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Self-Esteem Among Integrated
Partially Integrated, and Non Integrated
Hearing Impaired Children and Adolescents

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ABSTRACT

SELF-ESTEEM AMONG INTEGRATED,
PARTIALLY INTEGRATED, AND NON INTEGRATED
HEARING-IMPAIRED CHILDREN AND ADOLESCENTS

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The self-esteem of deaf students who were integrated to varying degrees with hearing students at school was examined. Hearing students served as a control group. Self-esteem was measured with the Coopersmith Self-Esteem Inventory, which was revised to accommodate the language and reading skills of the deaf students. The subjects were 41 deaf children (8 to 13 years of age) and adolescents (14 to 19 years of age) and 20 hearing children and adolescents. All of the deaf subjects were profoundly and prelingually deaf. None of the subjects attended residential schools and none had learning disabilities or physical handicaps (aside from deafness). The revised version of the Coopersmith Self-Esteem Inventory appears to be a useful measure of self-esteem for deaf students. The significant results were that (1) partially integrated deaf adolescents had lower levels of self-esteem than did non integrated deaf adolescents, and (2) both non integrated and integrated deaf children had higher scores on

the peer subscale of the Self-Esteem Inventory than did the hearing children. Given the importance of self-esteem for mental health, the lower self-esteem found among the partially integrated adolescents is especially relevant for integrated educational programs.

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Two of the most prominent approaches in deaf education are Oralism and Total Communication. While Oral Schools teach their students to communicate solely through spoken language, Total Communication schools teach their students both spoken and sign language. These two approaches are sometimes further differentiated by the environment in which the students are taught. Oral schools often try to integrate their students with hearing students, while total communication students usually remain in special schools for the deaf (Northern & Downs, 1978). The effectiveness of the two approaches is often measured by the relative linguistic and academic achievements of their respective students (Meadow, 1975). However, there is a distinct absence of information as to the effect of integrated versus non integrated environments on the emotional adjustment of deaf students.

Rosenberg (1979) found that minority group members who are integrated have low self-esteem whereas non integrated minority group members have high self-esteem. High self-esteem is widely agreed to be essential to mental health (Coopersmith, 1967; Jahoda, 1958; Meadow, 1975; Rosenberg, 1979). Thus, the impact of integration on the self-esteem of deaf students is an issue that warrants attention.

Only a handful of studies have examined the self-esteem of deaf individuals, and only one of these has directly addressed the issue of the effect of integration on the self-esteem of deaf students. The majority of these past studies have been methodologically flawed in that they did not control variables such as age and school setting which have been shown to affect the self-esteem of deaf individuals (Guterman, in press). As well, most of these studies measured self-esteem with tests which required reading and language skills beyond the ability of the deaf respondents (Garrison, Tesch, & De Caro, 1978; Guterman, in press).

The purpose of this study was to examine the self-esteem of deaf children and adolescents integrated to varying degrees with hearing children and adolescents. This study was designed to correct many of the methodological flaws found in earlier work. A self-esteem measure commonly used with hearing individuals was revised to meet the special needs of deaf individuals.

The background which follows, elaborates on the significance of self-esteem for mental health. It is then divided into four sections. The first section describes the antecedents of self-esteem according to different theorists. The second section discusses the

shift in importance of different sources of self-esteem as a child matures. The third section outlines the predictions which self-esteem theories make about the self-esteem of minority groups. The fourth section reviews empirical studies on the self-esteem of deaf individuals and the degree to which these studies support the theories presented in the first three sections.

Background

The self-concept is the totality of the individual's thoughts and feelings about himself (Rosenberg, 1979).

Self-esteem is the evaluative component of the self-concept (Coopersmith, 1967; Gergen, 1971; Rosenberg, 1979).

Self-esteem indicates the extent to which individuals believe themselves to be capable, significant and successful (Coopersmith, 1967).

High self-esteem is widely agreed to be essential to mental health (Coopersmith, 1967; Jahoda, 1958; Meadow, 1975; Rosenberg, 1979). Studies have shown that low self-esteem is a distinguishing feature of depression and anxiety (Beck, 1967; Coopersmith, 1967; Luck & Heiss, 1972; Moyal, 1977; Rosenberg, 1979). For example, a study of 5,000 high school students showed that 80% of those with low self-esteem and only 4% of those with high self-esteem were highly depressed according to a scale of depressive affect. Furthermore, 69% of those with low self-esteem showed a large number of psychophysiological indicators of anxiety as compared to only 19% of those with high self-esteem (Rosenberg, 1979). Clinicians observe that persons with high self-esteem have self-respect and are highly satisfied with their lives. These persons move directly and realistically toward their personal goals

and effectively meet environmental demands. By contrast, persons with low self-esteem are lacking in self-respect and harbour feelings of inadequacy and insignificance (Coopersmith, 1967; Crandall, 1973; Rosenberg, 1979).

Fromm (1939) hypothesizes that persons with low self-esteem can neither give nor receive love, fearing that the exposure that comes with intimacy will reveal their inadequacies and cause them to be rejected. Many theorists believe that the need to enhance and protect one's self-esteem is a fundamental motivation guiding human behavior (Coopersmith, 1967; Gergen, 1971; Kaplan, 1975; Snygg, & Combs, 1949).

Theories of Self-Esteem

At present, the two most prominent self-esteem theorists are Stanley Coopersmith (1967) and Morris Rosenberg (1979). They have evolved their theories by integrating and elaborating upon the earlier works by men such as James (1890), Mead (1932), and Sullivan (1947). According to James, a person's level of self-esteem depends upon the degree to which his achievements approach his aspirations in personally valued areas. The individual also assesses his self-worth by measuring his achievements against communal standards of success. Mead and Sullivan propose that a person evaluates himself as

he is evaluated by others who are significant to him. Sullivan emphasizes that individuals learn defenses which minimize threats to their self-esteem. These concepts form the building blocks of Coopersmith's and Rosenberg's theories.

