esteem. The fearfulness and lack of confidence reinforces the beginnings of a negative self-concept.

Self-concept and social contacts

LaBenne and Greene (1969, p. 13) believe that the self-concept is built or achieved through accumulated

social contacts and experiences with other people. People learn their identity, who and what they are, from the kinds of experiences that the growing-up process provides. Sullivan (1947) called this "the development about self from the mirror of other people." What people believe about themselves is partly a function of their interpretation of how others see them. They infer this from their behavior toward them. Therefore, the concept of self rests in part on what people think others think of them (LaBenne & Greene, 1969, p. 14).

Baumrind (1965, pp. 230-34) says that a combination of parental warmth and firm discipline is likely to produce self-reliant, bouyant, self-controlled children. Coopersmith (1967, p. 117) supports this observation. He also reports that the most notable antecedents of high self-esteem are directly related to parental behavior and the consequences of rules and regulations that parents establish for their children. This is illustrated by the statement that definite and consistently enforced limits on behavior are associated with high self-esteem; that families which maintain clear limits, utilize less drastic forms of punishment, and produce high self-esteem children exert greater demand for academic performance and excellence.

Formation of self-concept

Fiske and Bolgar (1962, p. 344) report that it is

clear a person is not born with a self-concept but forms one out of experiences. Important as a person's self-concept is, it seems to be almost a by-product of other learning experiences. An expression of pleasure following some achievement is one of the earliest clues that a child is beginning to develop a kernel of self-concept.

Minchin (1977, p. 82) writes that the understanding of self is a commonly accepted developmental goal. In the middle years, children move toward such a goal in two ways: through increasing objectivity and greater differentiation. Objectivity means these children can think about themselves as separate beings who are viewed and evaluated by the self and others. Greater differentiation increases their knowledge of what they are like as individuals.

Objectification of self-concept

Objectification has special qualities and limitations in relation to the self. An individual's knowledge of self needs to include awareness of feelings, of conflicts, and of the meanings of what others do. It is toward this complex integration that children begin to move when they come to understand that they can think about themselves and that they are objects of thought and evaluation by others (Minchin, 1977, p. 83).

Self-image becomes more differentiated as well as more objective during the middle years. The

self-perception of children contains an increasing range of detailed content, including a growing knowledge of personal qualities, competence, impact on others, fantasies, feelings, and emotional style. The growth in differentiated self-perceptions is part of the general growth of delineated and organized patterns of thought. It is also the product of an expanding world in which the new activities of the school and the neighborhood as well as the expanding contact with other children and new adults give children constant feedback about self (Minchin, 1977, p. 84).

According to Coleman (1960, p. 293), a realistic self-concept is an important component of sound mental health. He writes: "It is generally true that when most people see others very differently from the way they see themselves, their self-image is somehow inaccurate and they are probably headed for trouble" (p. 292).

Self-concept's influence on behavior

Gergen (1971, p. 90) states that self-concept influences behavior. Negative feelings toward self may produce negative behavior toward others. Persons with low self-esteem are less prone to influence others and more inclined to be influenced by others. One's estimate of self also strongly influences goals and behavior in reaching these goals. This means one's social identity is determined by self-concept. The individual's private

emotional life, as well as his relationship with others, is influenced by self-concept (Gergen, 1971, p. 91).

Teaching influences on self-concept

Erickson (1968, p. 122) theorizes that when children reach school age they receive some systematic instruction, although it is not always in the schoolroom. Most of the time teachers, specialized in disciplines, provide the children with knowledge which, first of all, makes them literate. When society's specialization is greater, the goal of initiative becomes more indistinct. As society becomes more complicated, the father's and mother's roles are less clearly defined. Between childhood and adulthood, children go to school. The skills they learn in school often seem to many to be a world with its own goals and limitations, its own achievements and disappointments. One of the most difficult tasks of the developing child is to incorporate the school world into the child's total self-concept and real world.

Self-concept in scholastic success

Purkey (1970, p. 65) explains that there is a dynamic interaction between the self-concept and scholastic success. One of the main tasks of the teacher is to aid the children in building positive and realistic self-concepts. If the self-concept is made an integral part of the curriculum, it is the result of the teacher's

Careful planning and instruction. As the self-concept of the student is improved, the teacher's self-concept is enhanced because of the success with the student.

Self-concept during adolescence

Kizzar and Hagedorn (1979, p. ix) feel that an adolescent's self-evaluation is the most important factor in determining a response to peer-group pressure. Adolescents with inadequate self-esteem usually are those who follow the crowd and its dictates; disregarding the values and ideas instilled by their families. Research indicates that increasing numbers of young people are swayed by peer-group pressure and are poorly equipped to go against the crowd. Positive parental judgments and unqualified support are the decisive factors in enabling young people to resist negative peer pressure (p. 2).

Kizzar and Hagedorn (p. 3) continue that an adolescent is extremely vulnerable to judgments expressed by those in the adolescent's immediate environment because at this stage in life the adolescent is concerned with the opinions of others. The peer group and their opinions help to form the adolescent's self-concept. To develop this self-concept, one of the important needs is the acceptance of significant others. These include love in the home, esteem and regard from peers, and respect from teachers and employers. An individual who has been hurt in peer interaction usually tends to withdraw or to build

psychological defenses and protective barriers (p. 5).

Social environment and
adolescent self-concept

Schwarzrock and Wrenn (1973, p. 28) state that cultural heritage, family experiences, socio-economic position, emotional make-up, and the ability to communicate all mold an individual so a person unconsciously responds to life situations according to the way each one has been taught. Unconscious reactions often create impressions of which one is unaware. The resulting self-concept can be different from the impressions that others have.

Elkind (1971, p. 111) points out that

. . . during adolescence the young person develops a true sense of self. While the children are aware of themselves, they are not able to put themselves in other people's shoes and to look at themselves from that perspective. Adolescents can do this and do engage in such self-watching to a considerable extent. Indeed, the characteristic self-consciousness of the adolescent results from the very fact that the young person is now very much concerned with how others react to him. This is a concern that is largely absent in childhood.

Okun and Sasfy (1977, p. 377) write that the self-consciousness and apprehension about how others see the person reflect the tenuous and somewhat unstable nature of the adolescent's self-concept. This self-concept is very susceptible to discomfoting evidence. The adolescent is always gathering evidence to support a perceived self-concept. Therefore, the driver's license

or the first date is of vital importance.

Flora (1978, p. 101) formulated the concept that the adolescent's self-concept has a significant effect upon the adolescent's perceived communication with parents. The adolescent with low self-concept perceives social interaction and communication with his parents as significantly more non-constructive than the adolescent who has a higher self-concept.

Adolescence is characterized by Erickson (1950, p. 81) as the period in which the individual must establish a sense of personal identity and avoid the dangers of role diffusion and identity confusion. The search for an identity involves the production of a meaningful self-concept in which the past, present, and future are linked together. Therefore, the task is more difficult in a historical period when the past has lost the anchorage of family and community tradition, the present is characterized by social change, and the future has become less predictable. In a rapidly changing society, the search for identity is taking place of the socialization process.

Muus (1975, p. 266) states that the adolescent faces the task of incorporating into his or her self-concept those sex characteristics that are culturally acceptable. New social relationships must be established during adolescence, especially heterosexual relationships, but also new social relationships within one's own sex group.

Adolescent stress and self-concept

Manaster (1977) notes that probably the most frequent and continual description of adolescence is a time of stress and upset. There are very usual, normal reasons for upset in the life-task areas in adolescence. Many of these are situationally fomented in interaction with developmental change. The self-concept and its differentiated parts may be affected by adolescent situations. The new situations of the adolescent cover love and sexual behavior, new social situations, new school settings, larger school course offerings, demands of educational choice, and vocational exploration. The effectiveness of coping has a profound effect on self-concept.

Self-estimate and ego aspirations

Ausubel, Montemayor, and Svajian (1977, p. 160) write that there are many reasons for placing the self-concept in a prominent place in the individual's psychological field during adolescence. The adolescent makes considerable upward revision of self-estimate and ego aspiration. The adolescent appears concerned with more precise verbalization of his feelings about himself. Concern with intellectual status and social relations have considerable self-reference and are important sources of self-esteem in the adolescent. Preoccupation with heterosexual activities can be useful as a contrast

medium for self-expression and sharper definition of individuality.

Ausubel, Montemayor, and Svajian (1977, p. 161) continue by saying that adolescence is a period of ego aspirations and self-estimate. In contrast to the early crisis of evaluation, it may be regarded as a time of ego reevaluation. All of the maturational tasks of adolescence have ego-inflationary implications. This is confirmed by the adolescent's fantasy which usually places the adolescent in the role of hero or in an amorous situation.

Combs, Avila, and Purkey (1971) write that the importance of the individual goes beyond providing a basis for reality. Its very existence determines what else the adolescent may perceive. The self-concept has a selective effect upon perception. A person tends to perceive what is congruent with already existing concept of self. An adolescent who sees himself as male perceives what is appropriate for a male to perceive. An adolescent who sees herself as female sees what is appropriate for a female to perceive. Once established, the self-concept, thereafter, provides a screen through which everything else is seen, heard, evaluated, and understood.

Aspiration influence on self-concept

The theory that the adolescent's level of

aspiration has a marked influence on individual self-concept is supported by Hurlock (1967). The reason for this is that the level of aspiration determines whether one sees one's self as a success or failure. When the adolescent is successful in reaching a personal goal, the adolescent has a feeling of self-satisfaction and self-confidence. Failure to reach a goal can undermine the self-confidence of the adolescent and lead to the feeling of personal inadequacy (p. 663). Once an adolescent has acquired the habit of unrealistic aspirations in either direction, the youth resists change. To offset this, many parents and teachers believe that expressing a level of aspiration serves as an important motivation to reach the goal. This forces the adolescent to literally sign on the dotted line and to achieve in order to save face. Talking about aspirations raises the adolescent's prestige in his own eyes and in the eyes of peers, but is the resulting psychological damage caused by failure worth the temporary ego satisfaction the adolescent receives (p. 663)?

Purkey (1970, p. 42) writes that the image of school grows less positive with the passing of time and communicates to the adolescent a sense of inadequacy. If the school is serious about understanding the place of the student's self-concept in the student's school success, it needs to seek ways to modify its curriculum and

methods. This would help to eliminate the negative self-concepts in the adolescents.

Sievert (1976, p. 50) indicates that adolescents who demonstrate a low positive or negative self-concept do not make realistic occupational choices. These adolescents do not see themselves as the same type of person as the typical worker in a chosen field. Perhaps the vocational programs of the schools should place more emphasis on providing the adolescents with vocational programs that are more compatible with the student's perceptions of themselves.

Unfinished adolescent tasks and self-concept

Jersild (1957, p. 16) reports that the adolescent not only continues to work on many tasks begun in earlier years but also leaves unfinished many tasks that are the business of adolescence. These tasks are finished in the adult years. There is something of the uncompleted work of adolescence in every adult. The big issues with which the adolescent strives--issues relating to self-concept, to acceptance or rejection of authority, association with the opposite sex, and responsibilities that should be accepted or rejected--are not completely settled just because one has officially finished the adolescent years of life.

There are issues that the individual must face

throughout life. In the typical life, as long as the individual continues to think and act, there will be problems to grapple with and decisions to make. Each of these actions or thoughts may have a profound effect on the self-concept of each person. This in turn could have a profound effect on life and the success or failure in life.

Measurement of Self-concept

Types of research on self-concept

Self-concept research has been conducted largely by using psychometric approaches similar to achievement. Garwood and Garwood (1978) report that the self-concept is assumed to increase in a linear fashion until some ceiling established by a particular scale is reached. One of the unfortunate results of such an approach is that it tends to deny that the self-concept may have a qualitative as well as a quantitative nature.

As Wylie (1974) points out, self-concept research lacks cohesiveness. There are too many unreplicated studies, too many self-concept instruments, and too little theory. Because of this, self-concept appears to be set apart as an entity unto itself.

Definition of self

In search of a viable definition of self, Sarbin (1971, pp. 22-23) stated that the notion of self is

defined as both a process and a structure. This is given as "that process by which the person conceptualizes or categories his behavior--both his external conduct and his internal states." Using the structural level, it is "the system of concepts available to the person attempting to define himself." Put into simple terms, this means what the individual thinks of himself as an object in society.

Limitation of self-concept measurement

LaBenne and Greene (1969, p. 11) report that because the self-concept cannot be seen, severe limitations are placed on any attempt to measure it at any given point in time.

If the self-concept is to be measured, how can a researcher expect to accomplish this feat? While it is true that self-concept cannot be seen, the behavior resulting from the self-concept can be seen and reported. In order to obtain this information efficiently, the psychometrists have developed a variety of tests to gather information about behavior patterns. Most of the tests require that a person gives information about himself. Even though this is limited, no one has the knowledge of the inner person and the private thoughts as deeply as the person.

Benjamins (1950, pp. 473-80) cautions that the

individual's statements about himself may not represent how the person feels. When the self-report is inaccurate, there is not an accurate measure of the self-concept. The person's statements about himself do not directly control that individual's behavior, but the way a person actually feels controls normal behavior. Therefore, it is hoped that the basic honesty of the subject enables the individual to give accurate information on such tests.

Coopersmith (1968, p. 8) writes that by the age of ten or twelve, the individual "appears to have sufficient experience and ability to think abstractly, so that he can make general assessments for his powers." This is the age at which the self-report inventory is initially used in the research on self-concept.

Crandall (1973, p. 47) notes that usually self-concept is directly tapped by asking people how much they like themselves. Dimensions of self-concept emerge when the people are asked about their responses to some different aspects of themselves: physical, mental, moral, in school, with people, at work, etc. At times, the researcher is tempted to weigh items according to their importance to self-concept. However, there is no convincing evidence that added validity is gained by this weighing of items.

Validity of self-concept research

The central problem in self-concept research is validity. The general lack of work in this area makes it easy to criticize all existing scales (p. 51). Research must deal with careful operationalizations to make self-concept research valuable. When the results are negative, the construct suffers even if its measuring devices are at fault.

Crandall continues (p. 54) that there are two ways measurement can improve: "first, if new scales are introduced which are supported by massive validation data, and second, if the usage is concentrated on a few scales causing the gradual accumulation of validity data." People interested in self-concept need not resolve all measurement problems. If a careful validation program is undertaken with the realization that it is a project that could last for many years, self/self-concept measurement can be established with a firm foundation. Many hundreds of items need to be tested against a multi-determined criteria on large replicated samples. This would serve as the foundation of validity that would stand the test of time (p. 58).

Early reports of self-concept research

Wylie (1961) gave the first detailed study of the different instruments and methodologies of various

studies in the field of self-concept evaluation. She states that "the total accumulation of substantive findings is disappointing, especially in proportion to the great amount of effort which has been extended" (p. 317). She concluded that this is because the constructs are stretched to cover so many inferred cognitive and motivational processes that "their utility for analytic and predictive purposes has been greatly diminished" (p. 318). Perhaps these over-generalized, self-referrent constructs should be more precisely reformulated.

Two recommended self-concept scales

Robinson and Shaver (1976, p. 57) write that

. . . two of the most widely recommended scales--the Tennessee Self-Concept Scale and the Piers-Harris Children's Self-Concept Scale--have the best overall quality. The Tennessee Self-Concept Scale, a 100-item form which includes a ten-item scale from the MMPI, has been administered to all but the youngest age groups. The carefully written and widely used Piers-Harris Children's Self-Concept Scale is used with younger age groups but can be used through the high school years.

The main difference which makes these scales superior to the others is the careful work that their creators have put into them.

The Piers-Harris Children's Self-Concept Scale has been developed especially for work with children (Robinson & Shaver, 1976, p. 73). Its items cover many areas of self-concept, particularly physical aspects, abilities, and personality. It is a useful scale for the

researcher. However, it is important to remember that for research purposes not all of the scales should be used to definitely place the children into various categories; they are merely indicators of general behavior.

The Tennessee Self-Concept Scale was developed from a clinical perspective. It measures self-concept across many sub-areas providing both an overall self-esteem score and a complex self-concept profile. This scale has many positive attributes that one would look for in a scale. However, it could be improved by including some information on clinical-behavior criteria such as peer ratings (Robinson & Shaver, 1976, p. 69).

Buros (1972, pp. 306-7) states that the Piers-Harris Children's Self-Concept Scale consists of eighty first-person declarative statements. The scale has been developed not only as a psychometrically adequate scale but also as a direct and honest evaluation. The research use of the scale is emphasized. This is due to the fact that the application of the scale is not completely validated.

Buros continues that the scale is designed as an unidimensional scale. The six factors of the test must be used with great care as they are primarily designed for research and are not intended to label students. These factors need more validation before they can be used by a researcher in any study of the general

population. The scale is designed to be interpreted by using the manual that the Piers-Harris have developed.

Some of the more admirable features of the manual are its accuracy and cautions. For example, the principle component analysis suggests that the combinations of items can be scored to yield cluster scores. The manual indicates that the cluster scores are at the moment sufficiently tentative that their application should be in research.

After consultation with the director of the Berrien County Day Program for Hearing-Impaired, the researcher determined that the Piers-Harris Children's Self-Concept Scale would be the most appropriate for this study. The yes-no answers made it easier for hearing-impaired students to formulate answers. One of the problems for the hearing-impaired students in their academic work is language and reading. Therefore, this scale fits the needs of the hearing-impaired students better than the more difficult-to-read Tennessee Self-Concept Scale. In addition, the Piers-Harris Children's Self-Concept Scale can be used for all grade levels involved in the study.

Self-Concept Development of Hearing-Impaired

Special needs of the hearing-impaired

Myklebust (1950, p. 34) supports the concept that

a hearing-impaired child is not different from the hearing child so far as the child's fundamental needs are concerned. The hearing problem dictates that the child's needs must be met and satisfied in a different way. Usually, this means that the training for the hearing-impaired child is more concrete and direct than that for the hearing child. The hearing-impaired child requires more careful demonstrations and explanations than does the hearing child.

Myklebust also points out (p. 15) that the child born with a hearing deficiency does not have a stereotyped personality. Just as the hearing child is different from the child's peers, so the hearing-impaired child develops a unique personality that is different from other hearing-impaired children. All types of personalities are present in hearing-impaired children.

Self-concept and social adjustment

Meadow (1976, p. 74) states that the growth of self-concept or identity goes hand in hand with social adjustment. As a child begins to be an object of himself as the child sees himself reflected in the appraisals of others, the child begins to understand both others' behavior and his own. The child gets a sense of self-worth from the reactions of others. At first the

important others are the immediate family members, but as the circle widens, the self-image is affected by the responses of other family members, teachers, peers, and others. The positive or negative meanings attached to responses to the child's "differentness" are very important to the development of the hearing-impaired child. The child incorporates these reactions, which become a part of his self-concept.

Cull and Hardy (1974, p. 160) state that the hearing-impaired are much more like the hearing than they are different. The one notable difference is that they have suffered a psychological impact of a disability and have adjusted or are in the process of adjusting to this impact. This adjustment can cause problems in their social adjustment, but with understanding and additional help they can succeed.

Somatopsychology and self-concept

A new method for the study of the hearing-impaired is somatopsychology (Cull & Hardy, 1974, p. 161). The basis for this is the body-image concept. The body image is a complex conceptualization which people use to describe themselves. This becomes one of the basic parts of the total personality and helps to determine the reaction to the environment.

Two aspects emerge from the body-image concept. They are the ideal body image (desired body image) and

the actual body image. The greater the congruity between these two images results in a better psychological adjustment for the individual; the greater the discrepancy between these two parts of the self-concept, the poorer the psychological adjustment (p. 162).

Hearing-impaired self-concept
and school

Habbe (1936, p. 77) reports that personality maladjustments do not necessarily accompany real or imagined organ deficiencies. If a hearing-impaired child's total adjustment to life is good, then minor difficulties can be resolved. Habbe also states that there is no need to consider a separate educational system for the hearing-impaired. Habbe's study concluded that the hearing-impaired belong in the same school as the hearing child.

Myklebust (1964, p. 176) concludes that hearing-impaired children, as all other children, present a wide variation of individual differences. Characteristic shifts in psychological structure and learning processes must be assumed. A carefully chosen program that uses the individual's total capacities allows the hearing-impaired to attain the maximum benefits from schooling. An important implication of Myklebust's study is that the effects of hearing-impairment are being modified in specific respects according to the type of school attended. It is apparent that through specialized methods, the

hearing-impaired child can be assisted to actualize his potential more successfully.

Frick (1973, p. 46) reports that hearing-impaired children from St. Louis are successful in the public schools. Most of the children have some difficulties in the academic areas of math, literature, and general vocabulary. Almost all hearing-impaired children need to be taught to be more independent and more aware of acceptable social behavior. Another need they have is to be more conscious of the world around them. The ultimate goal is for all students to be given the opportunity to progress to the maximum of their ability.

Giangreco and Giangreco (1970, p. 7) stress the need for educating so that hearing-impairment is not an excuse for not succeeding or meeting life satisfactorily. If a person is educated as an individual, individual maturation helps to develop personal responsibility for self. With a good background in school, a person should be ready to accept responsibility and establish personal goals without needing a crutch for failure to do what is wanted or needed.

According to Croft (1974, p. 121), the most important result of comfortable anonymity in the classroom of a public school is the opportunity to be equal to one's peers and to have the chance to develop a strong, positive self-concept. Croft indicates that focusing

attention on a handicap can retard maturity and later lead to a lonely existence. The mainstreaming experience in public school allows one to have a realistic self-knowledge and an accurate self-assessment of strengths and weaknesses. This is possible because the child is compared with the norm of the group.

Lerrman and Guifoyle (1970, p. 66) report that the vocational information and planning of hearing-impaired subjects is related to their language and communication competence, the level of stimulation available in their home, and, to a lesser degree, their intelligence and independence. This study suggests that existing programs of vocational training and orientation have little impact on the prevocational behavior. If there is an impact on the students, a concerted effort must be made to increase vocational information, change attitudes, and develop individual potentials at an earlier age. If this is not done, the hearing-impaired do not gain the professional status that is within the reach of their abilities.

The hearing-impaired child should be encouraged to join the youth groups of the community and school (Cosper, 1971). This involvement helps to develop an adequate self-concept and makes the child more aware of society's demands. Socialization also helps to acquaint the hearing students with the problems of their hearing-impaired classmates and encourages an understanding of

the problems that the hearing-impaired students must endure.

Despite the problems of the hearing-impaired individual, school helps to develop a social awareness. Rodda (1970) reports that there is a lasting impression that there is a "social viability of the hearing-impaired child including the profoundly hearing-impaired" (p. 156).

Adolescent stress and hearing-impaired self-concept

Moore (1978, p. 100) concludes that when a child in this culture enters adolescence, the possibility for role tension in the family increases. The strain is greatly intensified for the hearing-impaired child. Such a child may experience greater difficulty in establishing a personal position within the family structure and culture, and within society in general. It takes more understanding and patience to deal with the storm and stress of the hearing-impaired adolescent. All segments of society must shoulder a larger amount of responsibility for hearing-impaired adolescents than they would for the hearing adolescent. With this greater cooperation, the adolescent can safely thread a path through this time of trauma (p. 102).

However, to paint a completely depressing picture of the situation is wrong. Despite the problems that the hearing-impaired person must suffer, the majority make an

adequate adjustment to the world. They marry, raise children, pay taxes, contribute to the good of the community and country, fight, watch television, and entertain themselves in much the same way as does every other person in the country. Most of their problems are the result of the dominant society. Hearing-impaired people survive and endure in the face of the indifferent world with which they must deal (Moore, p. 103).

Hearing-impaired Education

Early beginnings

As education entered the nineteenth century, the thoughts of leading educators settled more and more on the child instead of exclusively on the subject matter to be taught. One of the early leaders of this trend in the education of the hearing-impaired children was Johannas Baptist Graser (Bender, 1970, p. 130). He insisted that the great weakness of most of the education of the hearing-impaired was that it was too isolated and remote from the real world. Graser maintained that the older German method that used oral teaching was the best method for teaching the hearing-impaired (1970, p. 131). At first this idea was widely accepted with enthusiasm. Classes for hearing-impaired children were made a part of the public school systems in the German states. The method ran into difficulty because there were not enough allowances made for the slower pace of the hearing-impaired

children. The oral method of teaching the hearing-impaired spread throughout Europe. Many wealthy people created their own schools for the hearing-impaired. Most of the early leaders of the oral teaching method in the United States received their exposure to the method in England (1970, p. 150).

The Bell family contribution

The mother of Alexander Graham Bell suffered a partial loss of hearing after having scarlet fever in her youth (Bender, 1970, p. 152). After coming to Canada, Alexander Melville Graham, Graham's father, started a school for the preparation of teachers that would use the oral method to teach the hearing-impaired. While on a lecture tour to Massachusetts, he was encouraged to give some lectures at Sarah Fuller's school for the deaf. Because of other commitments, he suggested his son Alexander Graham Bell for the position (1970, p. 157).

In 1872, Bell opened a school in Boston for teachers of the deaf. Alexander's plan was to make it an oral training school. However, the opposition from the major schools for the day, with their silent methods, made this an impossibility. Alexander changed the school to the School of Vocal Physiology or Elocution (Bender, 1970, p. 157). He continued to refine and develop the oral method of teaching to use when instructing his young students.

With \$200,000 of the prize money he won for inventing the telephone, Bell established The Volta Bureau to increase knowledge relating to the deaf. In 1890, the American Association for Teaching Speech to the Deaf was established, largely through the efforts of Bell. This developed into a national organization of teachers and educators interested in oral instruction for the hearing-impaired. Bell was one of the first to advocate that hearing-impaired children should begin their learning of speech by imitating whole words with meaning.

Oral versus silent methods

Perhaps the best-known family in the education of the hearing-impaired by the silent method is the Gallaudet family. Throughout the nineteenth century the development of the silent method of teaching had been supported by the Gallaudet family (Bender, 1970, p. 162). The silent method of teaching was followed in many of the schools that had large numbers of students. Out of the controversy concerning the oral and the silent teaching of the deaf, a typical American compromise was developed. Many of the schools adopted what came to be known as the combined method, which made use of the best of both methods. The Gallaudet family supported this method, but Bell never wholeheartedly endorsed it (Bender, 1970, p. 164).

Twentieth-century advances

In the twentieth century, physical sciences came to the aid of the hearing-impaired in a very different way. New discoveries enabled the detection of more residual hearing in most cases of hearing impairment than had been suspected. Electronics made it possible to exploit this residual hearing in many ways that had never been done before (Oyer & Frankman, 1975, p. 1). Earlier diagnosis and scientific improvements in the instruments for testing hearing brought to light more and more residual hearing. New electronic amplification of sound made usable this residual hearing to a degree never before dreamed possible.

Emphasis was centered on the importance of early teaching and nursery classes. Auditory stimulation had a special place in the hearing-impaired child's environment and helped to keep the child conscious of hearing (Simmons, 1966, p. 203).

Kinesthetic sensation and vibration, contributing factors in vocalization, can be utilized successfully, but the deaf baby's vocalization must be kept going at all costs if these factors are to be of any benefit (Tracy, 1964, p. 485). The accepted philosophy now is that a child's hearing impairment should be discovered as early as possible, and that from that time on he or she should be kept immersed in a constant environment of oral

language in the most effective ways that can be devised (Hnation & Reneu, 1968; Shore, 1964; Vorce, 1958).

The child's first teachers are the child's parents. Centers for hearing-impaired children are developing specific programs for counseling and training parents on how to begin the work of teaching communication skills to their babies. The general principle in such teaching is the use of a constant flow of normal, natural speech relating directly to the child's immediate family. The parents are cautioned to maintain patience and optimism through the inevitable, initial period of subtle absorption (Knox & McDonnell, 1968; Miller, 1960; Tracy, 1964).

Increasing recognition is being given to the importance of a normal speech and language atmosphere for the young hearing-impaired child. Many special classes in ordinary nursery-school settings are being held concurrently with the special hearing-impaired nursery schools. Normal-hearing children are being included in equal proportions with the hearing-impaired children (Weinstein, 1968).

As the public has become more aware of the need for an early beginning for the handicapped child, Congress has responded with laws that have given federal assistance to the initiation and expansion of programs for the handicapped. Public Law 90-538, the Handicapped Children's Early Assistance Act, was signed into law by

President Johnson on September 30, 1968 (Fellendorf, 1969, p. 78). This law was a major thrust forward in the area of helping the handicapped child. It has been heralded as an integral part of the total attack on the needs of the handicapped. The law provides a stimulus to the local school district to upgrade the quality of the education which is being provided to all handicapped children (Gallagher, 1968, p. 488). Federal funds have been made available to initiate and implement special programs at all age levels. Also there are programs organized under the Rehabilitation Service Administration to assist people in need of vocational training (Gallagher, 1968; Howe, 1968; Martin, 1968).

Many schools now offer updated programs in vocational training for young people who are hearing-impaired. One such is the National Technical Institute for the Deaf based at the Rochester Institute of Technology in New York. The course is planned for hearing-impaired high-school graduates. Many students, upon entering the school, find themselves unprepared for college in spite of their diplomas. The new program was started so these students could have success in college. The program offers instruction in areas needed or requested. The aim of the Institute is to provide broad career opportunities (Fellendorf, 1969, p. 298).

The modern trend towards mechanization has also

invaded the elementary-school classroom. Teaching tools of many varieties are available. Video tapes, tape recorders, overhead projectors, reading machines, and documentary films are just a few of the teaching tools that have been implemented in the classrooms of the hearing-impaired schools. In the hands of a skillful teacher, they can add a new dimension to the children's learning tasks; misused, they can waste the time of both the teacher and the students (Cunningham, 1969, p. 176).

There are sincere efforts to develop cooperation and correlation between the various groups that work with the hearing-impaired. The National Association of Hearing and Speech Agencies has encouraged its local centers to make arrangements with local organizations of adult hearing-impaired to insure mutual benefits. Services offered would include training and rehabilitation of hearing-impaired adults for better job opportunities; development of rosters of hearing-impaired families for social contacts within the communities; encouragement of educational facilities for hearing-impaired children. With community cooperation, these can help to improve quality of life and the status of citizens who are hearing-impaired (Workshop on Community Services, 1969).

Direction of hearing-impaired education

The hearing-impaired child is now detected at an

earlier age than ever before and the public is more concerned with the rehabilitation of these hearing-impaired children. Linguists have made important discoveries about the child's active participation in the evolvement of his own communication system.

However, the picture presented by the research in the area of hearing-impaired education is confused. Some of it is too esoteric to be of much value. Too often it only proves what the researcher sets out to find. Evaluation of the research and the methodology used in the education of the hearing-impaired must be more scientifically conducted if it is to provide a definite standard for future development. Cooperation among the various educational and social services that attempt to help the hearing-impaired can only improve the quality of services (Bender, 1970, p. 208).

Summary

Early writers have given the development of the self-concept an important place in their psychological writings. Formerly, writers equated ego development with that of self-concept. The later writers began to give the self-concept a new and individual place in psychological theories. They began to realize that the self-concept is important to the development of the whole person. The self-concept is one of the important factors which controls a person's behavior. The self-concept is

important in the evaluation of others and the individual's reactions to them. The total person is in many respects greatly influenced by his or her self-concept.

The individual self-concept goes through three stages of development. The first is the development of the self-concept through the parents' treatment of the child; the second is the child's perception of society's evaluation of his family, including himself; and the third is the child's accumulation of experiences with success and failure. At any age success in human relationships is just as vital as the experience with other kinds of achievement. The importance of the child's parents and the child's environment is vitally fundamental to the total development and especially to the child's self-concept. During the school years, the peer group evaluation of the individual assumes the pre-eminent position in the growth of the self-concept. Without the successful interaction with peers, the individual's self-concept either withers or retards the total development. The adult self-concept also needs constant positive reinforcement or periodical reinforcement. Without this, the effectiveness of the individual's work and interaction with others diminishes.

The measurement of the self-concept is a difficult task for the psychologist. Most of the methods follow the psychometric approaches. This is due primarily

to the lack of cohesiveness of the research in the field of self-concept. It has been difficult to develop a definition of self-concept that is universally accepted. One of the main problems with this is that the self-concept is something that cannot be seen. However, the results of the self-concept in a person's behavior can be seen and measured. Most self-concept tests and research have measured this behavior. Two highly recommended tests in the field of self-concept research are the Tennessee Self-Concept Scale and the Piers-Harris Children's Self-Concept Scale. Because the Piers-Harris can be used with a wider grade range, it was selected as the instrument for this study.

The hearing-impaired person develops a self-concept in the same sequence as the hearing person. The fundamental needs of the hearing-impaired individual are the same as those of the hearing person. The same three steps are traversed with the same importance in the development of the hearing-impaired individual's self-concept. One of the main differences is that the hearing-impaired may develop a secure self-concept more slowly and more patience has to be exercised by their teachers.

The educational evolution of the hearing-impaired started near the beginning of the nineteenth century. The Germans were the early leaders of the oral method of educating the hearing-impaired. The leader of the

movement in this country was Alexander Graham Bell. Because his mother and wife were both hearing-impaired, he always had a strong interest in the oral education. The Gallaudet family were the leaders of the silent education of the hearing-impaired. About the turn of the century, a compromise between the two methods produced the total education method, but Bell never fully accepted this compromise because he believed that the word should be learned in context with attached meaning.

During the 1960s, the federal government encouraged local school districts to develop programs for the hearing-impaired. This was done through legislation that provided for the least restrictive environment for the development and education of the hearing-impaired. The legislation has promoted cooperation between the local school districts and other local agencies that provide services for the hearing-impaired.

CHAPTER III

RESEARCH DESIGN

This chapter describes the research design employed to measure the self-concept components and dimensions of the hearing-impaired students of the Berrien County Day Program for Hearing-Impaired and the hearing students of the Berrien Springs Public Schools. To make this comparison, an ex-post-facto research methodology was used (Campbell & Stanley, 1963, pp. 70-71; Kerlinger, 1973, p. 9).

The Piers-Harris Children's Self-Concept Scale was chosen as the instrument for this study. All scores mentioned were obtained by using this instrument. A comparison of the self-concept components and dimensions of hearing-impaired students of the Berrien County Day Program for Hearing-Impaired and the hearing students of the Berrien Springs Public Schools is made by using ANOVAB (Futcher, 1980). This was used as a preliminary statistical analysis and was not reported in chapter IV. Six research factors of the self-concept are compared by using a differential analysis. The mean scores of the hearing-impaired students and the hearing students in

each grade are compared by using a t-test. A t-test compares the mean score of the middle school for the hearing-impaired and the middle school hearing students. The high-school mean score for the hearing-impaired and the hearing students are compared by a t-test. Each grade or group is compared to the national mean as established by the Piers-Harris by using a t-test.

Null Hypotheses

The null hypotheses are tested at the .05 level for significance. The study examines the following null hypotheses.

1. There is no significant difference between the self-concept of the hearing-impaired students of the Berrien County Day Program for Hearing-Impaired and the hearing students of the Berrien Springs Public Schools.
2. There is no significant difference between the self-concept of the hearing-impaired students of the Berrien County Day Program for Hearing-Impaired and the national norm as established by the Piers-Harris Children's Self-Concept Scale .
3. There is no significant difference between the self-concept of the hearing students of the Berrien Springs Public Schools and the national norm as established by the Piers-Harris Children's Self-Concept Scale.

Population for the Study

The present study was concerned with two categories of students: the hearing-impaired students attending the Berrien County Day Program for Hearing-Impaired and the hearing students of the Berrien Springs Public Schools. The students of the Berrien County Day Program for Hearing-Impaired live with their parents and are bussed to the school from their homes in Berrien, Cass, and Van Buren counties of Michigan. The program for the hearing-impaired is the only hearing-impaired school in the three counties.

The total population of the Berrien County Day Program for Hearing-Impaired in grades six through twelve was used in the study. Students in the first five grades were not used because the director of the school felt that the language of the Piers-Harris would be too difficult for the students to accurately comprehend. The total population of grades six through eleven was used in this study. The twelfth grade students taking an English course were also included.

Instrumentation

The instrument used in this study was the Piers-Harris Children's Self-Concept Scale.