Coopersmith (1967) proposes that an individual's self-esteem reflects the extent to which his subjective judgement of his success approaches his aspirations and societal standards of success. He emphasizes that only those areas of performance which are valued by the individual can affect his self-esteem. Thus if someone is a poor student, but he doesn't value academic success, perceived failure in this area will have little impact on his self-esteem. Within this theory, Coopersmith also postulates the existence of defense mechanisms that allow the individual to avoid low self-esteem. Individuals minimize the value of those areas in which they have failed and maximize the value of those areas in which they are successful. Other defenses include redefining what is regarded as a success and altering one's level of aspiration. Coopersmith identifies four different types of success experiences. They are power (the ability to influence others), significance (the acceptance, attention and affection of others), virtue (adherence to moral

and ethical standards), and competence (successful performance in meeting demands for achievement).

Rosenberg (1979) has identified four principles which act as antecedents of self-esteem. They are reflected appraisals, social comparisons, self-attribution, and psychological centrality. The principle of reflected appraisals is that individuals evaluate themselves as they think others who are important to them evaluate them. The principle of social comparisons is that people judge themselves by comparing with certain individuals, groups, or social categories in their immediate environment. There are two important dimensions of social comparison: superiority or inferiority, and conformity or deviance. Both inferior and deviant comparisons lead to low self-esteem. The principle of self-attribution is that people draw conclusions about themselves to a large extent on the basis of observing their own actions and their outcomes. The principle of psychological centrality is that a specific self-concept component is significant for self-esteem only if it is important or central for the individual. Thus, if a person feels that he is a poor athlete, his self-esteem will be adversely affected only if his athletic ability is important to him.

Rosenberg, like Coopersmith, has identified some

defenses which individuals use to protect their self-esteem. For example, the individual attaches the greatest importance to those who provide the most favourable evaluations and minimizes the significance of those who denigrate him. Similarly, individuals make their most positive self-concept components psychologically central. Thus, if a person is an excellent student, but is unpopular with his peers, he might maximize the importance of his academic success and minimize the importance of his popularity. However, these defenses are often not effective. Popularity might still remain psychologically central for a child even in the face of rejection by his peers.

Although Coopersmith and Rosenberg use different terminologies to describe their theories, many parallels can be drawn between them. One of Coopersmith's elements of success: significance, is conceptually similar to Rosenberg's principle of reflected appraisals. Both underscore the importance of other people's appraisals for one's self-esteem. Coopersmith's notion of comparing one's successes with personal aspirations is conceptually similar to Rosenberg's principle of self-attribution. Both refer to the process of evaluating one's performance against a personal standard of success. Coopersmith's idea of comparing one's successes to societal standards

is comparable to Rosenberg's principle of social comparisons. Coopersmith postulates that only those elements of success which are most valued can significantly affect self-esteem while Rosenberg claims that only the evaluation of those self-concept components which are psychologically central can significantly affect self-esteem. Conceptually, these statements are very similar. The defense mechanisms which Coopersmith and Rosenberg suggest that people use to protect and enhance their self-esteem are also comparable. For example, individuals often choose to value (Coopersmith) or make psychologically central (Rosenberg) their most positive characteristics.

The Antecedents of Self-Esteem for Children and Adolescents

Different antecedents of self-esteem predominate as a child matures. Rosenberg (1979) finds that children are less introspective than adolescents and are convinced that knowledge about themselves is vested in adults. In contrast, adolescents have an enhanced self-consciousness. They come to rely more heavily on their own judgements or the judgements of friends in whom they have chosen to confide. Thus while the reflected appraisals of parents predominate in childhood, the reflected appraisals of and social comparison with peers predominate in adolescence.

Rosenberg (1979) and Frank and Cohen (1979) conducted studies which support the above hypotheses. Rosenberg found that between 67% and 78% of children 8 to 11 years old believed that their parents knew better than they themselves how intelligent, attractive and good they were, whereas 50% to 68% of adolescents 15 years of age and over felt that they knew better than their parents how they rate in these areas. When asked to pick the one person (himself excepted) who best knew his inner most thoughts and feelings, 84% of the younger children but only 52% of the older children chose one or both parents. Conversely, only 7% of the younger children but 37% of the older ones chose a friend or a sibling.

Similarly, Frank and Cohen (1979) found that when asked to name the family member who understood them best, children most often named parents, whereas, adolescents most often named siblings. When asked who outside their family they thought was really great, children listed God and famous adults, whereas the majority of adolescents listed their own friends.

The Self-Esteem of Minority Groups

Rosenberg's theories also make predictions about the self-esteem of minority groups. The principles of social comparisons and reflected appraisals predict that minority

group members with low status in society do not of necessity have low self-esteem. Children in particular, are often not exposed to the widely held opinions of the majority regarding their minority status. Instead, they compare themselves with and are concerned with the reflected appraisals of people in their immediate environment with whom they interact. The principles of social comparisons and reflected appraisals do predict however that being a minority in one's immediate environment does lead to low self-esteem for three reasons. The individual is now exposed to the reflected appraisals of persons who share the opinions of the larger majority. As was pointed out earlier, both deviant and inferior social comparisons lead to lower self-esteem. The individual integrated with another group is both different from those in his immediate environment, and often inferior at certain skills which are highly valued by the majority (Rosenberg, 1979). By contrast, the non-integrated individual does not perceive himself to be inferior to his peers in his immediate environment and thus he should have higher self-esteem than the integrated individual.

These predictions were borne out in a study of black children and adolescents (Rosenberg, 1979). Rosenberg

found that black students who were bussed to predominantly white schools had low self-esteem, whereas black students attending predominantly black schools, had high self-esteem. While the integrated black students performed better academically than the non integrated black students, they did not perform as well as their referent group of white students. For the integrated students, harsh appraisals from their peers as well as both dissonant and inferior social comparisons resulted in lower self-esteem.