Piers-Harris Children's Self-Concept Scale

The Piers-Harris Children's Self-Concept Scale is a quickly administered (15-20 minutes) self-report

instrument designed for use with a wide age range of children. Administered in a group, the Piers-Harris requires approximately third-grade reading ability. The Piers-Harris can be administered by responsible, educated non-psychologists, but should be interpreted only with the aid of someone knowledgeable in measurement and statistics, psychology of adjustment, and self-theory. The scale was designed primarily for research on the development of children's self-attitudes and correlates of the attitudes (Manual, Piers-Harris, 1969).

Development of the scale

The universe to be sampled in a children's self-concept scale should consist of items reflecting the concerns that children have about themselves. An original pool of items was developed from Jersild's (1952) collection of children's statements about what they liked and disliked about themselves (Piers-Harris, 1964). Jersild grouped these into the following categories: (a) physical characteristics and appearance; (b) clothing and grooming; (c) health and physical soundness; (d) home and family; (e) enjoyment of recreation; (f) ability in sports; (g) ability in school, attitudes toward school, etc.; (h) intellectual abilities; (i) special talents (music, art); (j) just me, myself; and (k) personality, character, inner resources, and emotional tendencies.

The pilot study established that the children

understood the items and that the inventory could be completed in thirty to thirty-five minutes. Following the administration, items answered in one direction fewer than 10 percent or more than 90 percent of the time were inspected and in most cases dropped. One hundred forty items remained (Manual, Piers-Harris, 1969).

The one-hundred-forty-item scale was administered to different grades in a large school system. In the elementary grades, classes were chosen from several different schools representing a cross section of the socioeconomic levels in the community. In the high school, slow, average, and bright students participated. After sample testing and revision, one hundred items remained. Later these were reduced to the present eighty of the scale (Manual, Piers-Harris, 1969).

Validity

An attempt was made to build content validity into the scale by defining the universe to be measured about which the children reported qualities they liked or disliked about themselves (Jersild, 1952). Items of the scale were designed to cover all of these areas. During the item analysis, nondiscriminating items were dropped so that the final scale no longer covers every area to the same degree. The factor analysis indicated that factors from the remaining items cut across the original Jersild categories and reflect an emphasis on the

last two groups, i.e., "just me, myself" and "personality, character, inner resources, emotional tendencies." These are a better reflection of a child's self-concept than the narrow categories such as "enjoyment of recreation" or "special talents" (Manual, Piers-Harris, 1969).

Reliability

Buro's Seventh Mental Measurements Yearbook (1971) contains a detailed and favorable review of the Piers-Harris Children's Self-Concept Scale. The review considered the scale to possess adequate reliability and validity for research use.

Wylie (1974) reviewed several instruments for testing children and considered the Piers-Harris Children's Self-Concept Scale to be the most promising research tool available.

In another major review, Measures of Social psychological Attitudes by Robinson and Shaver (1973), Piers-Harris Children's Self-Concept Scale is the most highly recommended scale for children.

Most of the reliability data in the manual comes from the 1969 standardization study. This data ranges from coefficients of .93 to .77. Piers-Harris (1969) used the Kuder-Richardson Formula 21 to judge the homogeneity of the test. The resulting coefficients range from .78 to .93. To further check the reliability, the Spearman-Brown odd-even formula was applied and gave results of

.90 and .87. A retest on one-half the standardization sample after four months resulted in coefficients of .72, .71, and .77. These were judged satisfactory for a personality instrument.

Administration

The Piers-Harris Scale takes only fifteen to twenty minutes to administer but there is no time limit for the students taking the test. Before administering the test, the examiner discussed the value of the students finding out how they felt about themselves. The administrator read the instructions aloud to the students and the students proceeded to answer the items (Manual, Piers-Harris, 1969).

Scoring

In this study the scales were scored by the computing center at Andrews University. This has given consistent results for each of the students. The computer printouts have also given the different factors for the scale.

Procedure

During the first half of September 1980, the principals of the Berrien Springs High School and the Berrien Springs Middle School were contacted and their permission to test the students was secured. Both were

very cooperative and interested in the results to be obtained. The director of the Berrien County Day Program for Hearing-Impaired had given his permission on June 16, 1980.

On September 15, 1980, the researcher, with the help of the English teachers, administered the Piers-Harris Children's Self-Concept Scale to all students in the Berrien Springs Middle School and the Berrien Springs High School English classes. On the same day the hearing-impaired students were given the Piers-Harris Children's Self-Concept Scale by the teachers in the hearing-impaired classrooms.

The class teachers administered the scale to their respective students since this is the least threatening situation for the students. Also the teachers were the most familiar with the language abilities of the students and could give them help where it was needed.

The students' scales were then sent to the computer at Andrews University for scoring. The results were further analyzed by the researcher using the computer at Andrews University.

Summary

This chapter presented the research methodology and described the type of research, the population, the research design, and the instrument. The research design

procedures were described and the statistical analysis to test the null hypotheses were indicated. The next chapter will present and analyze the data.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This chapter presents and analyzes the data on 926 hearing-impaired and hearing students. The chapter is divided into three main sections. The first section presents the data of the study and includes subjective impressions. The second analyzes the data by testing the hypotheses. The final section compares the six major factors of the Piers-Harris Children's Self-Concept Scale for each grade and school.

Presentation of the Data

The data is presented in three sections. The first section is an introduction, which gives information about the participants involved and the reliability of the test instrument. Eight tables list the means of the self-concept in the second section. The third gives the means of the total self-concept of the schools and compares them to the national norm as established by the Piers-Harris Children's Self-Concept Scale.

Participants

For the present study, the Piers-Harris Children's

Self-Concept Scale was administered to 926 students of the Berrien County Day Program for Hearing-Impaired and the Berrien Springs Public Schools. Two of the hearing-impaired students were not tested because their physical handicap is not hearing related. Of the 926 tested, sixty-nine were hearing-impaired and 857 had normal hearing. The 926 tests were entered into the computer to build a data bank for the present study. The results were given to the schools involved in November 1980. Counselors at the respective schools used the results to aid in the counseling of the students. Table 1 gives the percentages of middle-school students by grade and the percentages of hearing-impaired students and students with normal hearing within each grade. Table 2 shows the percentages of high-school students by grade and the percentages of hearing-impaired students and students with normal hearing in each grade. Table 3 indicates the percentages of the total school population tested and percentages of students with hearing impairment or with normal hearing within each school. Tests were entered into the computer by the researcher and statistical analyses were done by computer personnel.

Group and grade means

The grade norms from the Piers-Harris Children's Self-Concept Scale for the hearing-impaired and the normal-hearing students are presented in a series of six

tables (tables 4-9). The group means from the Piers-Harris Children's Self-Concept Scale for the middle school for the hearing-impaired and the normal-hearing students are presented in tables 10 and 11.

TABLE 1
PERCENTAGES OF MIDDLE-SCHOOL STUDENTS TESTED

Grade	Number of students	Percent- age of grade	Percent- age of school
Sixth hearing-impaired	11	7.5	2.5
Sixth normal-hearing	136	92.5	30.3
Seventh hearing-impaired	1	0.7	0.2
Seventh normal-hearing	145	99.3	32.3
Eighth hearing-impaired	15	10.0	3.3
Eighth normal-hearing	<u>140</u>	90.0	<u>31.4</u>
Total number of students tested	448		100.0

The assumption of homogeneity of variance for the sixth grade is upheld. Therefore a t-test is used. With 145 degrees of freedom, t is $-.1884$ and probability is $.851$ on a two-tailed test.

The seventh-grade normal-hearing and hearing-impaired students are not compared since only one hearing-impaired student was enrolled in the seventh grade. A t-test cannot be used with only one student because this would give zero degrees of freedom.

TABLE 2

PERCENTAGE OF HIGH-SCHOOL STUDENTS TESTED

Grade	Number of students	Percent- age of grade	Percent- age of school
Ninth hearing-impaired	22	15.1	4.6
Ninth normal-hearing	123	84.9	25.7
Tenth hearing-impaired	10	6.8	2.1
Tenth normal-hearing	136	93.2	28.5
Eleventh hearing-impaired	6	4.6	1.3
Eleventh normal-hearing	125	95.4	26.1
Twelfth hearing-impaired	4	7.1	0.8
Twelfth normal-hearing	<u>52</u>	92.9	<u>10.9</u>
Total number of students tested	478		100.0

TABLE 3

PERCENTAGE OF TOTAL SCHOOL STUDENTS TESTED

Grade	Number of students	Percentage of school	Percentage of total school
Middle school hearing-impaired	27	6.0	2.9
Middle school normal-hearing	421	94.0	45.5
High school hearing-impaired	42	8.8	4.5
High school normal-hearing	<u>436</u>	91.2	<u>47.1</u>
Total number of students tested	926		100.0

TABLE 4

SIXTH GRADE MEANS ON PIERS-HARRIS
CHILDREN'S SELF-CONCEPT SCALE

Students	Means	Number of students
Normal-hearing	53.4044	136
Hearing-impaired	54.0909	11

The assumption of homogeneity of variance for the eighth grade (table 5) is not upheld. Therefore the Welch procedure is used with degrees of freedom correct to the lower integer. The Welch procedure corrects the statistical test when there is an uneven distribution of scores.

TABLE 5

EIGHTH GRADE MEANS ON PIERS-HARRIS
CHILDREN'S SELF-CONCEPT SCALE

Students	Means	Number of students
Normal-hearing	55.2571	140
Hearing-impaired	55.4000	15

The assumption of homogeneity of variance for the ninth grade (table 6) is upheld. Therefore a t-test is used. With 143 degrees of freedom, t is .3799 and

probability is .705 on a two-tailed test.

TABLE 6
NINTH GRADE MEANS ON PIERS-HARRIS
CHILDREN'S SELF-CONCEPT SCALE

Students	Means	Number of students
Normal-hearing	57.0975	123
Hearing-impaired	56.0909	22

The assumption of homogeneity of variance for the tenth grade (table 7) is upheld. Therefore a t-test is used. With 144 degrees of freedom, t is .5601 and probability is .567 on a two-tailed test.

TABLE 7
TENTH GRADE MEANS ON PIERS-HARRIS
CHILDREN'S SELF-CONCEPT SCALE

Students	Means	Number of students
Normal-hearing	55.5147	136
Hearing-impaired	53.6000	10

The assumption of homogeneity of variance for the eleventh grade is upheld. Therefore a t-test is used. With 129 degrees of freedom, t is .0709 and probability is .944 on a two-tailed test.

TABLE 8

ELEVENTH GRADE MEANS ON PIERS-HARRIS
CHILDREN'S SELF-CONCEPT SCALE

Students	Means	Number of students
Normal-hearing	56.6720	125
Hearing-impaired	56.3333	6

The assumption of homogeneity of variance for the twelfth grade (table 9) is upheld. Therefore a t-test is used. With 54 degrees of freedom, t is 1.3872 and probability is .171 on a two-tailed test.

TABLE 9

TWELFTH GRADE MEANS ON PIERS-HARRIS
CHILDREN'S SELF-CONCEPT SCALE

Students	Means	Number of students
Normal-hearing	59.7888	52
Hearing-impaired	51.7500	4

The assumption of homogeneity of variance for the middle school students is upheld (table 10). Therefore a t-test is used. With 446 degrees of freedom, t is $-.3931$ and probability is .694 on a two-tailed test.

TABLE 10

TOTAL MIDDLE SCHOOL MEANS ON PIERS-HARRIS
CHILDREN'S SELF-CONCEPT SCALE

Students	Means	Number of students
Normal-hearing	54.2233	421
Hearing-impaired	55.1481	27

The assumption of homogeneity of variance for the high school students is upheld (table 11). Therefore a t-test is used. With 476 degrees of freedom, t is .9377 and probability is .349 on a two-tailed test.

TABLE 11

TOTAL HIGH SCHOOL MEANS ON PIERS-HARRIS
CHILDREN'S SELF-CONCEPT SCALE

Students	Means	Number of students
Normal-hearing	56.8027	436
Hearing-impaired	55.1190	42

Comparison of grade, group,
and national means

The grade, group, and national means are compared in this section. Each mean is compared to the national mean by using a t-test. Comparisons are shown in tables 12 and 13.

TABLE 12

COMPARISON OF GRADE MEANS AND NATIONAL
MEAN USING A t-TEST

Grade	t	Probability on Two-tailed test
Sixth normal-hearing	.0712	.943
Sixth hearing-impaired	.2191	.831
Seventh normal-hearing	.6701	.504
Seventh hearing-impaired*		
Eighth normal-hearing	1.8147	.072
Eighth hearing-impaired	1.1993	.250
Ninth normal-hearing	3.6226	.000
Ninth hearing-impaired	1.1775	.252
Tenth normal-hearing	2.4150	.017
Tenth hearing-impaired	.0960	.926
Eleventh normal-hearing	3.2990	.001
Eleventh hearing-impaired	.5267	.621
Twelfth normal-hearing	4.1085	.000
Twelfth hearing-impaired	-.3992	.716

*Degrees of freedom less than one; test not made.

Table 14 compares boys and girls of the various grades to determine if there is a difference in the mean self-concepts of the sexes.

Table 15 compares all boys and girls of the middle school and the high school to determine if there is a

difference between the mean self-concept scores for the two groups.

TABLE 13
COMPARISON OF GROUP MEANS AND NATIONAL
MEAN USING A t-TEST

Group	t	Probability on Two-tailed test
Middle school (grades 6,7,8) normal-hearing	1.5197	.129
Middle school (grades 6,7,8) hearing-impaired	1.0716	.294
High school (grades 9,10, 11,12) normal-hearing	6.4837	.000
High school (grades 9,10, 11,12) hearing-impaired	1.1061	.275
All students in middle and high school	5.7350	.000

Testing the Hypotheses

This section analyzes the data by testing the hypotheses of the study.

The first hypothesis is concerned with the difference between the hearing-impaired and the normal-hearing students. Table 16 indicates the t score for each grade, the middle school, and the high school. The results of the t-tests show that there is no significant difference between the self-concept of the hearing-impaired and the self-concept of the normal-hearing

students. The seventh-grade hearing-impaired and the normal-hearing students are not compared because there is only one seventh-grade hearing-impaired student. The test results confirm the research hypothesis that there is no significant difference between the self-concept of the hearing-impaired students and the normal-hearing students.

TABLE 14
COMPARISON OF BOYS' AND GIRLS'
MEANS FOR EACH GRADE

Grade	t	Probability on Two-tailed test
Sixth	-.5099	.611
Seventh	1.8044	.073
Eighth	-.3976	.691
Ninth	2.6777	.008
Tenth	.3050	.761
Eleventh	1.6730	.097
Twelfth	1.0789	.285

TABLE 15
COMPARISON OF BOYS' AND GIRLS'
MEANS FOR EACH SCHOOL

Group	t	Probability on Two-tailed test
Middle school (grades 6,7,8)	.5284	.597
High school (grades 9,10,11,12)	2.7483	.006

TABLE 16

COMPARISON OF MEANS OF HEARING-IMPAIRED
AND NORMAL-HEARING STUDENTS

Grade or group	t	Proba- bility	Degrees of freedom	Signifi- cant .05 level
Sixth	-.1884	.851	145	no
Seventh	-	-	-	-
Eighth	-.0706	.944	134	no
Ninth	.3799	.705	143	no
Tenth	.5600	.576	144	no
Eleventh	.0709	.994	129	no
Twelfth	1.3872	.171	54	no
Middle school	-.3931	.694	446	no
High school	.9377	.349	476	no

The second hypothesis concerns the difference between the self-concept of the hearing-impaired students and the national norm as established by the Piers-Harris Children's Self-Concept Scale. The seventh-grade hearing-impaired student is not compared to the national norm because a t-test cannot be used with only one student. The results show that there is no significant difference between the self-concept of the hearing-impaired students and the national norm as established by the Piers-Harris Children's Self-Concept Scale (table 17). These results confirm the research hypothesis that there is no

significant difference between the self-concept of the hearing-impaired students and the national norm as established by the Piers-Harris Children's Self-Concept Scale.

TABLE 17
COMPARISON OF MEANS OF HEARING-IMPAIRED
STUDENTS AND THE NATIONAL MEAN

Grade or group	t	Proba- bility	Degrees of freedom	Signifi- cant .05 level
Sixth	.0712	.943	.10	no
Seventh	-	-	-	-
Eighth	1.1193	.250	14	no
Ninth	1.1775	.252	21	no
Tenth	.0960	.926	9	no
Eleventh	.5267	.621	5	no
Twelfth	-.3993	.716	3	no
Middle school	1.0716	.294	26	no
High school	1.1061	.275	41	no

The third hypothesis is concerned with the difference between the self-concept of the normal-hearing students and the national norm as established by the Piers-Harris Children's Self-Concept Scale. The results of the t-tests that compare the means are given in table 18. The results of the t-tests show that there is a

significant difference for grades nine, ten, eleven, and twelve. There is a significant difference between the mean of the high-school normal-hearing students and the national norm. However, there is no significant difference for the sixth, seventh, or eighth grades or the middle school when the results are compared to the national norm. The research hypothesis is upheld for the sixth, seventh, and eighth grades and the middle school. At the same time, it is rejected for the ninth, tenth, eleventh, and twelfth grades and the total high school.

TABLE 18
COMPARISON OF MEANS OF NORMAL-HEARING
STUDENTS AND THE NATIONAL MEAN

Grade or group	t	Proba- bility	Degrees of freedom	Signifi- cant .05 level
Sixth	.0712	.943	135	no
Seventh	.6701	.504	144	no
Eighth	1.8147	.072	130	no
Ninth	3.6226	.000	122	yes
Tenth	2.4150	.017	135	yes
Eleventh	3.2990	.001	124	yes
Twelfth	4.1085	.000	51	yes
Middle school	1.5197	.294	420	no
High school	5.7350	.000	435	yes

Self-Concept Factors

A discriminant analysis is used to compare the six factors that have been extracted from the Piers-Harris Children's Self-Concept Scale. Tables 18-28 compare the factors of the hearing-impaired students to those of the hearing students. Because there is only one seventh grade hearing-impaired student, the seventh grade will not be compared.

With six degrees of freedom and a probability of .0953, discriminant function one and following are not significant. These results would indicate that there is no significant difference between the sixth-grade hearing-impaired and hearing students as measured on the factors of the Piers-Harris Children's Self-Concept Scale (table 19).

TABLE 19

COMPARISON OF FACTORS FOR SIXTH GRADE

Factor	Standard discriminant function
Behavior	-10.6848
Intellectual and school status	-5.3916
Physical appearance and attitudes	-9.3781
Anxiety	4.8159
Popularity	-3.5301
Happiness and satisfaction	21.4123

The eighth-grade hearing students have a mean 4.207 while the hearing-impaired students have a mean of 1.128. With six degrees of freedom and a probability of less than .005, the results of discriminant function one are significant (table 20).

TABLE 20
COMPARISON OF FACTORS FOR EIGHTH GRADE

Factor	Standard discriminant function
Behavior	11.2621
Intellectual and school status	-7.5794
Physical appearance and attitudes	-24.2084
Anxiety	-.0381
Popularity	7.9072
Happiness and satisfaction	14.0640

Compared to the hearing-impaired students of the eighth grade, the eighth-grade hearing students tend to have a lower self-concept with regard to physical appearance, but a higher self-concept with regard to happiness and satisfaction and behavior (table 21).

The ninth-grade hearing students have a mean of 3.309 while the ninth-grade hearing-impaired have a mean of 7.10. With six degrees of freedom and a probability of less than .0005, the results of the discriminant

function are significant (table 22).

TABLE 21

COMPARISON OF THE DISCRIMINANT FUNCTION IN
EIGHTH-GRADE HEARING AND HEARING-IMPAIRED

1.128	4.207
Hearing-impaired mean	Hearing mean
← physical appearance and attitudes	
	→ happiness and satisfaction
	→ behavior

TABLE 22

COMPARISON OF FACTORS FOR NINTH GRADE

Factor	Standard discriminant function
Behavior	2.9850
Intellectual and school status	1.8566
Physical appearance and attitudes	-18.0626
Anxiety	-.0381
Popularity	7.9072
Happiness and satisfaction	18.2471

Compared to the ninth-grade hearing-impaired students, the ninth-grade hearing students have a higher self-concept with regard to happiness and satisfaction, but a lower self-concept with regard to physical appearance (table 23).

TABLE 23

COMPARISON OF THE DISCRIMINANT FUNCTION IN THE
NINTH-GRADE HEARING AND HEARING-IMPAIRED

0.710	3.309
Hearing-Impaired mean	Hearing mean
happiness and satisfaction →	
← physical appearance	

With six degrees of freedom and a probability of .9250, discriminant functions one and following for the tenth grade are not significant (table 24). These results indicate that there is no significant difference between the hearing-impaired students and normal-hearing students as measured on the factors of the Piers-Harris Children's Self-Concept Scale.

With six degrees of freedom and a probability of .0768, discriminant functions one and following for the eleventh grade are not significant (table 25). These results indicate that there is no significant difference

between the hearing-impaired and hearing students as measured on the factors of the Piers-Harris Children's Self-Concept Scale.

TABLE 24
COMPARISON OF FACTORS IN TENTH GRADE

Factors	Standard discriminant function
Behavior	-7.4348
Intellectual and school status	-18.0799
Physical appearance and attitudes	1.0238
Anxiety	-7.9389
Popularity	26.4698
Happiness and satisfaction	3.5657

TABLE 25
COMPARISON OF FACTORS IN THE ELEVENTH GRADE

Factors	Standard discriminant function
Behavior	3.6210
Intellectual and school status	4.0491
Physical appearance and attitudes	-8.003
Anxiety	-4.4671
Popularity	-5.3229
Happiness and satisfaction	11.5792

With six degrees of freedom and a probability of .0768, discriminant functions one and following for the twelfth grade are not significant (table 26). These results indicate that there is not a significant difference between the hearing-impaired and hearing students as measured on the factors of the Piers-Harris Children's Self-Concept Scale.

TABLE 26
COMPARISON OF THE FACTORS IN THE TWELFTH GRADE

Factors	Standard discriminant function
Behavior	3.6210
Intellectual and school status	4.0491
Physical appearance and attitudes	-8.0003
Anxiety	-4.4671
Popularity	-5.3229
Happiness and satisfaction	11.5792

The middle-school hearing students have a mean of 1.633, while the middle-school hearing-impaired students have a mean of -1.054 (table 27). With six degrees of freedom and a probability of less than .0002, the results of discriminant function one for the middle school are significant.

TABLE 27

COMPARISON OF FACTORS OF THE MIDDLE SCHOOL

Factors	Standard discriminant function
Behavior	8.9672
Intellectual and school status	-18.3515
Physical appearance and attitudes	-37.9904
Anxiety	3.4639
Popularity	8.3793
Happiness and satisfaction	29.4854

Compared to the hearing-impaired students of the middle school, the hearing students of the middle school tend to have a lower self-concept with regard to physical appearance and attitudes, but a higher self-concept with regard to happiness and satisfaction (table 28). Intellectual and school status are included because of their slight influence. Compared to the hearing-impaired students of the middle school, the hearing students of the middle school tend to have a lower self-concept with regard to intellectual and school status.

With six degrees of freedom and a probability of .5761, discriminant function one for the high school are not significant (table 29). These results indicate that there is no significant difference between the

hearing-impaired and the hearing students of the high school as measured on the factors of the Piers-Harris Children's Self-Concept Scale.

TABLE 28

COMPARISON OF DISCRIMINANT FUNCTION IN MIDDLE-SCHOOL
HEARING AND HEARING-IMPAIRED

-1.054	1.633
Hearing-impaired mean	Hearing mean
← physical appearance and attitudes	
happiness and satisfaction →	
← intellectual and school status	

TABLE 29

COMPARISON OF FACTORS OF THE HIGH SCHOOL

Factors	Standard discriminant function
Behavior	4.9630
Intellectual and school status	-5.5535
Physical appearance and attitudes	-30.8367
Anxiety	-8.2187
Popularity	-6.4920
Happiness and satisfaction	34.8977

The hearing students have a mean of 1.4616 while the hearing-impaired students have a mean of $-.315$ (table 30). With six degrees of freedom and a probability of less than .005, the results of the discriminant function are significant.

TABLE 30
COMPARISON OF FACTORS FOR ALL STUDENTS

Factors	Standard discriminant function
Behavior	-4.2813
Intellectual and school status	-3.4324
Physical appearance and attitudes	-47.0113
Anxiety	-7.6371
Popularity	8.0573
Happiness and satisfaction	47.8738

TABLE 31
COMPARISON OF DISCRIMINANT FUNCTION OF ALL STUDENTS IN MIDDLE SCHOOL AND HIGH SCHOOL

$-.315$	1.416
Hearing-impaired mean	Hearing mean
happiness and satisfaction →	
← physical appearance and attitude	

Compared to the hearing-impaired students of the middle school and the high school, the hearing students of the middle school and the high school tend to have a higher self-concept with regard to happiness and satisfaction, but a lower self-concept with regard to physical appearance and attitude (table 31).

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The summary, conclusions, and recommendations of the study are presented in this chapter. The rationale of the study stemmed from the supposition that hearing-impaired students of the Berrien County Day Program for Hearing-Impaired have developed a self-concept that is as adequate as the self-concept of the hearing students of the Berrien Springs Public Schools.

Summary

The summary of this study is divided into the following sections: (1) purpose; (2) overview of related literature; (3) population, delimitation, and instrumentation; and (4) results.

Purpose

Because it is hypothesized that there is no significant difference between the self-concept of the hearing-impaired and the hearing students, the purpose of this study was to compare the self-concepts of these two groups. Another consideration was to compare the self-concept factors named by the Piers-Harris Children's Self-Concept Scale. The self-concept factors named by the

Piers-Harris Children's Self-Concept Scale were analyzed for the hearing-impaired and hearing students.

Overview of related literature

Early writers have given the development of the self-concept an important place in their psychological writings. Formerly, writers equated ego development with that of self-concept. Later writers began to give the self-concept a new and individual place in psychological theories. They began to realize that the self-concept is important to the development of the whole person. It is one of the important factors which controls a person's behavior and is important in the evaluation of others and in one's actions to them. The total person is in many respects greatly influenced by self-concept.

The individual's self-concept goes through three stages of development. The first is the development of the self-concept through the parents' treatment of the child; the second is the child's perception of society's evaluation of the child's family, including himself or herself; and the third is the child's accumulation of experiences with success and failure. At any age, success in human relationships is just as vital as the experience with other kinds of achievement. The importance of the child's parents and individual environment is clearly fundamental to the total development and especially to the child's self-concept. During the school

years, the peer-group evaluation of the individual assumes the preeminent position in the growth of the self-concept. Without the successful interaction with peers, the individual's self-concept withers and retards the total development. The adult self-concept also needs constant positive reinforcement or periodical reinforcement. Without this, the effectiveness of the individual's work and interaction with others diminish in quality.

Measurement of the self-concept is a difficult task for the psychologist. Most of the methods follow the psychometric methods. Much of the difficulty is due to the lack of cohesiveness of the research in the field of self-concept. It seems almost impossible to develop a definition of self-concept that is universally accepted. One of the main problems is that self-concept is something that cannot be seen. However, the results of the self-concept as it controls a person's behavior can be seen and measured. Most self-concept tests and research have measured this resultant behavior. Two highly recommended tests in the field of self-concept research are the Tennessee Self-Concept Scale and the Piers-Harris Children's Self-Concept Scale. Because the Piers-Harris can be used with a wider age range, it was selected as the instrument for this study.

The hearing-impaired person develops a self-concept in the same sequence as does the hearing person.

The fundamental needs of the hearing-impaired are the same as those of the hearing person. The same three steps in the development of a self-concept are traversed by the hearing-impaired as by those with normal hearing. One of the main differences is that the hearing-impaired may develop a secure self-concept more slowly and therefore more patience needs to be exercised when dealing with the hearing-impaired.

The educational evolution of the hearing-impaired began about the beginning of the nineteenth century. The Germans were the early leaders of the oral method for the hearing-impaired. The leader of this movement in the United States was Alexander Graham Bell. Because his mother and his wife were both hearing-impaired, Bell always had a strong interest in the oral education of the hearing-impaired. The Gallaudet family were the leaders of the silent education of the hearing-impaired. About the beginning of this century a compromise between the two methods produced the total-education method. Bell never fully accepted this because he believed that the language should be learned using words in context with attached meaning.

During the 1960s, the federal government encouraged the local school districts to develop programs for the hearing-impaired. This was done through legislation that provided for the least restrictive environment for

the development and education of the hearing-impaired. The legislation has promoted cooperation between the local school districts and other local agencies that provide services for the hearing-impaired.

Population

The population for this study was composed of sixty-nine hearing-impaired students of the Berrien County Day Program for Hearing-Impaired and 857 students of the Berrien Springs Public Schools. From the sixth through twelfth grade, all hearing-impaired and hearing students taking English were tested. The hearing-impaired students were from the Michigan counties of Berrien, Cass, and Van Buren. The hearing students all lived in the Berrien Springs public-school district.

Delimitation

The results of this study were limited to the students of the Berrien Springs Public Schools and the Berrien County Day Program for Hearing-Impaired. The results were further limited to the students in grades six through twelve.

Instrumentation

Because of the nature of the language difficulties of the hearing-impaired, the Piers-Harris Children's Self-Concept Scale was used for this study. The Piers-Harris requires only a third-grade reading ability,

therefore the language was not a barrier to a more accurate result from each student. The items of the Piers-Harris could be explained to the students if there were difficulties with the language.

Results and discussion

The results of the study regarding the hypotheses are discussed in this section. Each hypothesis is accepted or rejected according to the test of significance. To test the hypotheses, alpha was set at the .05 level.

Hypothesis 1. There is no significant difference between the self-concept of the hearing-impaired students of the Berrien County Day Program for Hearing-Impaired and the hearing students of the Berrien Springs Public Schools.

On the basis of the data obtained for the hearing-impaired and the hearing students, the hypothesis is accepted. Three comparisons were made: (1) hearing and hearing-impaired self-concept means for each grade, (2) hearing and hearing-impaired means for the middle school, and (3) hearing and hearing-impaired means for the high school. The conclusion is that there is no significant difference between the self-concept means for the hearing and hearing-impaired students. This finding is in accordance with the research reviewed in the study of the literature (Myklebust, 1950; Cull and Hardy, 1974; and Moores, 1978).

Hypothesis 2. There is no significant difference between the self-concept of the hearing-impaired students of the Berrien County Day Program for Hearing-Impaired and the national norm as established by the Piers-Harris Children's Self-Concept Scale.

On the basis of data obtained for the hearing-impaired, the hypothesis is accepted. Three comparisons were made: (1) hearing-impaired self-concept means for each grade were compared with the national norm, (2) hearing-impaired self-concept means for the middle school with the national norm, and (3) hearing-impaired self-concept means for the high school with the national norm. The conclusion is that there is no significant difference between the self-concept for the hearing-impaired and the national norm as established by the Piers-Harris Children's Self-Concept Scale. This is in accordance with the research cited under hypothesis one.

Hypothesis 3. There is no significant difference between the self-concept of the hearing students of the Berrien Springs Public Schools and the national norm as established by the Piers-Harris Children's Self-Concept Scale.

On the basis of the data obtained for the hearing students, the hypothesis is accepted for the middle school and rejected for the high school. Three comparisons were made: (1) hearing students' self-concept

means for each grade with the national norm, (2) hearing students' self-concept means for the middle school with the national norm, and (3) hearing student's self-concept mean for the high school with the national norm. The conclusion is that there is no significant difference between the self-concept of the hearing students of the middle school and the national norm as established by the Piers-Harris Children's Self-Concept Scale. However, there is a significant difference between the normal-hearing and the national norm as established by the Piers-Harris Children's Self-Concept Scale.

The Piers-Harris Children's Self-Concept Scale has six factors that have been identified for research purposes. These factors are: (1) behavior, (2) intellectual and school status, (3) physical appearance, (4) anxiety, (5) popularity, and (6) happiness and satisfaction. These factors count for 42 percent of the variance in the total self-concept score. The test is constructed so that the higher the factor score, the more positive the attribute. For example, the higher the score of the anxiety factor, the lower the anxiety of the individual. The discriminant analyses of these factors are included because of their interest. However, the factor scores are not to be overly generalized. As Piers and Harris state, "the factors are only indicators and should form the basis of further research and study."

The results of the discriminant analyses are commented on only if they are significant. If there are no significant results for a grade or group, no comment is given.

Compared to the eighth-grade hearing-impaired students, the eighth-grade hearing students tend to have a lower self-concept with regard to physical appearance. However, eighth-grade hearing students tend to have a higher self-concept than the eighth-grade hearing-impaired with regard to happiness and satisfaction and behavior.

Compared to the ninth-grade hearing-impaired students, the ninth-grade hearing students tend to have a lower self-concept with regard to physical appearance. At the same time, the ninth-grade hearing students tend to have a higher self-concept than the ninth-grade hearing-impaired with regard to happiness and satisfaction.

Compared to the middle-school hearing-impaired student, the middle-school hearing students tend to have a higher self-concept with regard to happiness and satisfaction. The hearing-impaired tend to have a higher self-concept than the middle-school hearing students with regard to physical appearance and attitudes. Also, the middle-school hearing students tend to have a slightly lower self-concept with regard to intellectual and school status than do the middle-school hearing-impaired students.

Compared to the high-school hearing-impaired students, the high-school hearing students tend to have a higher self-concept with regard to happiness and satisfaction. The high-school hearing students tend to have a higher self-concept than the high-school hearing-impaired students with regard to physical appearance and attitude.

Conclusions

From the foregoing findings, the following conclusions are made:

1. The hearing-impaired students, when their mean self-concept scores are compared, have self-concepts that are not significantly different from the national norm or mean as established by the Piers-Harris Children's Self-Concept Scale.

2. The hearing-impaired students, when their mean self-concept scores are compared, have self-concepts that are not significantly different from those of the hearing students.

3. The middle school hearing students, when their mean self-concept scores are compared, have self-concepts that are not significantly different from the national norm or mean as established by the Piers-Harris Children's Self-Concept Scale.

4. The high-school hearing students, when their means are compared, have self-concepts that are significantly different from the national norm or mean as

established by the Piers-Harris Children's Self-Concept Scale. However, according to the manual of the Piers-Harris Children's Self-Concept Scale, they are both well within the normal range. In practical use, this would not be a significant difference (Piers-Harris, 1969).

5. The eighth- and ninth-grade hearing students tend to have a higher self-concept with regard to happiness and satisfaction than the hearing-impaired students of the eighth and ninth grades.

6. The eighth- and ninth-grade hearing-impaired students tend to have a higher self-concept with regard to physical appearance than the hearing students of the eighth and ninth grades.

7. The high-school hearing students tend to have a higher self-concept with regard to happiness and satisfaction and physical appearance and attitude than the hearing-impaired students of the high school.

8. The hearing students and the hearing-impaired students have many self-concept factors that are very similar.

Recommendations

As the study progressed, questions were raised that were not part of the present research. Consequently, the following recommendations for further research are proposed:

1. The teaching methods of the Berrien County

Day Program for Hearing-Impaired should be compared to those of similar schools to determine if this could be a factor in the development of the self-concept of the hearing-impaired students.

2. A replication study should include the state school for the hearing-impaired. This would allow the researcher to compare the self-concept of the hearing-impaired living with their parents and the hearing-impaired students living at the state school.

3. A state-wide study that includes similar hearing-impaired schools could provide a more in-depth study of the total hearing-impaired self-concept.

4. An instrument that would more adequately measure self-concept would greatly improve the objectivity of the research. The Piers-Harris Children's Self-Concept Scale is one of the best that is available, but with some of the older groups, it has some questions that are too juvenile.

5. Experimental studies should be undertaken to determine if the type of home has an influence on the student's self-concept.

6. A better definition of self-concept and a better understanding of its components would enable a researcher to more accurately formulate a research study.

7. A study of the parents and their treatment of the hearing-impaired child may shed additional informa-

tion as to the best environment for the development of a child with a hearing impairment.

8. An investigation of the social self-concept of the hearing-impaired child should be a longitudinal study that would trace the progress over the period of the school years.

9. A comparison of the treatment of the hearing-impaired child as compared to the treatment of the hearing child by teachers may give valuable information as to the development of the self-concept.

10. A comparison of the social self-concept of the hearing-impaired with that of the hearing child could produce information as to the development of a social life for the adult.