These predictions of self-esteem theories for racial minorities can be extended to all minorities, including the physically handicapped. Deaf persons are one such, minority. Deaf students often compare unfavourably with hearing students in their oral communication skills and academic ability, and their physical handicap (presence of hearing aids) differentiates them (Meadow, 1975; Moores, 1978; Northern & Downs, 1978). Deaf students are non integrated, partially integrated, or fully integrated with hearing students. Thus, one might predict that there are different levels of self-esteem among those groups which parallel the differences found among the integrated and non integrated black students.

Studies of Self-Esteem Among Deaf Individuals

Only a handful of empirical studies have examined

the self-esteem of deaf persons. The majority of these studies compared the self-esteem of deaf versus hearing persons (Blanton & Nunnally, 1964; Brunschwig, 1936; Garrison, Tesch, & De Caro, 1978; Sussman, 1973). Other studies compared the self-esteem of deaf children attending non integrated residential schools with that of deaf children attending non integrated day schools (Craig, 1965; Schlesinger & Meadow, 1972). Only one of the studies described here compared the self-esteem of deaf students integrated to varying degrees with hearing students at school (Safarty & Katz, 1978).

Brunschwig (1936) measured the self-esteem of 85 deaf children attending residential schools and 85 hearing children matched on age, I.Q., race, and socio-economic status. She used the Personal Inferiority Scale of the Rogers Test of Personality Adjustment, a sentence completion test (Rogers, 1931). The two groups did not differ significantly in self-esteem. These results support Rosenberg's (1979) hypothesis regarding non integrated minorities. The non integrated children in Brunschwig's study did not have low self-esteem, as was the case for the non integrated black students in Rosenberg's study. This comparison however, is not strictly valid because while the deaf children were in

residence, the hearing children were not. Both Craig (1965) and Meadow (1969) found that deaf children living in residence had higher self-esteem than deaf children attending day schools for the deaf. Paper and pencil tests such as the one employed by Brunschwig, are often not effective when working with the deaf because of their poor reading and language skills (Lewis, 1968; Moores, 1978; Northern & Downs, 1978). As well, Brunschwig did not specify the degree to which her deaf sample was hearing impaired. Perhaps they were only moderately handicapped.

Blanton and Nunnally (1964) compared levels of self-esteem between 173 profoundly deaf (> 80 dB hearing loss) 'residential' children and adolescents, and 178 hearing adolescents using the Evaluation Scale of the Semantic Differential (Nunnally, 1961). Deaf females evaluated themselves more negatively than hearing females, but no differences were found among the males. Again, the confounding variable of living in residence was introduced. As well, the hearing and deaf groups were of different ages. Because children evaluate themselves using different criteria than adolescents, age is an important variable to control (Rosenberg, 1979).

Craig (1965) examined the self-esteem of 'residen-

tial deaf children, deaf children attending day schools, and hearing children. There were 16 children in each group aged 9½ to 12 years. The groups were matched according to age, I.Q., sex, and degree of hearing loss. All of the deaf children had at least a 65 decibel hearing loss and were prelingually (deaf before 2 years of age) deaf. To assess self-esteem, Craig measured the children's perceptions of how they were rated by their peers, using two of Schiff's (1960) sociometric measures. The language was simplified to accommodate the deaf children. The 'residential' deaf children rated themselves more positively than the other two groups of children. No significant differences were found between the 'day' deaf and the hearing children. These results also support Rosenberg's predictions regarding non integrated minorities. Neither of the two non integrated deaf groups had low self-esteem. As well, residential living was shown to have an effect on self-esteem.

Meadow compared levels of self-esteem among 'residential' deaf children and adolescents with hearing parents, 'residential' deaf children and adolescents with deaf parents and 'day' deaf children and adolescents with hearing parents using the Meadow Self-Image Test (Meadow, 1967; Meadow, 1969; Schlesinger & Meadow, 1972).

All of the students were profoundly and prelingually deaf. None had handicaps in addition to deafness, and none belonged to racial or ethnic minorities. The groups were matched on sex, age, I.Q., and degree of deafness. Meadow found that the 'residential' children with deaf parents had higher self-esteem than both the 'day' children and the 'residential' children with hearing parents. By contrast, the 'residential' adolescents with hearing parents had higher self-esteem than both the 'residential' adolescents with deaf parents and the 'day' adolescents with hearing parents. Meadow's study indicated that age, school setting, and the hearing status of one's parents were variables which significantly affect the self-esteem of the deaf. The differences found among the children and adolescents lend support to Rosenberg's (1979) hypothesis that different antecedents of self-esteem predominate as a child matures. It would have been interesting to compare the six deaf groups with a hearing group. Although they varied in levels of self-esteem with respect to each other, perhaps all six groups had high or low self-esteem relative to a hearing group.

Sussman (1973) measured the self-esteem of 129 deaf adults using the Tennessee Self-Concept Scale (TSCS)

(Fitts, 1965). He found that these adults had self-esteem below that of the sample used in the TSCS manual for developing norms. Deaf adults have more exposure to the appraisals and accomplishments of the hearing majority through personal experience and through the media, than do non integrated deaf children. The results of this study support Rosenberg's hypothesis that integrated members of minority groups have low self-esteem.

Garrison, Tesch, and De Caro (1978) measured the self-esteem of 109 profoundly deaf students about to enter a technical college for the deaf using the TSCS. He found that the self-esteem of the deaf students was lower than the self-esteem of the normative sample in the TSCS manual. Garrison et al. did not specify the degree to which their deaf subjects had been integrated with hearing students prior to enrollment. Thus, their findings cannot be discussed in terms of Rosenberg's (1979) hypotheses regarding the self-esteem of minorities. Upon closer examination through personal interviews, Garrison et al. found that 80% of the test items in the TSCS were not adequately understood by the deaf respondents. On average, only about half of them understood any given item. This brings the validity of both Sussman's and Garrison et al.'s findings into serious

question.