11. A replication of the study should include the self-concept of the parents to determine if the hearing-impaired child merely develops a self-concept that is the same as that of his parents or if there is a deviation in self-concept from that of his parents.

APPENDIX A

THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE

PLEASE NOTE:

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

These consist of pages:

106-111

**University
Microfilms
International**

300 N. ZEEB RD., ANN ARBOR, MI 48106 (313) 761-4700

APPENDIX B
TEST RESULTS OF THE PIERS-HARRIS
CHILDREN'S SELF-CONCEPT SCALE

TABLE 32
TEST RESULTS OF THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE
MIDDLE SCHOOL, GRADE 6

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0600121	66	85	15	15	9	8	10	8
0600211	54	52	15	13	7	9	9	4
0600311	47	33	6	10	9	9	3	7
0600421	71	94	8	16	9	11	10	8
0700521	50	41	16	10	9	6	4	6
0600621	73	96	13	14	10	11	10	7
0600721	44	27	14	9	6	4	4	6
0600821	54	52	11	8	8	8	6	5
0600911	54	52	10	10	11	8	9	4
0601011	66	85	3	15	11	7	11	5
0601111	69	91	14	13	10	9	10	7
0601221	54	52	13	8	9	8	6	7
0601321	54	52	16	16	9	8	9	6
0601411	70	93	13	17	11	10	9	7
0601511	56	57	12	12	7	8	7	4
0601611	52	46	10	15	6	9	9	5
0601711	48	36	6	13	7	5	6	5
0601811	45	29	7	12	8	6	7	5
0601911	68	89	14	15	11	9	8	7
0602021	57	60	7	14	9	8	10	4
0602111	63	77	12	16	8	8	8	6
0602211	27	6	12	10	6	4	3	3
0602321	46	31	11	12	4	6	7	4
06-2421	47	33	11	9	7	7	3	6
0602521	63	77	11	13	10	10	9	7
0602621	60	69	12	11	8	10	8	7

TABLE 32--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0602721	51	44	9	10	7	9	7	7
0602821	59	66	8	13	9	11	10	4
0602911	47	33	9	11	8	6	11	3
0603021	49	38	13	12	8	8	6	6
0603121	62	74	16	14	9	8	9	7
0603221	75	98	14	16	12	11	10	7
0603321	52	46	13	12	6	7	9	3
0603421	44	27	14	10	2	6	7	5
0603511	27	6	8	8	3	6	6	2
0603621	56	57	10	12	8	9	6	7
0603711	67	87	11	15	11	10	11	5
0603811	65	82	15	13	10	8	8	7
0603911	24	4	14	4	3	2	3	2
0604011	54	52	15	13	9	9	8	5
0604121	53	49	10	13	9	7	6	5
0604221	40	20	13	10	7	6	3	6
0604311	63	77	6	15	9	10	6	8
0604411	53	49	11	11	8	11	8	6
0604521	53	49	12	9	7	8	7	6
0604621	75	98	5	18	11	12	10	8
0604711	73	96	11	16	11	12	9	8
0604811	41	21	11	8	6	6	4	5
0604921	36	14	15	9	6	4	4	6
0605021	37	15	15	7	3	7	7	3
0605111	47	33	14	10	7	8	8	3
0605211	63	77	7	14	11	8	6	7
0605311	65	82	6	13	9	9	8	7
0605411	52	46	11	16	8	9	5	5
0605521	53	49	11	12	7	7	7	6
0605611	58	63	6	12	10	8	9	7

TABLE 32--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0605711	64	79	11	16	9	11	10	5
0605811	27	6	11	7	6	3	3	1
0605921	66	85	10	15	10	9	8	6
0606011	69	91	16	16	11	10	8	7
0606121	69	91	5	14	11	10	10	6
0606211	50	41	16	10	9	7	6	7
0606321	62	74	10	14	10	6	8	5
0606421	41	21	15	13	7	7	6	5
0606511	53	49	14	11	6	8	7	6
0606621	67	87	12	14	8	9	10	8
0606711	58	63	16	14	9	7	9	4
0606821	54	52	7	10	7	7	7	5
0606911	58	63	15	14	9	10	10	6
0607021	40	20	14	9	7	7	7	6
0607111	36	14	14	15	6	6	6	2
0607221	36	14	12	6	4	4	4	4
0607311	65	82	6	15	8	8	8	5
0607411	67	87	7	17	9	11	11	6
0607521	47	33	10	9	9	9	9	5
0607621	69	91	10	15	9	10	10	8
0607721	58	63	14	12	11	9	9	7
0607821	55	55	14	13	8	7	7	7
0607911	48	36	13	9	8	9	9	5
0608011	53	49	11	14	8	5	5	6
0608121	42	23	15	11	5	7	7	5
0608211	71	94	17	18	10	11	11	8
0608311	40	20	9	12	8	6	6	3
0608411	59	66	10	11	7	6	6	8
0608511	49	38	13	11	7	6	6	4

TABLE 32--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0608621	59	66	11	13	7	8	9	8
0608711	46	31	13	9	8	9	8	4
0608821	60	69	16	13	8	9	7	6
0608921	67	87	11	12	11	10	9	8
0609021	48	36	15	10	8	6	4	5
0609121	54	52	14	12	9	8	9	6
0609211	44	27	11	6	8	7	9	6
0609311	35	13	5	11	5	6	6	2
0609421	61	71	6	12	11	7	9	7
0609521	59	66	16	15	9	9	8	5
0609611	49	38	8	14	9	5	6	6
0609711	38	16	14	7	6	3	3	4
0609821	43	24	12	9	7	7	4	5
0609921	58	63	12	13	9	10	9	5
0610011	66	85	12	13	10	8	10	5
0610121	49	38	12	12	6	5	8	5
0610221	75	98	7	17	11	10	10	8
0610321	61	71	10	16	10	8	7	5
0610411	57	60	9	13	10	10	8	7
0610521	45	29	3	12	8	6	9	3
0610621	49	38	13	9	8	6	5	7
0610711	46	31	8	15	9	6	7	4
0610811	54	52	12	9	10	6	4	7
0610911	63	77	16	12	9	11	9	7
0611021	71	94	6	15	11	11	10	8
0611121	32	10	11	5	6	5	5	2
0611221	50	41	10	9	8	7	8	4
0611321	69	91	13	14	10	8	10	7
0611421	42	23	16	10	6	4	5	5

TABLE 32--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0611511	60	69	15	14	9	7	8	7
0611621	72	95	11	17	10	10	11	7
0611711	52	46	15	13	9	7	7	6
0611811	52	46	14	11	10	7	8	5
0611921	55	55	16	12	8	7	10	5
0612011	66	85	9	13	9	10	9	8
0612111	48	36	14	13	7	9	4	5
0612221	62	74	12	12	10	9	9	6
0612321	60	69	15	14	8	8	6	7
0612421	64	79	13	14	11	12	7	8
0612521	64	79	12	13	10	10	10	4
0612621	65	82	6	14	10	6	9	6
0612721	34	12	12	7	4	2	4	2
0712811	55	55	15	16	10	7	7	5
0612921	64	79	12	13	9	10	8	6
0613021	34	12	18	7	3	3	5	6
0613111	31	9	10	8	5	6	6	2
0613211	48	36	10	10	8	7	5	5
0613321	65	82	7	13	9	9	7	7
0613421	58	63	15	15	9	8	8	6
0613511	58	63	11	12	11	8	10	4
0613621	46	31	16	8	7	5	9	4
0613721	53	49	9	13	9	7	7	5
0613821	70	93	8	17	11	10	8	6

TABLE 33
TEST RESULTS OF THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE
MIDDLE SCHOOL, GRADE

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0700121	44	27	11	10	4	4	4	3
0700211	69	91	16	16	11	9	9	6
0700321	60	69	13	12	7	7	8	7
0700411	66	85	15	15	9	9	9	6
0700511	71	94	14	15	11	9	9	7
0700611	45	29	10	11	3	10	8	4
0700711	68	89	14	17	9	11	9	7
0700811	66	85	15	15	10	10	9	8
0700911	64	79	15	16	10	9	10	5
0701011	55	55	12	13	7	7	9	7
0701111	57	60	12	12	10	9	8	5
0701211	71	94	15	17	10	11	9	7
0701321	57	60	13	12	9	8	6	6
0701411	55	55	8	11	9	12	6	7
0701511	65	82	15	11	10	8	10	8
0701621	46	31	9	10	8	4	9	3
0701721	59	66	11	16	7	10	9	5
0701811	42	23	10	12	7	6	5	4
0701911	41	21	9	12	5	7	7	4
0702021	53	49	8	10	9	10	8	7
0702121	47	33	9	11	5	6	6	2
0702211	59	66	10	14	7	9	8	6
0702311	52	46	11	10	9	9	8	6
0702411	49	38	11	9	9	7	7	5
0702511	59	66	13	13	9	8	5	6
0702611	53	49	12	12	7	5	6	6

TABLE 33--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0702711	52	46	12	12	9	7	8	5
0702811	39	18	8	10	4	5	4	8
0702911	76	99	16	17	11	11	11	8
0703011	69	91	13	15	11	11	9	5
0703121	40	20	7	10	6	5	7	4
0703221	55	55	11	13	10	8	4	7
0703321	31	9	7	6	2	5	6	3
0703421	48	36	9	10	8	9	7	4
0703521	48	36	9	10	9	4	7	4
0703621	44	27	8	10	7	7	5	2
0703711	65	82	14	15	10	8	8	8
0703811	52	46	11	15	11	7	7	6
0703921	44	27	7	10	7	7	7	5
0704011	50	41	11	8	6	5	8	4
0704121	50	41	13	9	6	6	9	4
0704221	65	82	15	13	9	8	10	6
0704321	52	46	13	10	10	6	7	5
0704421	51	44	9	11	7	9	4	5
0704511	63	77	16	13	11	10	9	7
0704621	60	69	14	15	10	7	8	5
0704711	67	87	14	15	7	8	10	6
0704821	60	69	14	13	8	10	8	6
0704921	55	55	15	10	8	6	6	7
0705021	57	60	12	13	9	8	8	5
0705121	35	13	7	10	5	2	4	5
0705211	56	57	13	11	10	8	10	4
0705321	46	31	12	12	8	7	6	4
0705411	71	94	16	17	10	10	9	8
0705521	74	97	16	18	11	11	10	7

TABLE 33--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0705611	69	91	14	16	10	10	8	7
0705711	37	15	11	8	6	5	6	3
0705821	71	94	13	16	12	11	11	6
0705921	60	69	11	13	10	11	7	5
0706021	65	82	13	13	10	10		8
0706121	64	69	15	16	9	7	10	6
0706221	61	71	15	14	9	7	6	7
0706311	19	2	5	4	3	1	4	1
0706411	59	66	12	13	9	7	6	8
0706521	54	52	11	12	8	9	7	7
0706621	30	8	5	5	6	5	2	3
0706711	75	98	15	18	10	11	10	8
0706811	64	79	13	15	9	10	11	4
0706921	60	69	10	14	11	6	7	6
0707021	63	77	10	14	11	8	9	5
0707121	40	20	5	9	6	6	6	5
0707221	60	69	14	17	8	6	9	5
0707311	62	74	15	11	11	8	10	6
0707421	46	31	8	13	8	5	5	5
0707511	48	36	8	10	7	11	8	5
0707611	54	52	8	14	11	10	5	6
0707721	49	38	10	8	8	8	8	4
0707821	61	41	10	15	10	10	7	8
0707921	58	63	11	12	9	8	9	6
0708011	51	44	11	12	8	7	8	3
0708121	69	91	15	15	11	9	8	7
0708221	69	91	14	14	12	10	7	7
0708321	38	17	9	6	5	6	4	4
0708411	38	17	8	8	3	5	4	4

TABLE 33--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0708521	62	74	15	13	10	6	8	7
0708611	35	13	8	9	5	3	5	5
0708721	45	29	8	11	8	4	5	6
0708821	60	69	11	14	9	9	5	7
0708921	51	44	11	11	8	6	7	6
0709011	64	79	11	15	10	10	10	6
0709221	50	41	10	16	12	7	5	6
0709311	60	69	11	14	11	9	5	7
0709421	69	91	14	16	10	11	9	7
0709521	38	14	10	8	4	5	7	4
0709611	48	36	10	12	6	6	7	7
0709721	68	89	17	16	8	7	10	8
0709911	37	15	7	9	5	6	5	5
0710011	39	18	10	8	9	6	7	6
0710121	62	74	10	14	12	10	7	4
0710211	63	77	12	14	8	7	7	5
0710311	57	60	10	15	9	6	8	6
0710421	34	12	6	4	6	5	5	5
0710521	64	79	12	14	11	9	8	7
0710611	56	57	11	11	10	6	7	6
0710721	47	33	8	12	7	7	4	3
0710821	39	18	11	6	6	4	3	6
0710911	56	57	10	11	9	11	6	7
0711021	51	44	13	10	7	7	7	5
0711111	74	97	17	15	11	12	9	8
0711221	47	33	8	11	8	10	6	4
0711311	57	60	12	11	9	9	8	5
0711411	67	87	12	15	10	10	9	6
0711511	48	36	12	15	6	5	7	4

TABLE 33--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0711611	57	60	12	12	11	6	7	5
0711711	52	46	12	15	8	6	6	6
0711821	72	95	16	16	9	9	10	6
0711911	36	14	8	9	7	4	7	2
0712011	55	55	11	13	8	6	8	6
0712111	63	77	12	14	10	7	10	7
0712221	54	52	9	13	7	8	6	6
0712321	73	96	17	16	10	9	9	8
0712411	60	69	13	13	9	9	4	7
0712521	62	74	11	12	10	10	7	8
071262	50	41	10	10	6	9	2	8
0712711	71	94	16	17	9	9	7	7
0712811	68	89	14	16	11	9	8	7
0712911	26	5	3	9	3	4	3	2
0713011	29	7	6	7	3	8	5	2
0713111	66	85	13	15	11	10	9	7
0713211	66	85	15	17	11	7	9	6
0713321	64	79	13	12	10	9	9	5
0713421	49	38	10	10	8	6	5	6
0713511	51	44	9	12	6	7	6	5
0713621	32	10	5	7	4	4	4	4
0713711	71	94	18	15	10	10	8	8
0713811	40	20	7	10	6	4	8	2
0713911	64	79	14	14	10	10	9	6
0714011	55	55	12	14	6	7	6	6
0714111	67	87	15	12	11	10	9	8
0714211	52	46	9	12	8	7	7	5
0714311	60	69	16	14	8	9	10	7

TABLE 33--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0714421	45	29	9	10	7	8	7	4
0714511	75	98	16	16	12	10	9	8
0714621	58	63	13	14	10	6	7	5

TABLE 34
TEST RESULTS OF THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE
MIDDLE SCHOOL, GRADE 8

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0800111	66	85	15	16	9	10	9	4
0800211	59	66	11	13	7	9	8	7
0800311	33	11	7	10	6	6	5	4
0300421	45	29	15	9	5	8	4	4
0800521	73	96	10	16	11	11	8	8
0800611	62	74	15	15	9	7	8	8
0800711	65	82	11	14	11	7	8	5
0800811	45	29	11	12	6	4	4	4
0800921	53	49	11	15	11	6	4	6
0801021	21	2	15	3	4	7	3	2
0801121	67	87	16	12	10	11	9	7
0801221	57	60	10	10	8	9	9	5
0801311	74	97	11	16	12	11	9	8
0801421	55	55	14	14	9	7	9	6
0801521	54	52	10	10	8	8	5	7
0801621	49	38	7	11	8	5	4	7
0801721	33	11	9	6	5	4	3	2
0801821	37	15	9	5	9	5	6	4
0801920	60	69	14	12	10	8	9	6
0802011	40	20	11	14	7	5	4	5
0802111	59	66	14	17	8	8	7	6
0802221	61	71	4	11	11	9	8	8
0802311	40	20	11	11	5	5	8	4
0802411	48	36	8	15	8	4	7	6
0802511	55	55	12	12	9	9	6	6
0802611	58	63	12	12	9	6	6	6

TABLE 34--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0802711	47	33	10	7	9	7	7	5
0802821	47	33	10	13	11	5	5	5
0802921	42	23	10	10	6	6	4	5
0803021	60	69	7	11	8	8	8	7
0803121	68	89	13	16	10	8	9	8
0803221	69	91	18	15	11	9	10	7
0803321	67	87	8	17	9	9	10	7
0803411	58	63	10	13	11	8	8	6
0803511	38	17	6	8	7	3	4	4
0803611	58	63	12	15	11	10	6	8
0803711	46	31	12	12	7	6	8	3
0803811	65	82	15	16	11	11	9	8
0803921	67	87	5	14	11	10	8	8
0804021	71	94	12	16	11	11	8	8
0804121	57	60	10	13	10	8	5	6
0804221	60	69	5	14	9	7	9	4
0804321	38	17	14	9	7	7	3	4
0804411	53	49	8	11	7	8	9	4
0804521	60	69	9	11	11	8	6	7
0804621	41	21	14	10	6	5	4	4
0804721	55	55	14	8	11	10	7	6
0804821	58	63	8	12	10	8	7	7
0804911	71	94	8	15	11	12	11	6
0805011	71	94	10	16	10	11	9	7
0805111	62	74	10	17	11	8	10	4
0805221	40	20	13	9	8	4	5	6
0805311	33	11	15	7	7	5	5	3
0805411	55	55	12	14	9	8	9	8
0805521	57	60	13	11	9	9	5	8
0805621	38	17	13	8	5	7	6	2

TABLE 34--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0805721	41	21	14	8	4	3	6	4
0805821	63	77	4	15	11	9	11	6
0805921	54	52	16	11	9	9	6	4
0806021	73	96	12	17	11	10	11	8
0806111	33	11	15	5	4	7	3	5
0806221	73	96	9	15	10	9	10	8
0806321	54	52	13	14	8	8	7	5
0806421	73	96	5	16	12	11	8	8
0806511	70	93	14	14	10	10	9	7
0806611	56	57	16	14	9	8	8	5
0806711	77	99	14	16	12	12	10	7
0806821	48	89	11	11	11	6	7	6
0806921	62	74	12	10	11	8	6	8
0807021	66	85	8	14	10	9	6	8
0807111	63	77	5	14	10	8	8	6
0807211	58	63	9	14	10	7	8	6
0807321	35	13	15	7	6	4	6	4
0807411	45	29	12	12	5	7	7	4
0807521	34	12	5	5	6	4	5	6
0807611	51	44	17	11	11	8	7	4
0807711	68	89	11	14	10	11	10	6
0807821	68	89	12	14	10	8	10	7
0807811	63	77	12	16	11	7	8	6
0807921	67	87	12	15	11	9	8	8
0808021	62	74	10	11	11	10	10	5
0808121	71	94	8	16	12	10	10	8
0808211	76	99	15	14	12	12	10	8
0808321	48	36	6	12	7	7	7	6
0808421	63	77	14	14	12	9	8	7

TABLE 34--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0808511	65	82	8	17	10	8	9	6
0808611	65	82	13	16	11	9	8	6
0808721	57	60	17	12	8	6	8	4
0808821	64	79	13	14	10	8	9	7
0808911	59	66	15	17	10	9	8	6
0809021	67	87	7	14	10	9	10	7
0809111	67	87	7	15	11	10	7	7
0809221	53	49	8	10	10	5	4	5
0809311	38	17	7	8	7	7	4	4
0809411	33	11	13	5	4	7	10	3
0809521	68	89	12	15	11	7	7	7
0809611	49	38	11	12	8	7	10	6
0809711	66	85	6	15	11	10	5	6
0809811	47	33	7	13	9	4	7	5
0809921	56	57	10	10	8	8	10	7
0810011	60	69	15	14	10	9	10	7
0810121	61	71	10	12	11	8	5	5
0810221	46	31	18	10	6	8	8	5
0810321	41	21	10	9	9	4	7	4
0810421	56	57	11	12	9	7	4	6
0810521	31	9	9	7	5	5	10	4
0810621	67	87	10	11	12	11	6	6
0810711	42	23	7	9	7	5	8	4
0810821	60	69	11	11	10	9	8	5
0810921	69	91	14	17	10	10	6	8
0811011	42	23	14	10	8	6	7	3
0811121	63	77	4	14	11	8	7	8
0811211	55	55	10	12	8	10	7	8

TABLE 34--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0311311	71	94	16	15	11	11	9	8
0811421	76	99	7	17	12	10	10	8
0811521	75	98	13	18	12	12	9	6
0811621	64	79	16	14	11	11	9	7
0811721	61	71	10	15	11	7	8	7
0811811	61	71	10	13	7	9	7	7
0811911	71	94	10	15	9	10	8	7
0812021	41	21	13	9	8	4	5	3
0812111	64	79	10	14	11	6	10	6
0812221	62	74	14	15	10	7	7	6
0812321	74	97	11	16	11	11	10	8
0812421	62	74	11	16	10	7	6	4
0812511	46	31	13	10	6	6	7	3
0812621	35	13	15	7	6	3	3	4
0812721	64	79	9	15	10	11	7	8
0812811	71	94	10	15	12	9	10	6
0812921	50	41	12	11	6	8	8	6
0813021	77	99	8	17	12	12	10	8
0813121	57	60	6	13	9	9	5	8
0813211	43	24	10	9	6	6	6	3
0813311	32	10	14	7	6	2	3	3
0813411	64	79	13	15	9	8	8	4
0813521	64	79	13	14	10	10	8	6
0813611	66	85	10	15	11	10	9	6
0813711	38	17	9	9	3	3	7	4
0813811	41	21	13	12	7	5	5	4
0813911	70	93	16	14	12	11	8	8
0814011	64	79	14	14	9	9	7	7

TABLE 35
TEST RESULTS OF THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE
MIDDLE SCHOOL, HEARING-IMPAIRED

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0620120	43	24	8	9	8	7	6	6
0620220	51	44	11	11	8	8	4	6
0620310	62	74	13	15	9	8	7	7
0620410	62	74	11	15	9	9	7	7
0620520	58	63	12	12	8	8	9	5
0620620	42	23	10	7	4	6	7	5
0620710	68	89	16	14	10	10	10	8
0620820	53	49	12	12	8	7	8	7
0620910	67	87	17	14	9	8	10	8
0621010	66	85	14	14	8	11	10	7
0621120	35	13	8	11	6	4	4	3
0720110	64	79	14	14	9	9	8	9
0820110	50	41	11	9	10	7	9	6
0820210	64	79	14	13	10	9	10	8
0820320	52	46	11	9	10	10	10	6
0820410	57	60	14	15	9	5	7	7
0820510	47	33	11	11	5	6	7	4
0820610	53	49	10	9	10	10	10	5
0820710	59	66	14	11	6	9	7	7
0820810	64	79	10	16	11	9	11	8
0820910	59	66	13	13	9	7	10	8
0821020	53	49	11	9	8	9	9	6
0821120	43	24	10	6	5	6	9	4
0821210	67	87	16	15	9	9	9	8
0821320	58	63	13	11	8	9	9	5

TABLE 35--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0821410	59	66	12	14	9	10	8	6
0821520	61	71	11	13	11	9	10	9

TABLE 36
TEST RESULTS OF THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE
HIGH SCHOOL, GRADE 9

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0900111	33	11	7	7	6	6	5	5
0900221	33	11	5	9	5	5	5	5
0900321	50	41	12	9	8	5	7	6
0900411	46	31	9	12	7	4	5	4
0900511	63	77	13	13	12	6	7	7
0900621	69	91	13	14	12	10	9	8
0900711	47	33	9	9	7	9	7	6
0900811	71	94	14	17	11	10	9	7
0900921	69	91	12	13	11	11	8	7
0901021	36	14	6	6	4	5	5	3
0901111	57	60	12	12	6	10	8	7
0901211	46	31	7	11	8	7	7	6
0901321	58	63	12	12	9	8	6	8
0901411	41	21	9	5	6	5	4	5
0901511	50	41	11	13	7	6	5	3
0901621	43	24	8	10	8	7	5	6
0901711	72	95	14	15	12	11	10	8
0901821	49	38	9	9	7	8	9	5
0901921	50	41	11	9	7	6	5	5
0902021	50	41	8	9	11	8	5	6
0902111	77	99	16	17	12	12	10	8
0902221	68	89	16	17	10	6	8	6
0902311	72	95	16	17	11	11	10	7
0902421	40	20	6	11	7	5	5	4
0902511	75	98	18	15	12	11	9	8
0902621	41	21	8	10	7	4	5	4

TABLE 36--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0902721	65	82	14	14	11	9	9	7
0902811	62	74	12	14	11	9	8	8
0902921	62	74	16	13	10	7	8	7
0903021	57	60	11	11	11	7	6	5
0903111	48	36	9	10	7	7	6	3
0903211	45	29	10	8	6	6	7	5
0903311	69	91	15	15	10	9	8	7
0903421	41	21	8	12	7	5	7	3
0903521	50	41	10	11	9	6	7	3
0903621	66	85	14	13	11	10	9	8
0903721	62	74	15	15	10	9	11	5
0903821	58	63	9	14	10	8	5	6
0903921	42	23	5	7	6	9	6	5
0904021	64	79	11	14	11	10	7	8
0904111	52	46	10	10	8	7	5	4
0904221	60	69	13	13	8	8	9	6
0904311	72	95	15	15	12	11	10	8
0904411	59	66	13	15	10	8	9	7
0904521	63	77	12	14	9	8	10	5
0904611	73	96	16	16	11	10	10	8
0904721	72	95	15	17	12	10	10	8
0904811	72	95	15	16	12	11	11	7
0904921	63	77	11	16	9	10	6	7
0905011	61	71	14	14	9	7	8	5
0905121	56	57	12	11	12	7]	8	7
0905211	59	66	12	13	10	8	6	8
0905311	53	49	12	11	8	7	9	6
0905421	65	82	12	14	11	9	9	6
0905521	54	52	13	11	11	5	6	5

TABLE 36--Continued

Student ID No.	Raw Score	Per centile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0905611	76	99	17	17	11	11	11	8
0905711	78	99	18	17	11	10	10	8
0905811	40	20	6	10	7	6	5	2
0905911	56	57	11	12	8	8	5	7
0906021	36	14	9	7	5	3	6	3
0906111	58	63	12	13	10	9	5	6
0906211	76	99	15	17	12	12	11	7
0906321	55	55	9	13	10	7	7	5
0906411	67	87	12	17	10	9	9	7
0906511	72	95	15	17	11	8	11	7
0906611	64	79	14	14	10	8	7	7
0906711	53	49	11	12	6	6	7	3
0906821	72	95	15	15	10	10	11	8
0906921	51	44	11	11	8	8	4	6
0907021	62	74	14	12	10	11	8	8
0907121	56	57	13	11	8	7	7	6
0907211	53	49	11	13	7	5	7	6
0907321	73	96	16	15	11	11	8	8
0907411	58	63	11	12	11	8	9	4
0907521	69	91	16	13	11	7	8	8
0907621	53	49	8	11	10	9	5	4
0907711	74	97	18	16	11	10	10	8
0907811	70	93	18	16	9	9	9	7
0907921	73	96	17	17	12	8	9	8
0908011	40	20	5	11	8	4	4	2
0908111	50	41	12	14	7	5	6	6
0908211	53	49	11	14	8	6	6	5
0908321	54	52	11	14	7	7	5	6
0908421	58	63	13	13	7	10	7	7

TABLE 36--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0908511	52	46	11	13	7	7	7	4
0908611	71	94	16	15	12	10	8	8
0908711	42	23	7	9	7	6	4	2
0908811	52	46	11	12	6	8	6	5
0908921	58	63	11	11	9	10	6	8
0909021	47	33	12	9	8	3	9	6
0909111	37	15	8	12	9	4	6	2
0909221	61	71	15	14	9	8	6	2
0909311	68	89	16	17	10	10	6	6
0909411	66	85	15	14	12	9	7	8
0909611	59	66	12	12	10	9	8	8
0909721	49	38	13	10	7	7	9	5
0909821	71	94	16	17	11	9	4	8
0909911	58	63	12	11	8	9	10	8
0910011	68	89	14	15	12	11	5	7
0910121	52	46	12	10	9	8	6	7
0910221	44	27	9	9	9	5	7	4
0910311	73	96	15	16	12	10	6	5
0910411	65	82	14	16	10	9	10	8
0910511	69	91	15	13	10	8	6	7
0910621	59	66	12	13	10	9	8	8
0910711	60	69	13	14	9	9	9	7
0910811	67	87	16	14	10	8	9	5
0910921	41	21	10	9	7	4	4	5
0911021	68	89	12	15	9	10	7	5
0911111	67	87	13	15	11	9	10	7
0911221	64	79	13	13	11	6	7	6
0911321	59	66	16	13	8	6	8	6
0911421	37	15	8	6	5	6	5	6

TABLE 36--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0911521	73	96	16	16	11	10	11	7
0911611	67	87	14	13	12	12	8	5
0911721	43	24	8	6	5	8	7	6
0911821	49	38	10	9	8	4	4	7
0911921	40	20	8	7	7	5	3	5
0912011	68	89	14	15	12	10	7	8
0912111	75	98	17	16	11	11	9	8
0912211	68	89	16	15	11	10	8	7

TABLE 37
TEST RESULTS OF THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE
HIGH SCHOOL, GRADE 10

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
1000121	57	60	14	12	8	9	8	5
1000221	40	20	7	7	7	7	3	5
1000321	63	77	13	13	10	9	10	5
1000411	45	29	7	9	9	7	5	6
1000521	72	95	15	16	12	10	9	7
1000611	53	49	9	11	8	7	5	6
1000721	49	38	12	10	8	4	6	7
1000821	58	63	10	12	11	9	8	7
100911	66	85	13	14	9	11	7	8
1001011	32	10	4	9	6	6	3	1
1001111	54	52	12	10	9	7	6	6
1001221	53	49	12	11	7	4	8	6
1001311	67	87	14	14	10	11	10	7
1001411	58	63	14	12	10	9	6	7
10p1511	52	46	13	10	9	6	7	6
1001621	65	82	12	16	11	8	8	7
1001721	57	60	16	10	6	9	8	5
1001821	53	49	11	13	9	8	5	8
1001921	46	31	10	12	8	2	8	2
1002021	44	27	8	9	9	6	6	4
1002111	42	23	11	5	7	5	7	4
1002211	56	57	11	13	9	6	9	7
1002321	50	41	13	12	9	4	9	5
1002411	68	89	14	14	12	11	10	7
1002521	61	71	14	12	11	7	11	7
1002621	49	38	12	8	10	7	9	6

TABLE 37--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
1002721	62	74	12	14	12	8	10	5
1002821	58	63	11	14	11	9	8	5
1002921	60	69	12	14	10	11	6	6
1003011	57	60	12	10	7	7	9	6
1003121	65	82	12	14	12	9	10	7
1003211	45	29	11	6	6	4	8	2
1003311	50	41	2	13	7	7	7	5
1003411	51	44	12	12	9	5	6	4
1003521	72	95	14	16	12	12	7	7
1003621	61	71	12	13	10	8	9	5
1003721	66	85	9	16	12	10	6	6
1003821	77	99	10	18	12	10	10	8
1003921	47	33	17	11	7	6	8	4
1004021	40	20	13	8	7	7	6	3
1004121	69	91	7	15	12	10	7	7
1004221	50	41	15	13	7	5	6	3
1004321	45	29	11	8	9	5	4	6
1004421	72	95	8	16	11	11	11	7
1004511	28	6	14	7	6	3	4	2
1004611	62	74	5	14	10	6	8	6
1004711	72	95	13	17	12	11	8	8
1004821	52	46	14	12	10	7	7	3
1004911	52	46	12	12	8	6	4	5
1005021	73	96	13	16	11	10	9	7
1005111	73	96	16	17	11	9	9	8
1005221	69	91	16	16	11	10	10	7
1005321	68	89	13	16	11	9	10	7
1005421	40	20	14	8	5	7	7	5
1005521	66	85	8	15	8	9	9	7

TABLE 37--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
1005611	63	77	15	14	10	6	9	5
1005721	59	66	15	16	9	8	9	8
1005811	65	82	13	16	7	7	10	5
1005911	48	36	14	11	8	6	5	5
1006021	44	27	9	9	8	5	7	4
1006111	22	3	10	9	3	5	5	0
1006211	61	71	12	11	12	9	9	6
1006321	52	46	11	11	11	7	6	5
1006421	66	85	15	15	10	6	8	8
1006521	68	89	15	14	10	10	10	7
1006611	57	60	12	10	8	10	7	7
1006721	72	95	15	15	12	10	11	7
1006811	53	49	14	9	8	6	6	6
1006911	43	24	9	9	5	6	7	4
1007011	57	60	12	12	12	6	7	6
1007211	72	95	14	17	11	9	10	7
1007321	56	57	12	15	9	6	5	6
1007421	62	74	13	12	10	8	7	6
1007511	54	52	13	12	8	6	4	6
1007611	59	66	13	12	9	9	5	6
1007711	44	27	9	12	7	6	6	5
1007811	59	66	14	14	7	7	8	8
1007921	65	82	14	15	10	10	7	8
1008021	54	52	9	11	10	8	6	8
1008111	74	97	15	18	11	11	10	7
1008211	61	71	13	12	9	8	7	6
1008321	53	49	11	10	8	7	7	5
1008411	54	52	10	14	9	8	8	7
1008511	72	95	16	16	11	10	10	8

TABLE 37--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
1008621	62	74	13	14	11	6	9	6
1008711	58	63	10	15	8	9	8	6
1008811	41	21	8	9	8	6	5	5
1008921	69	91	15	15	12	8	10	8
1009011	46	31	12	12	6	4	5	5
1009111	37	15	7	7	7	6	4	5
1009221	55	55	11	12	10	7	4	7
1009321	55	55	11	12	10	8	7	6
1009411	67	87	15	14	12	9	8	5
1009511	57	60	8	12	9	8	7	5
1009721	53	49	13	13	6	7	5	5
1009811	52	46	10	11	7	6	7	6
1009921	34	12	11	9	8	2	3	5
1010021	71	94	7	13	10	10	10	7
1010111	65	82	17	12	10	7	10	7
1010211	41	21	15	7	6	7	4	5
1010311	61	71	7	12	10	12	7	6
1010421	35	13	12	9	3	3	5	1
1010511	67	87	9	13	11	9	9	6
1010711	50	41	14	15	10	9	8	5
1010811	53	49	8	11	7	9	10	4
1010921	63	77	14	14	8	9	9	6
1011021	60	69	13	14	11	8	6	7
1011111	67	87	15	15	12	7	10	4
1011221	52	46	9	10	8	7	8	5
1011311	65	82	13	16	10	9	11	7
1011341	56	57	13	14	11	8	10	5
1011521	45	29	13	9	6	6	8	4

TABLE 37--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
1011621	42	23	6	9	7	7	6	5
1011711	68	89	14	16	9	9	8	7
1011821	50	41	9	14	9	9	7	6
1011911	51	44	14	10	7	7	8	6
1012011	60	69	11	13	10	11	7	6
1012121	49	38	10	12	10	5	7	4
1012221	63	77	12	14	11	7	7	5
1012311	57	60	11	11	11	8	6	7
1012421	48	36	12	10	4	7	9	3
1012511	54	52	12	14	10	6	9	5
1012611	58	63	12	13	10	10	6	7
1012811	58	63	11	12	10	10	6	7
1012921	51	44	9	12	11	7	7	6
1013021	67	87	16	14	10	10	9	6
1013121	57	60	13	12	7	7	8	5
1013211	66	85	14	17	9	9	9	6
1013311	67	87	14	13	11	10	8	7
1013421	52	46	11	13	8	7	8	6
1013511	72	95	17	17	11	8	8	8
1013611	74	97	17	15	11	11	10	8
1013721	49	38	8	11	9	8	5	6