Safarty and Katz (1978) measured the self-esteem of three groups of deaf students who differed in the degree to which they were integrated with hearing students at school, using the TSCS. The 48 students were 14 and 15 years of age. The first group was non integrated and living in residence. The second group was partially integrated, and the third group was fully integrated with hearing students. Only students with a language level which would enable them to comprehend the TSCS participated. The partially integrated students had the highest self-esteem followed by the fully integrated students and the residential students had the lowest self-esteem. These results do not support Rosenberg's hypothesis regarding the self-esteem of integrated and non-integrated minorities. He would have predicted that the non integrated group would have higher self-esteem than the partially integrated and fully integrated groups. The low self-esteem of the non integrated students may have been a function of some aspects of the residential school they attended. For example, they may have interpreted their being sent away to school as a form of rejection by their parents. As well, the partially integrated group only had a moderate hearing loss whereas

the other two groups had severe hearing losses. Perhaps the higher self-esteem of the partially integrated students was related to their lesser handicap. Finally, the self-esteem of the deaf groups was not compared to the self-esteem of a hearing group. Thus it is impossible to assess whether any of these groups in fact had high or low self-esteem.

It is difficult to draw any firm conclusions about the self-esteem of deaf persons because so few studies have been conducted in this area, and a number of the studies include confounding variables. It appears that non integrated deaf children do not differ significantly from hearing children in levels of self-esteem (Brunschwig, 1936; Craig, 1965). This supports Rosenberg's hypothesis regarding the self-esteem of non integrated minorities. Deaf adults seem to have self-esteem below the norms established for the hearing (Garrison, Tesch, & De Caro, 1978; Sussman, 1973). Deaf adults are more integrated with the hearing than non integrated deaf children. Even if these adults are not physically integrated in the sense that they attend non integrated schools, have deaf spouses, or live in a deaf community, their exposure through the media and through discussions would render them much more aware of the widely held opinions of the

hearing majority regarding their minority status. Thus, the lower self-esteem of deaf adults concurs with Rosenberg's predictions regarding integrated minorities. The studies of Craig (1965) and Meadow (1969) illustrated that variables such as living in residence rather than at home, the hearing status of one's parents, and age significantly affect the self-esteem of the deaf.

Statement of the Problem

The present study examined the self-esteem of integrated, partially integrated, and non integrated deaf children and adolescents. Hearing children and adolescents were also tested.

This study controlled certain variables which were shown to affect the self-esteem of deaf individuals. All of the subjects lived at home. All had hearing parents. It was more feasible to select subjects with hearing parents because only 10% of deaf children have deaf parents and the majority of these parents send their children to residential schools (Meadow, 1975). To control for the effects of age on self-esteem, children and adolescents were considered separately. All of the subjects were profoundly and prelingually deaf. None were black, had physical handicaps (in addition to deafness) or central learning disabilities. These variables might have confounded the effects of deafness and degree of integration on self-esteem. For example, a non integrated deaf child who has a physical handicap in addition to deafness would be a minority among his or her deaf peers.

Other variables which might affect the self-esteem of the deaf could not be controlled because of the small

number of deaf subjects who met all of the specified criteria. Although Coopersmith (1967) and Smith (1978) did not find any significant differences between the mean levels of self-esteem of male and female children and adolescents, Blanton and Nunnally (1964) did find significant differences among male and female deaf students. This study, however, did not consider males and females separately. Although the majority of participants in the study were middle class, socio-economic status and membership in ethnic minority groups were not strictly controlled.

Guterman (in press) questions the validity of virtually all of the self-esteem measures used with deaf individuals in past studies because they required reading and/or language skills beyond the scope of the deaf respondents (Lewis, 1968; Moores, 1978; Northern & Downs, 1978). Guterman outlines four criteria that should be met by self-esteem measures for the deaf. First, the measure should be suitable for both deaf and hearing individuals to facilitate comparisons with a hearing control group. Second, the test should include subscales which assess how the respondent evaluates himself with regard to specific dimensions of his self-concept, as well as a subscale which assesses his general self-evalu-

ation, or global self-esteem. The subscales tapping specific dimensions provide insight into the source of high or low self-esteem. Third, the self-esteem measure should be administered individually by interview to overcome poor reading skills. Fourth, it should have a vocabulary level that can be understood by all of the deaf respondents. The self-esteem measure used in this study, took all four criteria into consideration.

Students who cope with full as opposed to partial integration might be more intelligent (Northern & Downs, 1974). Coopersmith found a .28 correlation between self-esteem and intelligence. In order to take intelligence into account when analyzing the results, a measure of intelligence was administered to all of the subjects.

Hypothesis

Social comparison with peers and their reflected appraisals are important sources of self-esteem in adolescence (Rosenberg, 1979). Integrated and partially integrated deaf adolescents often compare unfavourably with their hearing peers in their oral communication skills and academic ability and their physical handicap is a source of differentiation (Meadow, 1975; Moores, 1978). By contrast, non integrated deaf adolescents are on par with their deaf classmates in their academic and

communication skills. Thus, the following hypothesis was tested:

The integrated deaf adolescents and the partially integrated deaf adolescents will have lower levels of self-esteem than both the non-integrated deaf adolescents and the hearing adolescents.

In the case of children, the reflected appraisals of parents are more important sources of self-esteem than comparison with peers (Rosenberg, 1979). Thus, no significant differences were anticipated among the groups of deaf children or between the deaf children and the hearing children.