TABLE 38
TEST RESULTS OF THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE
HIGH SCHOOL, GRADE 11

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
1100121	36	14	12	7	8	4	5	5
1100211	65	82	14	16	11	9	8	6
1100321	63	77	14	12	10	8	9	8
1100411	59	66	10	14	10	9	8	4
1100511	58	63	13	12	10	8	8	6
1100611	79	99	18	18	12	10	11	8
1100711	64	79	13	15	8	9	9	7
1100821	40	20	9	9	9	3	3	5
1100911	64	79	15	15	11	9	9	8
1101011	55	55	11	11	9	8	6	5
1101111	58	63	12	15	10	8	8	6
1101221	48	36	7	8	11	6	6	4
1101311	56	57	12	11	9	6	7	6
1101421	66	85	13	14	11	10	8	8
1101511	63	77	15	14	9	9	11	5
1101621	63	77	16	12	8	8	9	6
1101711	61	71	12	14	11	9	7	7
1101811	67	87	17	15	11	9	9	5
1101911	65	82	12	16	11	10	10	6
1102021	51	44	9	11	6	9	5	5
1102121	50	41	13	10	9	5	5	6
1102221	53	49	12	12	9	7	4	8
1102321	63	77	14	12	10	10	8	8
1102421	57	60	9	13	11	7	6	8
1102511	68	89	15	13	10	9	9	6
1102611	68	89	14	15	10	9	10	8

TABLE 38--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
1102711	56	57	13	12	9	6	6	6
1102811	59	66	13	12	9	7	6	8
1102921	51	44	13	13	8	6	7	3
1103021	45	29	8	8	8	7	8	4
1103121	65	82	13	15	11	9	9	6
1103221	28	6	8	7	2	4	5	2
1103311	58	63	11	15	10	6	8	4
1103411	61	71	13	14	9	8	7	5
1103521	49	38	11	11	9	7	6	6
1103621	60	69	13	13	11	8	7	6
1103721	63	77	14	13	10	9	9	7
1103821	46	31	10	9	7	7	6	4
1103911	64	79	13	16	10	9	11	5
1104011	69	91	14	16	10	9	8	8
1104121	33	11	7	6	7	6	4	5
1104211	62	74	12	14	10	7	9	7
1104321	55	55	11	14	10	9	5	8
1104411	64	79	15	13	10	9	11	7
1104511	63	77	14	15	10	9	11	4
1104611	63	77	15	14	10	6	9	6
1104721	65	82	15	11	12	8	9	8
1104821	46	31	9	8	9	6	6	7
1104921	32	10	9	10	5	3	5	3
1105011	66	85	15	17	9	7	10	6
1105111	46	31	9	9	6	7	6	7
1105211	65	82	15	13	12	9	10	6
1105311	57	60	13	11	7	6	7	6
1105421	57	60	12	14	10	6	7	6

TABLE 38--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
1105521	64	79	13	14	10	8	9	7
1105611	54	52	10	13	8	7	7	5
1105711	69	91	15	15	10	8	10	7
1105821	72	95	14	18	12	10	8	8
1105921	48	36	9	9	10	8	6	6
1106021	59	66	13	14	8	6	9	6
1106111	66	85	12	18	11	8	6	8
1106211	65	82	16	15	11	8	8	5
1106311	55	55	11	12	9	8	6	5
1106411	62	74	14	16	8	10	8	6
1106521	47	33	8	10	7	9	4	6
1106621	55	41	12	10	8	8	5	6
1106711	69	91	14	16	11	8	11	6
1106811	66	85	14	15	10	6	11	4
1106921	70	93	14	16	11	10	10	7
1107021	75	98	17	15	12	10	11	8
1107111	66	85	16	13	10	10	9	8
1107211	77	99	16	17	12	11	11	8
1107311	28	6	5	5	4	5	4	3
107411	59	66	14	14	9	8	8	7
1107521	14	1	4	4	5	1	2	1
1107611	55	55	13	10	8	6	7	8
1107721	70	93	16	16	10	10	9	7
1107821	62	74	13	17	12	7	9	4
1107911	64	79	13	13	10	7	9	8
1108011	66	85	11	15	11	10	10	7
1108121	57	60	10	15	10	9	8	6
1108221	66	85	13	13	12	11	11	7
1108311	68	89	13	15	10	10	7	8

TABLE 38--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
1108411	65	82	10	15	10	11	8	7
1108511	62	74	10	16	10	11	6	5
1108621	61	71	14	16	7	9	7	6
1108721	73	96	17	17	11	9	9	8
1108811	46	31	9	11	9	6	6	5
1108921	51	44	13	11	10	4	6	3
1109021	64	79	11	16	11	7	7	6
1109221	56	57	13	15	9	7	7	6
1109321	48	36	9	10	5	9	7	6
1109421	64	79	14	14	10	9	10	6
1109511	41	21	8	9	8	5	6	3
1109621	53	49	8	9	11	8	8	6
1109711	33	11	8	8	5	5	1	5
1109821	31	9	5	4	8	4	4	3
1109911	68	89	13	16	11	10	7	8
1110011	67	87	12	17	10	9	8	7
1110111	49	38	9	9	6	5	5	6
1110221	58	63	11	15	9	8	6	7
1110311	43	24	9	10	8	5	5	5
1110421	61	71	14	14	9	10	8	8
1110521	75	98	16	16	11	11	10	8
1110611	68	89	13	14	12	11	10	8
1110711	58	63	11	12	9	6	8	7
1110811	54	52	14	10	9	5	8	6
1110911	65	82	14	16	11	10	8	6
1111011	69	91	15	17	11	11	9	8
1111121	58	63	14	11	9	9	7	6
1111211	65	82	13	15	12	8	10	5
1111321	62	74	9	13	11	9	6	6

TABLE 38--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
1111411	46	31	9	11	10	6	5	3
1111521	66	85	13	14	10	10	10	7
1111611	62	74	14	11	11	10	7	7
1111721	68	89	15	16	11	9	7	8
1111811	47	33	11	8	7	5	6	4
1111921	66	85	15	15	9	7	8	7
1112011	59	66	12	15	11	8	7	5
1112121	61	71	12	17	9	9	8	6
1112211	41	21	10	11	7	5	5	5
1112321	54	52	10	15	9	6	6	6
1112411	39	18	9	6	3	3	5	3
1112521	43	24	10	8	5	5	9	3
1112621	67	87	17	15	11	9	10	8

TABLE 39
TEST RESULTS OF THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE
HIGH SCHOOL, GRADE 12

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
1200121	38	17	7	9	5	6	6	5
1200211	61	71	14	14	10	9	7	6
1200321	69	91	18	16	11	8	8	8
1200421	72	95	16	16	11	10	9	7
1200521	68	89	16	15	11	10	11	6
1200621	74	97	18	16	9	11	10	7
1200721	50	41	12	9	7	6	6	2
1200821	71	94	14	15	11	11	8	7
1200911	68	89	16	17	10	8	9	7
1201011	62	74	14	15	9	7	7	7
1201121	68	89	16	15	12	10	9	8
1201221	47	33	10	9	10	7	5	6
1201321	70	93	14	16	12	9	8	6
1201421	33	11	8	5	7	4	4	6
1201521	37	15	9	7	5	2	5	2
1201611	47	33	9	12	7	9	6	3
1201721	65	98	17	15	11	11	9	8
1201811	65	82	13	17	11	10	7	6
1201911	49	38	8	11	8	8	4	5
1202021	35	13	7	8	5	5	4	3
1202121	58	63	10	11	12	7	7	8
1202221	54	52	9	11	8	7	7	5
1202321	39	18	8	6	6	3	7	4
1202421	56	57	11	14	9	6	7	8
1202521	66	85	15	14	12	8	7	8

TABLE 39--Continued

Student ID No.	Raw Score	Percentile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
1202621	68	89	16	14	11	10	9	8
1202721	63	77	13	15	11	7	6	6
1202821	64	79	17	15	10	9	8	7
1202921	67	87	14	15	12	9	9	8
1203021	72	95	14	16	12	10	9	8
1203111	60	69	15	15	10	5	8	5
1203211	66	85	12	11	11	8	9	8
1203321	66	85	15	14	11	10	8	8
1203411	43	24	12	8	6	9	3	5
1203511	66	85	7	17	11	6	7	5
1203611	68	89	15	16	10	9	9	7
1203721	64	79	15	12	12	10	6	8
1203811	52	46	13	11	8	5	6	7
1203921	55	55	12	12	7	8	7	5
1204011	75	98	12	17	12	8	10	7
1204111	68	89	17	16	10	9	9	6
1204211	75	98	14	18	11	10	9	8
1204311	79	99	17	17	11	12	11	8
1204421	62	74	18	13	9	9	6	7
1204521	65	83	11	12	11	11	8	8
1204621	61	71	13	13	10	7	8	4
1204721	57	60	14	12	11	7	5	8
1204821	45	29	12	12	7	7	5	5
1204911	64	79	8	14	10	9	7	6
1204921	65	82	12	15	7	8	8	6
1205021	70	93	15	16	11	10	10	8
1205121	42	23	15	10	7	6	8	5

TABLE 40
TEST RESULTS OF THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE
HIGH SCHOOL, HEARING-IMPAIRED

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Factor Six
0920121	60	69	12	15	9	8	9	8
0920210	72	95	16	17	11	9	11	8
0920320	53	49	12	14	8	5	7	7
0920420	52	46	12	12	6	5	7	6
0920510	61	71	14	13	9	7	10	7
0920610	28	6	10	6	5	1	6	3
0920710	67	87	14	17	9	8	10	7
0920820	54	52	11	16	6	5	8	6
0920920	58	63	12	12	10	5	7	7
0921010	57	60	11	11	9	7	7	6
0921110	67	87	13	15	12	9	9	8
0921210	72	95	17	15	11	9	11	8
0921320	58	63	10	14	10	7	8	7
0921420	33	11	5	8	4	5	5	4
0921510	64	79	15	16	11	6	9	8
0921620	53	49	11	12	7	6	5	7
0921710	47	33	13	9	6	4	9	6
0921810	68	89	15	14	11	11	10	8
0921920	60	69	12	15	9	8	9	8
0922010	61	71	14	12	9	7	10	7
0922110	53	49	12	12	9	7	6	7
0922220	59	66	13	16	7	6	9	6
1020110	59	66	11	13	7	8	7	9
1020210	65	82	13	15	9	11	9	7
1020320	58	63	11	13	8	8	6	7

TABLE 40--Continued

Student ID No.	Raw Score	Percen- tile	Factor One	Factor Two	Factor Thres	Factor Four	Factor Five	Factor Six
1020410	45	29	10	8	7	9	6	6
1020510	41	21	11	7	6	5	7	6
1020621	50	41	10	14	7	7	7	8
1020710	56	57	10	12	8	8	8	5
1020810	62	74	13	11	10	9	7	7
1020910	65	82	16	14	9	9	10	8
1021020	45	29	7	11	5	5	6	7
1120110	64	79	15	13	10	9	8	7
1120210	61	71	12	14	11	6	8	8
1120310	63	77	14	14	10	10	7	8
1120420	69	91	15	14	11	10	9	8
1120510	30	8	9	6	4	3	3	6
1120620	57	60	11	13	8	8	8	6
1220110	55	55	11	13	10	7	7	7
1220210	53	49	11	12	9	7	9	6
1220310	61	71	12	12	9	9	9	8

SELECTED BIBLIOGRAPHY

SELECTED BIBLIOGRAPHY

- Allport, Gordon W. Personality: A Psychological Interpretation. New York: Holt, Reinhart, and Winston, Inc., 1937.
- Ambrose, Anthony. Stimulation in Early Infancy. New York: Academic Press, Inc., 1969.
- Arnold, Magda B., and Gasson, John A. The Human Person: An Approach to and Integral Theory of Personality. New York: Ronald Press Company, 1954.
- Ausubel, David P.; Montemayor, Raymond; and Svajian, Pergrouhi. Theory and Problems of Adolescent Development. New York: Grune and Stratton, 1977.
- Barrett, Thomas C., and Tinsley, Howard E. A. "Vocational Self-Concept Crystalization and Vocational Indecision." Journal of Counseling Psychology 24, no. 4 (1977):301-307.
- Baumrind, Diana. "Parental Control and Parental Love." Children 12, no. 7 (1965):230-245.
- Baughman, E. Earl, and Welsh, George Schlager. Personality: A Behavioral Science. Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1962.
- Bender, Ruth E. The Conquest of Deafness. Cleveland: Press of Case Western Reserve University, 1970.
- Benjamins, John. "Changes in Performance in Relation to Influences upon Self-Concept." Journal of Abnormal Social Psychology 45, no. 5 (1950): 473-80.
- Boatner, Maxine Tull. Voice of the Deaf: A Biography of Edward Miner Gallaudet. Washington, D.C.: Public Affairs Press, 1959.
- Bolton, Brian. Psychology of Deafness for Rehabilitation Counselors. Baltimore: University Park Press, 1976.

- Boone, Daniel. "Modification of the Voices of Deaf Children." The Volta Review 68 (November 1968): 686-92.
- Briggs, Dorothy Corkville. Your Child's Self-Esteem. New York: Doubleday & Company, Inc., 1970.
- Brookover, Wilbur B.; Erickson, Edsel L.; and Joiner, Lee M. Relationship of Self-Concept to Achievement in High School. Cooperative Research Program of the Office of Education; United States Department of Health, Education and Welfare. Human Learning Research Institute, Michigan State University, East Lansing, Michigan, February, 1967.
- Brunschwig, Lily. A Study of Some Personality Aspects of Deaf Children. New York: Teachers College, Columbia University, 1936.
- Burgoyne, Peter H. "Concepts of Present Self, Expected Self, and Ideal Self in Vocational Preferences and Expectations." Journal of Vocational Behavior 14, no. 2 (1979):134-44.
- Buros, Oscar Kirisen. The Seventh Mental Measurement Yearbook. Highland Park, New Jersey: Gryphon Press, 1972.
- Campbell, Donald T., and Stanley, Julian C. Experimental and Quasi-Experimental Designs for Research. Chicago: Rand McNally College Publishing Company, 1963.
- Combs, Arthur W.; Avila, Donald L.; and Purkey, William W. Helping Relationships. Boston: Allyn and Bacon, Inc., 1973.
- Coopersmith, Stanley. The Antecedents of Self-Esteem. San Francisco: W. H. Freeman and Company, 1967.
- _____. "A Method of Determining Types of Self-Esteem." Journal of Abnormal and Social Psychology 58, no. 4 (1959):87-94.
- Cosper, Charles H. "An Oral Adult Speaks: On Activities of Teenage Children." The Volta Review 73 (April 1971):240-42.
- Gofey, Charles H. Human Nature and the Social Order. Chicago: Charles Scribner's Sons, 1922.

- Croft, John C. "A Look at the Future of a Hearing-Impaired Child of Today." The Volta Review 76 (February 1974):115-22.
- Cunningham, Dean. "Testing Modified Transparencies for Teaching the Deaf with Overhead Projectors." The Volta Review 71 (March 1969):174-81.
- Dobson, Russell; Silvertooth, C. Lindel; and Dobson, Judith Shelton. "Comparison of Achievement, Self-Concept, Perceived Environment, and Attendance of Bused and Nonbused White Fifth and Sixth-Grade Children." The Humanist Educator 15 (March 1977):140-47.
- Doleman, J. C. Personality Dynamics and Effective Behavior. Chicago: Scott, Foresman and Company, 1960.
- Drever, James. A Dictionary of Psychology. Baltimore: Penguin Books, Inc., 1952.
- Eisen, Marvin, and Montemayor, Raymond. "The Development of Self-Concept from Childhood to Adolescence." Developmental Psychology 13, no. 4 (1977):314-19.
- Elkind, D. A Sympathetic Understanding of the Child: Six to Sixteen. Boston: Allyn and Bacon, 1971.
- Erikson, Erik H. Childhood and Society. New York: W. W. Norton and Company, Inc., 1950.
- _____. Identity: Youth and Crisis. New York: W. W. Norton and Company, Inc., 1968.
- Ewing, Alexander. New Opportunities for Deaf Children. London: University of London Press, 1961.
- Fellendorf, George W. "Guidelines to New Model Preschool Programs." The Volta Review 62 (February 1969): 59-69.
- Felkner, Donald W. Building Self-Concepts. Minneapolis, Minnesota: Burgess Publishing Company, 1974.
- Ferguson, George A. Statistical Analysis in Psychology and Education. New York: McGraw-Hill Book Company, 1976.
- Finch, Alton C. "Self-Image--A Life Tool Element of Career Education." Business Education Forum 32 (March 1978):3.

- Flora, Roslind Reed. "The Effect of Self-Concept upon Adolescents' Communication with Parents." The Journal of School Health 23 (February 1978):56.
- Froom, Erich. "Selfishness and Self-Love." Psychiatry 2, no. 5 (January 1939): 213-224.
- Freud, Anna, and Burlingham, Dorothy T. War and Children. New York: Ernest Willard, 1943.
- Freud, Sigmund. A General Introduction to Psychoanalysis. Garden City, New York: Garden City Publishing Company, 1943.
- Frick, Elizabeth. "Adjusting to Integration: Some Difficulties Hearing-Impaired Children Have in Public Schools." The Volta Review 75 (January 1973): 36-46.
- Furth, Hans G. Deafness and Learning. Belmont, California: Wadsworth Publishing Company, Inc., 1973.
- Gallagher, James J. "Organization and Special Education." Exceptional Children 34 (March 1968):485-91.
- Garrison, Wayne M.; Tesch, Stephanie; and DeCaro, Patricia. "An Assessment of Self-Concept Levels among Post-Secondary Deaf Adolescents." American Annals of the Deaf 123 (December 1978):317-26.
- Garwood, S. Gray. "Effects of Level of Cognitive Development on Self-Concept Changes in Young Adolescents." U.S. Department of Health, Education and Welfare; National Institute of Education, 1978.
- Gergen, Kenneth J. The Concept of Self. New York: Holt, Reinhart, and Winston, Inc., 1971.
- Germain, Robert B. "Self-Concept and Self-Esteem Reexamined." Psychology in the Schools 15 (July 1978): 386-89.
- Giangreco, C. Joseph, and Giangreco, Marianne Ranson. The Education of the Hearing-Impaired. Springfield, Illinois: Charles C. Thomas, 1970.
- Gordon, Jesse E. Personality and Behavior. New York: MacMillan Company, 1963.