Method

Subjects

The subjects were 41 hearing impaired children (8-13 years of age) and adolescents (14-19 years of age); and 20 hearing children and adolescents. None of the subjects had central learning disabilities or physical handicaps (aside from deafness), and they lived at home. All of the deaf subjects had a hearing loss of greater than 80 decibels (ISO) averaged over the speech range (500, 1,000 and 2,000 Hz) in the better ear, and all were prelingually deaf (before 2 years of age). The deaf students were assigned to six different experimental groups according to age and the degree to which they were integrated with hearing students at school. The hearing students were divided into two control groups according to age. The age range, and number of students in each group is outlined in Table 1.

Both the integrated and the partially integrated students were enrolled at the Montreal Oral School for the Deaf (Oral School) and communicated solely through spoken English. The integrated students attended various public and private schools on a full-time basis. In all cases, they were the only deaf student in their class (and often, the only deaf student in the school).

Table 1
Age Range, and
Number of Students in Each Group

Group	Non Inte- grated n	Partially Integrated n	Integrated n	Hearing n
Children (8-13 yrs)	5	7	6	10
Adolescents (14-19 yrs)	7	9	7	10

They met individually with an Oral School teacher one to two hours weekly for speech lessons and academic tutoring. The partially integrated students also attended regular schools, but for 20 to 80% of the day they were in special classes conducted by an Oral School teacher with an average of four to five other deaf students. The Oral School selects students for full integration in large part on the basis of the strength of their language skills. Thus, the integrated students in this study had stronger language skills than the partially integrated students.

The non integrated students attended the Mackay School for Deaf and Crippled Children, Royal Vale Campus (Mackay School), a day school for deaf students. Although the philosophy of the school was total communication (communication through both speech and sign language), the students in this study relied almost exclusively on sign language.

The hearing students attended regular public schools. They were selected randomly from classes which contained students of the appropriate age.

Experimental Measures

Two tests were given to all of the subjects; the Standard Progressive Matrices Test and a revised Cooper-

smith Self-Esteem Inventory.

The Standard Progressive Matrices Test (PM), developed by Raven (1960) in 1937, was designed as a measure of Spearman's g factor. It requires the deduction of relations among abstract items. The PM consists of 60 matrices divided into 5 sets of 12. A part has been removed from each matrix. The subject chooses the missing insert from six or eight alternatives. The test can be used with persons 6 to 65 years of age.

The PM has a number of qualities which make it an appropriate intelligence measure for use with deaf children. Because the test is non verbal, deaf children, many of whom have inferior language and reading skills, are not placed at a disadvantage relative to hearing children (Lewis, 1968; Moores, 1978; Northern & Downs, 1978). The first problem in each of the 5 sets is self-evident, thus the standard training can be conveyed with a minimum of language. The PM is untimed. Many deaf students have difficulty with timed tests, having had limited exposure to them (Meadow, 1975).

An intelligence measure which is often used to test deaf children is the performance part of the Wechsler Intelligence Scale for Children (WISC) (Wechsler, 1949). However, a number of verbal instructions are necessary

to describe the various subtests of the performance WISC to the respondents. The deaf students in this study had varying degrees of verbal skill. Thus, some of the students would have been placed at a disadvantage had the performance WISC been used.

The Coopersmith Self-Esteem Inventory (SEI) was derived from Roger and Dymond's (1951) self-concept scale and reworded by Coopersmith (1967) for use with children 8 to 10 years old. The 50 item SEI measures subjects' self-attitudes. It contains four subscales; General Self, Social Self and Peers; Home-Parents, and School-Academic Self. The total score is derived from the sum of the scores on the four subscales. The SEI also contains an eight item lie scale. Kokenes (1978) confirmed the construct validity of the subscales using a variation of Thurstones Orthogonal Rotation technique. The SEI has a test-retest reliability of .88 over a five week interval and .70 after a three year period (Coopersmith, 1967).

Modifications were made to the SEI to ensure that the deaf students understood all of the items. Educators from both the Oral School and the Mackay School who had worked with the deaf students in this study, identified the words and phrases which were beyond their students' grasp. When possible, words and phrases which even the

youngest deaf children could comprehend, and which preserved the original concept, were substituted. When substitutions could not be found, the item was removed from the scale. Ten items were removed. The revised SEI was read or signed to the students by a skilled translator on an individual basis so that poor reading skills would not interfere with comprehension.

Copies of both the original and revised SEI are presented in Appendix A.

Procedure

The students were seen individually in a quiet room, with only the experimenter and when necessary a signing translator present. Most of the students were seen at school (during the school day) although a few were seen in their home. A relaxed and friendly atmosphere was established.

The revised SEI was administered first to both the deaf and hearing students. The students were given an answer booklet and asked to write their name, age, date of birth and grade on the cover sheet which also contained the appropriate spaces to respond to two sample questions. The answer booklet contained two columns labeled 'same as me' and 'not same as me'. The students checked their own answers on the answer sheet to give them a sense of

privacy, but many of the younger children looked to the experimenter for assistance in checking the correct column. The students were given the following instructions:

I am going to read some sentences. When I finish a sentence, if you feel it is the same as you, put a check here (the experimenter pointed to the sample 'same as me' column on the cover sheet). If you feel it is not the same as you, put a check here. (The experimenter pointed to the 'not the same as me' column on the cover sheet).

The younger children were then read two sample sentences. They were told:

Let's practice, (or) for example:

A, I like chocolate.

B, I am wearing ___ dress/pants. (A colour was inserted so as to make 'not the same as me' the correct response.)

The students were then told:

These answers will be very private. Only I will see them. If you don't understand anything tell me. Turn the page and we'll start.

The instructions were very simply phrased so that all of the deaf respondents would understand them.

The deaf students asked questions quite freely

about the meaning of the various items. The experimenter used a number of techniques to convey the meaning of the items when necessary including showing the sentence in written English, using alternate vocabulary, drawing, and pantomime. If the experimenter was not confident that the student understood the item, she would pose a question that would assess whether the child grasped the concept. For example, if the sentence was, 'I often feel upset in school' and the child nodded in agreement, the experimenter might say; what sort of things upset you? an appropriate response from the child would then assure the experimenter that the child understood the initial sentence. The partially integrated children and adolescents and the non integrated children required the most assistance. After the revised SEI was completed, the experimenter made sure that all of the sentences had been properly filled in. If a child did not understand a sentence, and the experimenter could not convey the meaning to him, she marked down the item. If more than five items were not understood, the test was discarded. Five tests were discarded, and all of these had been completed by partially integrated deaf children. The number of items which these partially integrated children did not understand ranged from 12 to

30. Only four other students did not answer every item on the revised SEI. All of these were non integrated children. They did not understand one, one, three, and five of the items respectively. The three and five misunderstood items were not loaded onto one or two subscales.

The student was then given the PM test. The experimenter supervised as the student attempted the first two problems. The student was then told:

Now try to finish the book. First they are easy, and then they get harder. Try to answer all of the questions. Choose only one answer. Don't hurry, work carefully. Don't go back.

Results

Validity of the Revised SEI

The validity of the revised SEI was assessed by comparing the mean 'revised SEI' scores of the hearing children and adolescents in this study, with the mean scores reported by Coopersmith (1967), for hearing children and adolescents on the original SEI. These mean scores are presented in Table 2. While the original SEI has 50 items and the revised SEI has 40 items, the mean scores for both measures are presented as percentages to facilitate comparison. A t ratio comparing the children's mean scores showed that these scores were not significantly different, $t(120) = .46$. Coopersmith did not specify the sample size of his adolescent group or the standard deviation of the mean score. Thus a t ratio comparing the adolescents' mean scores could not be computed. Nonetheless, they do not appear to be significantly different (75.8% versus 76.0%).

Analysis of the Mean Scores on the Revised SEI and its Subscales

Children In order to assess whether the self-esteem of the integrated, non integrated, and hearing children differed significantly, five one-way analyses of variance (ANOVAS) were performed to compare their mean scores on.

Table 2

Mean Scores for the Hearing Children
and Adolescents on the Revised SEI versus
Norms Established by Coopersmith on the
Original SEI

Measure	Revised SEI			Original SEI		
	$\bar{X}(\%)$	(SE)	Age (yrs)	$\bar{X}(\%)$	(SE)	Age (yrs)
Group						
Children	69.3	(3)	9-12	71.2	(.3)	9-15
Adolescents	75.8	(4)	14-17	76.0		16-23

the revised SEI, and on the self, peer, home and school subscales. In addition, a one-way ANOVA comparing the children's mean lie scores was performed. Low lie scores indicate that subjects distorted their answers on the revised SEI in a manner that inflated their scores. Because only two of the seven partially integrated children successfully completed the revised SEI, this group was excluded from the analysis.

The children's mean scores and standard errors on the revised SEI and its subscales are presented in Table 3. The revised SEI score is a composite of the self, peer, home, and school scores. Of the 40 items, 17 of them comprise the self-subscale, seven comprise the peer subscale, eight comprise the home subscale, and the last eight comprise the school subscale. The lie scale consists of eight additional items. The total mean scores and the mean subscale scores are presented as percentages to facilitate comparison among them. The mean raw scores and standard errors are presented in Appendix B. ANOVA summary tables are presented in Appendix C. The significant differences found among the children's mean scores on the revised SEI and its subscales are outlined below.

A significant difference was found among the

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Table 3

Children's Mean Scores and Standard
Errors on the Revised SEI

Group	Integrated		Non Inte- grated		Hearing	
	$\bar{X}(\%)$	(SE)	$\bar{X}(\%)$	(SE)	$\bar{X}(\%)$	(SE)
Measure						
Total	74	(5)	83	(7)	69	(4)
(Subscales)						
Self	69	(5)	84	(7)	69	(4)
Peer	74	(7)	91	(6)	56	(9)
School	82	(5)	78	(9)	75	(6)
Home	77	(8)	78	(12)	77	(5)

Lie	57	(13)	66	(11)	62	(7)

children's mean scores on the peer subscale, $F(2,18)=4.15$, $p \leq .05$. Scheffé comparisons showed that the non integrated children had a significantly higher mean 'peer' score than the hearing children $F(2,18) = 7.98$, $p \leq .05$, and that all of the deaf children had a higher mean 'peer' score than the hearing children, $F(2,18) = 6.7$, $p \leq .10$. (Ferguson, 1976, points out that the Scheffé test is more rigorous than other procedures. He therefore suggests that the .10 level of significance be used instead of the .05 level of significance.)

Adolescents Two a priori orthogonal comparisons were calculated to assess whether the integrated adolescents had lower self-esteem than the hearing adolescents and whether the partially integrated adolescents had lower self-esteem than the non integrated adolescents. These predictions were outlined in the hypothesis. Five sets of these two orthogonal comparisons were computed to compare the mean scores of the adolescents on the revised SEI, and on the self, peer, home, and school subscales. Five one-way ANOVAS were also performed so that all other comparisons (in addition to the two a priori comparisons) among the mean scores of the adolescent groups could be considered. In addition, a one-way ANOVA was performed to compare the adolescents' mean lie scores.

Two-way ANOVAS assessing both the children and adolescents were not performed because only the partially integrated adolescents could be included in the analysis. Without a comparable group of partially integrated children, the partially integrated adolescents could not have been assessed adequately.

The adolescents' mean scores and standard errors (presented as percentages) on the revised SEI and its subscales are listed in Table 4. The mean raw scores and standard errors are presented in Appendix B. The significant differences found among the adolescents' mean scores are presented below.