- Greenhaus, Jeffery H. "Self-Esteem as an Influence on Occupational Choice and Occupational Satisfaction." Journal of Vocational Behavior 1, no. 1 (1971): 75-83.
- Habbe, Stephen. Personality Adjustments of Adolescent Boys with Hearing-Impairment. New York: Teachers College, Columbia, University, 1936.
- Hamachek, Don E. Encounters with Self. New York: Holt, Rinehart, and Winston, Inc., 1971.
- Hansen, James C., and Maynard, Peter E. Youth: Self-Concept and Behavior. Counseling with Youth Series. Edited by Herman Peters. Columbus, Ohio: Merrill, 1974.
- Hardy, Richard W., and Cull, John G. Educational and Psychological Aspects of Deafness. Springfield, Illinois: Charles C. Thomas, 1974.
- Hare, Charles M. "Dissecting Self-Esteem." Human Behavior 7, no. 3 (Fall, 1977).
- Harris, Charles M. "Scholastic Self-Concept in Early and Middle Adolescents." Adolescence 6 (February 1971): 269-78.
- Hnation, Gail, and Reneu, John P. "Evoked Response Audiology." Central Wisconsin Colony and Training School Research Proceedings. Monograph Supplement, Vol. 1, April 1968.
- Horney, Karen. Neurosis and Human Growth. New York: Norton, 1950.
- _____. The Neurotic Personality of Our Time. New York: Norton, 1936.
- Houck, Cherry, and Houck, Ernest. "Investigation of the Relationships between Academic Achievement and Self-Concept in Children with Specific Learning Disabilities." Paper presented to the Annual International Convention, Council for Exceptional Children, Chicago, Illinois, April 1976.
- Howard, Douglas P.; Stainbeck, Susan B.; and Stainbeck, William. "The Relationship between Self-Concept and Peer Acceptance." Journal of School Health 42 (February 1972): 109-10.

- Howe, Harold, II. "The Nation's Commitment for Education of Handicapped Children." Exceptional Children 34 (March 1968):479-84.
- Hurlock, Elizabeth B. Adolescent Development. New York: Holt, Rinehart and Winston, Inc., 1967.
- James, William. The Principles of Psychology. New York: Holt, 1890.
- Jersild, Arthur T. The Psychology of Adolescence. New York: MacMillan Company, 1957.
- Judd, Larry R., and Smith, Carolyn B. "The Relationship of Age, Educational Classification, Sex, and Grade to Self-Concept and Ideal Self-Concept in a Basic Speech Course." Communication Education 26 (November 1977):231-38.
- Katz, Lee; Mathias, Steve E, III; and Merrill, Edward C., Jr. The Deaf Child in the Public School. Danville, Illinois: Interstate Publishers & Printers, Inc., 1974.
- Katz, Lillian G. "Building Your Child's Self-Esteem." Parents, July 1979, p. 82.
- Kelly, George A. A Theory of Personality. New York: The Norton Company, Inc., 1963.
- Kennedy, Patricia, et al. "Results of a Follow-up Sociometric Research Study and Summary of Longitude and Cross-Sectional Data of Hearing-Impaired Children Enrolled in Regular Classrooms." Paper presented at Annual International Convention, Council for Exceptional Children, Chicago, Illinois, April 1976.
- Kennedy, Patricia, and Bruininks, Robert H. "Social Status of Hearing-Impaired Children in Regular Classrooms." Exceptional Children 34 (February 1974):336-42.
- Kerlinger, Fred N. Foundations of Behavioral Research. New York: Holt, Rinehart, and Winston, Inc., 1973.
- Kiester, Dorothy J. Who Am I? The Development of Self-Concept. Durham, North Carolina: Learning Institute of North Carolina, 1973.
- Kilpatrick, Irene D. "Mainstreaming the Hearing-Impaired Child: Critical Values." United States Department of Health, Education, and Welfare, May 11, 1976.

- Kilpatrick, William. Identity and Intimacy. New York: Dell Publishing Company, Inc., 1975.
- Kirk, Samuel A. "The National Advisory Committee on Handicapped Children." Exceptional Children 34 (March 1968):481-84.
- Kizzar, Janet, and Hagedorn, Judy. Search for Acceptance: The Adolescent and Self-Esteem. Chicago: Nelson-Hall, 1979.
- Kleinke, Chris L. Self-Perception: The Psychology of Personal Awareness. San Francisco: W. H. Freeman and Company, 1978.
- Knox, Laura L., and McConnell, Freeman. "Helping Parents to Help Deaf Infants." Children, September-October 1968, p. 67.
- Kelly, George A. A Theory of Personality. New York: W. W. Norton and Company, Inc., 1963.
- Labenne, Wallace D., and Greene, Bert I. Educational Implications of Self-Concept Theory. Pacific Palisades, California: Goodyear Publishing Company, 1969.
- LaPorta, Rita Ann, et al. Mainstreaming Preschoolers: Children with Hearing-Impairment. United States Department of Health, Education and Welfare; Office of Human Development Services, Administration for Children, Youth and Families, 1971.
- Leonard, Russel L.; Walsh, W. Bruce; and Osipow, Samuel H. "Self-Esteem, Self-Consistency, and Second Vocational Choice." Journal of Counseling Psychology 20, no. 1 (1973):91-93.
- Lerrman, Alan M., and Guifoyle, George R. The Development of Pre-Vocational Behavior in Deaf Adolescents. New York: Teachers College, Columbia University, 1970.
- Lewin, Kurt. Principles of Topological Psychology. New York: McGraw-Hill Book Company, 1936.
- Liben, Lynn S. Deaf Children: Developmental Perspectives. New York: John Wiley & Sons, 1978.
- London, Harvey, and Exner, John E., Jr. Dimensions of Personality. New York: John Wiley & Sons, 1978.

- Long, John A. Motor Abilities of Deaf Children. New York: Teachers College, Columbia University, 1932.
- Lopez, Elisa M., and Greenhaus, Jeffery H. "Self-Esteem, Race and Job Satisfaction." Journal of Vocational Behavior 13, no. 1 (1978):75-83.
- Lugo, James O., and Hershey, Gerald L. Human Development: A Psychology, Biological, and Sociological Approach to the Life Span. New York: MacMillan Publishing Company, Inc., 1979.
- Lundholm, Gelge, "Reflection Upon the Nature of the Psychological Self." Psychological Review 47 (1940):110-27.
- Lydell, Ruth G. "Adolescent and Adult Self-Esteem as Related to Cultural Values." Adolescence 7 (Spring 1973):341-48.
- Maltz, Maxwell. The magic Power of Self-Image Psychology. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1964.
- Manaster, Guy J. Adolescent Development and the Life Tasks. Boston: Allyn and Bacon, Inc., 1977.
- Manaster, Guy J.; Saddler, Charles D.; and Wukasch, Linda. "The Ideal Self and Cognitive Development in Adolescence." Adolescence 7, no. 48 (Winter, 1977):38-43.
- Martin, Edwin W., Jr. "Breakthrough for the Handicapped: Legislative History." Exceptional Children 34 (March, 1970):493-503.
- McElroy, Dierde, and Bernstein, H. William. "The Role of Parents in Development of Self-Esteem in a Hearing-Impaired Child." The Volta Review 78 (September 1976):213-23.
- McGee, Donald I. "Critical Variables in the Mainstreaming of Hearing-Impaired Children." Paper presented at the Annual International Convention, Council for Exceptional Children, Chicago, Illinois, April, 1976.
- Mead, George H. Mind, Self, and Society. Chicago: University of Chicago Press, 1934.

- Meadow, Kathryn. "Personality and Social Development of a Deaf Person." Psychology of Deafness for Rehabilitation Counselors. Edited by Brian Bolton. Baltimore: University Park Press, 1976.
- Miller, John K.; Munson, Harold L.; Gargantile, Carol W.; and Huang, Jerry. "Philosophical Consideration in Maintstreaming the Hearing-Impaired in Occupational Programs: An Empirically Based Discussion of Goals and Objectives." Paper prepared for the 1978 American Educational Research Association, Toronto, Canada, 1978.
- Minchin, Patricia. The Middle Years of Childhood. Monterrey, California: Brooks-Cole Publishing Company, 1977.
- Mindel, Eugene D., and McCay, Vernon. They Grow in Silence. Silver Spring, Maryland: National Association of the Deaf, 1971.
- Mischel, Theodore. The Self: Psychological and Philosophical Issues. Bristol, England: Western Printing Services Limited, 1977.
- Montemayor, Raymond, and Eisen, Marvin. "The Development of Self-Conceptions from Childhood to Adolescence." Development Psychology 13, no. 4 (1959): 314-19.
- Moore, Donald F. Educating the Deaf: Psychology, Principles, and Practices. Dallas: Houghton Mifflin Company, 1978.
- Munson, Harold L. Foundations of Developmental Guidance. Boston: Allyn and Bacon, Inc., 1971.
- Murphy, Gordon. Personality: A Biosocial Approach to Origins and Structures. New York: Harper and Row Publishers, 1947.
- Murray, Ellen, and Wellman, Barry. "Success and Self-Conception: The Impact of Academic Grades on the Student Role Identities of Black and White Adolescents." Paper presented at the annual meeting of American Sociological Association, Denver, Colorado, August, 1971.
- Muus, Rolf E. Theories of Adolescence. New York: Random House, 1975.

Myers, Gerald E. Self: An Introduction to Philosophical Psychology. New York: Pegasus, 1969.

Myklebust, Helmer R. "The Deaf Child with Other Handicaps." Annals of the Deaf 103, no. 4 (September 1958):496-509.

_____. The Psychology of Deafness. New York: Grune and Stratton, 1964.

_____. Your Deaf Child. Springfield, Illinois: Charles C. Thomas, 1950.

Noblitt, George W. "The Adolescent Experience and Adult Success: A Non-metropolitan Investigation." Paper prepared for the Rural Sociology Section of the Southern Association of Agriculture Scientists, Memphis, Tennessee, February, 1974.

Okun, Morris A., and Sasfy, Joseph H. "Adolescence, the Self-Concept, and Formal Operations." Adolescence 12 (Fall 1977):506-10.

O'Neill, John J. The Hard of Hearing. Englewood Cliffs, New Jersey: Prentice-Hall, 1964.

Oyer, Herbert J., and Frankman, Judith P. The Aural Rehabilitation Process. New York: Holt, Rinehart, and Winston, 1975.

Piers, Ellen V. The Piers-Harris Children's Self-Concept Scale. Nashville, Tennessee: Counselor Recordings and Tests, Research Monograph, 1977.

_____. The Piers-Harris Children's Self-Concept Scale Manual. Nashville, Tennessee: Counselor Recordings and Tests, 1969.

Protinsky, Howard O. "Eriksonian Ego Identity in Adolescents." Adolescence 10 (February 1975):428-32.

Purkey, William Watson. Self-Concept and School Achievement. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970.

Resnick, Harvey; Fauble, Marianne Leeson; and Osipow, Samuel H. "Vocational Crystallization and Self-Esteem in College Students." Journal of Counseling Psychology 17, no. 5 (1970):405-67.

- Robinson, John P., and Shaver, Phillip R. Measures of Social Psychological Attitudes. Institute of Social Research, University of Michigan, Ann Arbor, Michigan, 1976.
- Robinson, Luther D. Sound Minds in a Soundless World. Washington, D.C.: U.S. Department of Health, Education, and Welfare, National Institute of Mental Health, 1973.
- Rodda, Michael. The Hearing-Impaired School Leaver. London: University of London Press, Ltd., 1970.
- Rogers, Carl R. Client-Centered Therapy: Its Current Practice, Implications and Theory. Boston: Houghton Mifflin Company, 1951.
- Rogers, Carl R.; Smith, Monte D.; and Coleman, J. Michael. "Social Comparison in the Classroom: The Relationship between Academic Achievement and Self-Concept." Journal of Educational Psychology 70, no. 1 (1978):50-57.
- Rosenberg, Barbara Strassberg, and Gaier, Eugene L. "The Self-Concept of the Adolescent with Learning Disabilities." Adolescence 12 (Winter 1977):301-308.
- Ross, Mark, and Giolas, Thomas G. Auditory Management of Hearing Children. Baltimore: University Park Press, 1978.
- Schiffler, Nancy; Lynch-Sauer, Judith; and Nadelman, Lorraine. "Relationship between Self-Concept and Classroom Behavior in Two Informal Elementary Classrooms." Journal of Educational Psychology 69 (August 1977):349-59.
- Schipper, David James. Self-Concept Differences between Early, Late, and Non-Boarding Missionary Children. Unpublished dissertation, Rosemead, California, 1977.
- Schwarzrock, Shirley, and Wrenn, C. Gilbert. Do I Know the "Me" Others See? Circle Pines, Minnesota: American Guidance Services, Inc., 1973.
- Shavelson, Richard J.; Huber, Judith J.; and Stanton, George C. "Self-Concept: Validation of Construct Interpretations." Review of Educational Research 46 (Summer 1976):407-41.

- Shephard, Lorrie A. "Self-Acceptance: The Evaluative Component of the Self-Concept." American Educational Research Journal 16 (Spring 1979): 139-60.
- Shore, Irwin. "The Deaf Child from 2-5: Evaluation and Educational Planning." In Report on the Proceedings of the International Congress of the Education of the Deaf, Washington, D.C.: U.S. Government Printing Office, 1964, pp. 596-99.
- Sievert, Norman W. "The Role of the Self-Concept in Determining an Adolescent's Occupational Choice." Journal of Industrial Education 9, no. 3 (Spring 1972): 58-67.
- Silver, Nancy. "Recommendations for a Measure of Self-Concept." Unpublished paper, October 19, 1965, from ERIC Files.
- Simmons, Audrey Ann. "Language Growth for the Prenursery Deaf Child." The Volta Review 8 (March 1966): 201-205.
- Simmons-Martin, Audrey, and Calvert, Donald R. Parent-Infant Intervention. New York: Grune & Stratton, Inc., 1979.
- Skolnick, Arlene. Rethinking Childhood Perspectives on Development and Society. Boston, Little, Brown, and Company, 1976.
- Snygg, David, and Combs, Arthur W. Individual Behavior. New York: Harper and Row Publishers, 1949.
- _____. "Phenomenal Self." Theories of Personality. Edited by Hall and Lindzey. New York: John Wiley and Sons, Inc., 1963.
- Spitz, Renne A. A Genetic Field Theory of Ego Formation. New York: International Universities Press, Inc., 1959.
- Stern, Daniel. The First Relationship: Mother and Child. Cambridge, Massachusetts: Harvard University Press, 1977.
- Strang, Louise; Smith, Monte D.; and Rogers, Carl M. "Social Comparison, Multiple Reference Groups, and the Self-Concepts of Academically Handicapped Children before and after Mainstreaming." Journal of Educational Psychology 70, no. 4 (1978): 487-97.

- Streng, Alice, et al. Hearing Therapy for Children. New York: Grune and Stratton, 1958.
- Sullivan, Harry Stack. Conceptions in Modern Psychiatry. Washington, D.C.: Alanson White Psychiatric Foundation, 1947.
- _____. The Interpersonal Theory of Psychiatry. New York: Norton Press, 1953.
- Symonds, Phillip The Ego and Self. New York: Appleton-Century-Crofts, 1951.
- Taub, Marvin. "Self-Concepts of Parents and Children." Home Economics Research Journal 3 (December 1974): 30-36.
- Thomas, M. Angele. "Preschool." A Report on the Proceedings of the International Congress on the Education of the Deaf. Washington, D.C.: U.S. Government Printing Office, 1964, pp. 483-93.
- Tracy, Mrs. Spencer. "Most Productive Environments for Mentally Retarded Individuals." Journal of Research and Development in Education 13, no 4 (1980): 206-9.
- Upshall, C. C. Day Schools Versus Institutions for the Deaf. New York: Teachers College, Columbia University, 1929.
- Van Pelt, Nancy. The Complete Parent. Nashville, Tennessee: Southern Publishing Association, 1976.
- Vogel, Jerry. "Learning and Self-Esteem: You Can't Have One without the Other." Learning 2 (March 1974): 68-72.
- Voice, Elanor. "Speech in the Preschool for the Deaf." The Volta Review 60 (November 1958): 478-81.
- Wagner, Maurice E. The Sensation of Being Somebody. Grand Rapids, Michigan: Zondervan Publishing House, 1975.
- Webster, Murray, and Sobieszek, Barbara. Sources of Self-Evaluation. New York: John Wiley and Sons, 1974.
- Weinstein, Grace W. "Nursey School with a Difference." Parent's Magazine, November 1968, pp. 43-48.

- Welles, Henry Hunter. The Measurement of Certain Aspects of Personality among Hard-of-Hearing Adults. New York: Teachers College, Columbia University, 1932.
- Wilkins, William H. R. The Youth Years. Valley Forge, Pennsylvania: Judson Press, 1967.
- Woolsey, Raymond H. Planning the Ideal Home. Washington, D.C.: Review and Herald Publishing Association, 1975.
- Wylie, Ruth C. The Self-Concept. A Critical Survey of Pertinent Research Literature. Lincoln, Nebraska: University of Nebraska Press, 1961.
- _____. The Self-Concept. Lincoln Nebraska: University of Nebraska Press, 1974.
- Yale, Caroline A. Years of Building. New York: Dial Press, 1931.
- Yamamoto, Kaoru. The Child and His Image. Self-Concept in the Early Years. New York: Houghton Mifflin Company, 1972.

VITA

Name: Wayne K. Wright

Date and Place of Birth: May 23, 1937; Sheridan, Indiana

Undergraduate and Graduate Schools Attended:

Emmanuel Missionary College, Berrien Springs,
Michigan
Andrews University, Berrien Springs, Michigan
Indiana University at South Bend, South Bend,
Indiana

Degrees Awarded:

1959 Bachelor of Arts, Emmanuel Missionary
College
1961 Master of Arts in Teaching, Andrews
University
1975 Master of Arts Andrews University
1981 Doctor of Education, Andrews University

Experience:

1960-63 Sixth Grade Teacher, Fairplain Public
Schools, Benton Harbor, Michigan
1963-67 Junior High School Teacher, Fairplain
Public Schools, Benton Harbor, Michigan
1967-76 High School Teacher, Benton Harbor High
School, Benton Harbor, Michigan
1966-76 Teacher, Benton Harbor Summer High
School, Benton Harbor, Michigan
1966-71 Teacher, Benton Harbor Evening High
School, Benton Harbor, Michigan
1971-72 Assistant Director, Benton Harbor
Evening High School, Benton Harbor,
Michigan

- 1975-77 Director, Berrien Springs Evening High School, Berrien Springs, Michigan
- 1976-81 Counselor, Berrien Springs High School, Berrien Springs, Michigan