The partially integrated adolescents had a significantly lower mean 'total' score, $t(29) = 2.3$, $p \leq .05$, and a significantly lower mean 'self' score, $t(29) = 2.24$, $p \leq .05$, than did the non integrated group of adolescents. A significant difference was found among the adolescents' mean lie scores, $F(3,29) = 3.75$, $p \leq .05$. Scheffé comparisons showed that the partially integrated adolescents had a significantly lower mean lie score than did the hearing adolescents, $F(3,29) = 10.02$, $p \leq .05$. The mean lie score of the partially integrated adolescents was also significantly lower than that of the non integrated, integrated and hearing adolescents combined, $F(3,29) = 8.90$, $p \leq .05$.

Table 4

Adolescents' Mean Scores and
Standard Errors on the Revised SEI

Group	Integrated		Partially Integrated		Non Integrated		Hearing	
	$\bar{X}(\%)$	(SE)	$\bar{X}(\%)$	(SE)	$\bar{X}(\%)$	(SE)	$\bar{X}(\%)$	(SE)
Measure								
Total	78	(5)	65	(3)	78	(4)	76	(4)
(Subscale)								
Self	81	(6)	68	(4)	81	(3)	78	(4)
Peer	74	(3)	68	(8)	78	(3)	82	(3)
School	77	(8)	60	(6)	82	(9)	68	(9)
Home	77	(8)	60	(4)	57	(10)	74	(8)

Lie	81	(8)	53	(9)	68	(5)	84	(6)

Additional Analysis

The SEI contains a subscale which assesses global self-esteem (self subscale), as well as subscales which assess how the respondent evaluates specific dimensions of his self-concept (peer, home, and school subscales). In order to consider which components of the self-concept most strongly affected the global self-esteem of the different groups of students, a multiple regression analysis could have been performed with the peers, home and school subscales serving as dependent variables and the self subscale serving as the independent variable. This analysis was not feasible however, because students' scores on certain of the subscales were too clustered at the top of the scale to perform meaningful correlations. Longer, and more sensitive subscales, would have minimized this 'ceiling effect'.

The Progressive Matrices Test

Coopersmith (1967) found a .28 correlation between intelligence and self-esteem among 10 to 12 year old boys. Because one of the criteria for successful integration might be a high level of intelligence, there was some concern that there might be differences in intelligence among the integrated and partially integrated students (Northern & Downs, 1974). A one-way ANOVA

comparing the mean PM scores of the children showed that there were no significant differences among their scores. A one-way ANOVA comparing the mean scores of the adolescents showed that there was a significant difference among the mean scores, $F(3,29) = 3.89, p \leq .05$. A Scheffé test showed that the partially integrated adolescents had a lower mean score than the hearing adolescents, $F(3,29) = 10.68, p \leq .05$. However, there were no significant differences between the mean scores of the partially integrated and integrated adolescents.

Coopersmith found that the correlation between intelligence and self-esteem was a reflection of superior school performance, which in turn raised self-esteem. Thus a positive correlation between 'school' scores on the SEI and intelligence scores should be expected. However, the correlation between the PM scores and the 'school' scores for the children in this study was negative (-.11). This was also the case when only the hearing children were considered (-.20). This may be a reflection of the fact that only a performance measure was used, because verbal measures cannot be used with deaf students. Perhaps it is the verbal measure of intelligence which predicts academic success which in turn raises self-esteem. Because of the large discrepancy in the correlation which Coopersmith measured between self-

esteem scores and WISC scores, and the correlations measured in this study between PM scores and self-esteem scores, the PM scores were judged to be an inappropriate measure with which to covary out the effects of intelligence on self-esteem. The mean scores and standard errors on the PM for the children and adolescents are presented in Table 5. The correlation between the revised SEI scores and the PM scores are presented in Table 6.

Age Differences

Because there were few available deaf subjects who met all of the specified criteria, the subjects were not matched on age. Instead, the children and adolescents were selected within two specified age ranges. A one-way ANOVA was performed to assess whether the mean ages of the four groups of children differed significantly. Similarly, a one-way ANOVA was performed to compare the adolescents' mean ages. The children's and adolescents' mean ages and standard errors are presented in Table 7. A significant difference was found among the children's mean ages, $F(3,24) = 3.30, p \leq .05$. Scheffé comparisons showed that the mean age of the partially integrated children was significantly lower than that of the integrated children, $F(3,24) = 9.33, p \leq .05$. There were no significant differences among the adolescents' mean ages.

Table 5

Means and Standard Errors
on the PM for the Children
and Adolescents

Group	Integrated	Partially Integrated	Non Inte- grated	Hearing
	\bar{X} (SE)	\bar{X} (SE)	\bar{X} (SE)	\bar{X} (SE)
Children	57 (13)	58 (15)	42 (14)	64 (9)
Adolescents	64 (9)	39 (6)	66 (12)	73 (6)

Table 6

Pearson Correlations Between the PM
Scores and the Revised SEI Scores

Group	All Children (n=21) r	All Adolescents (n=33) r	Hearing Children (n=10) r	Hearing Adolescents (n=10) r
	-.38	.43*	-.50	.49

*p < .05

Table 7

Mean Ages and Standard Errors for the
Children and Adolescents

Group	Non Inte- grated \bar{X} (yrs:mths) (SE) (yrs:mths)	Partially Integrated \bar{X} (yrs:mths) (SE) (yrs:mths)	Integrated \bar{X} (yrs:mths) (SE) (yrs:mths)	Hearing \bar{X} (yrs:mths) (SE) (yrs:mths)
Children	10:10 (1: 1)	10: 0 (0: 7)	12: 9 (0: 7)	10:10 (0: 5)
Adolescents	17: 2 (0:10)	16: 8 (0: 7)	15: 8 (0: 7)	15: 8 (0: 4)

Discussion

The Revised SEI

The mean scores of the hearing children and adolescents on the revised SEI closely approximated the mean scores reported by Coopersmith (1967) for hearing children and adolescents on the original SEI. This lends some validity to the revised version of the test. The modifications made to the SEI overcame some of the serious weaknesses found in previous tests used to measure the self-esteem of deaf individuals. Meaningful completion of the previous tests used, required language and reading skills beyond the scope of the deaf respondents (Garrison, Tesch, & De Caro, 1978; Guterman, in press; Meadow, 1975). The revised SEI can also be administered to hearing individuals thus facilitating comparisons between deaf and hearing groups.

Hypothesis

The hypothesis that the integrated deaf adolescents and the partially integrated deaf adolescents would have lower levels of self-esteem than both the non integrated deaf adolescents and the hearing adolescents was partially supported.

Integrated Deaf Adolescents The integrated deaf adolescents did not have lower self-esteem than both the

the integrated deaf adolescents and the hearing adolescents. The integrated adolescents may have employed some defenses to protect their self-esteem as discussed by Coopersmith (1967) and Rosenberg (1979). These defenses include minimizing the value of those areas in which an individual has failed, and maximizing the value of those areas in which the individual is successful. The individual also attaches the greatest importance to those persons who provide the most favorable evaluations and minimize the significance of those who denigrate him. Thus, although comparison with peers is an important source of self-esteem in adolescence, and integrated deaf adolescents often compare unfavourably with their hearing peers, the integrated adolescents may have minimized the significance of their hearing peers to protect their self-esteem.

An important philosophy of the Oral School is the recognition of their students' emotional needs in addition to their academic needs. Adherence to this philosophy might explain in part why the integrated adolescents did not have low self-esteem. The Oral School employs a team of health care professionals including a social worker, a psychologist, and a psychiatrist who work closely with the students. After students are

fully mainstreamed, the health care team remains available to them. In addition, the integrated students meet with an Oral School teacher one or two hours weekly for academic tutoring and speech lessons. The Oral School teacher informs the 'regular' teacher of the students' special needs, and asks to be alerted to any academic or adjustment problems which the integrated deaf students might have. Thus, the use of defenses which protect self-esteem, and the support services provided by the Oral School might have overcome some of the negative effects on self-esteem of interacting with hearing peers, for these integrated deaf adolescents.

Partially Integrated Deaf Adolescents The partially integrated deaf adolescents had significantly lower total and global self-esteem scores than did the non integrated adolescents. In addition, the partially integrated adolescents had significantly lower lie scores than both the hearing adolescents, and the integrated, non integrated and hearing adolescents combined. Their significantly lower lie scores indicate that their already low self-esteem scores were an inflated measure of their actual self-esteem.

The low self-esteem of the partially integrated adolescents, supports Rosenberg's (1979) predictions

and findings regarding both the self-esteem of integrated minorities, and the importance of peers as a source of self-esteem in adolescence. Partially integrated adolescents are often inferior to their hearing peers in their academic and language skills, and their handicap differentiates them. Both inferior and dissonant social comparisons contribute to low self-esteem. However, comparison with hearing peers would not have lowered the self-esteem of the partially integrated adolescents had that comparison not been an important source of self-esteem. The self-esteem of the non integrated adolescents did not differ significantly from that of the hearing adolescents. This also supports Rosenberg's hypothesis regarding the self-esteem of non integrated minority group members. Because the non integrated deaf adolescents were on par with their deaf classmates in their academic and linguistic skills, they did not have low self-esteem.

Both the integrated and the partially integrated adolescents compared themselves with hearing peers. Both could have used the same defenses to protect their self-esteem and both had access to the same support services, yet only the partially integrated adolescents had low self-esteem. The partially integrated adolescents had

poorer linguistic and academic skills than the integrated adolescents. It was largely for these reasons that they had not as yet been mainstreamed. Thus, the partially integrated adolescents compared even less favourably with their hearing peers than did the integrated adolescents. In addition, the partially integrated adolescents may have felt more differentiated than the integrated adolescents because they had to attend special classes for part of the day.

Because high self-esteem is widely agreed to be essential to mental health, the low self-esteem of the partially integrated adolescents should be attended to. The support services provided by the Oral School could be tailored to meet their special needs.

Children's Self-Esteem

There were no significant differences in the 'total' self-esteem scores among the integrated, non integrated, and deaf children. This concurs with Craig's (1965) finding that the self-esteem scores of a non integrated group of deaf children attending day schools were not significantly different from those of a hearing group of children.

The similar levels of self-esteem among the three groups of children lend support to Rosenberg's (1979)

theory and findings which predict that the reflected appraisals of parents are more important sources of self-esteem than comparison with peers, for children. Although the integrated children had hearing peers, and the non integrated children had deaf peers, there were no significant differences between the mean self-esteem scores of these two groups. Thus parental appraisal might have been the more important source of self-esteem than comparison with peers.

The non integrated deaf children had higher 'peer' scores than the hearing children. In addition, all of the deaf children considered as a group had significantly higher 'peer' scores than the hearing children. This finding also supports Rosenberg's theory regarding the lesser importance of peer relations as a source of self-esteem in childhood. Despite significantly higher peer scores, the children's self scores were not significantly higher. The self scale is a measure of global self-esteem. Had peer relations been very important for the children's self-esteem, their 'self' scores would also have been inflated.

It is important to consider why the deaf children had inflated peer scores. Meadow (1975) finds that the insular and protected environment of the residential

school promotes high self-esteem among deaf children. Non integrated 'day' children are similarly insulated from the hearing world during the day. Both non integrated and integrated children are also insulated in another way; by their limited communication skills. The non integrated children in this study communicated primarily through sign, a language which only their deaf teachers and peers, and to a lesser extent their parents, understood. Profoundly deaf oral children must face a speaker and stand at an optimal distance in order to take full advantage of their residual hearing and lip reading skills and thus, understand the speaker. The vocabulary which the oral child masters has been taught to him in a formal manner. Unlike a hearing child, he does not casually pick up words, and expressions. Thus, both groups of deaf children are insulated in that they are not perceiving the casual remarks of passersby. Only a select number of individuals can communicate effectively with the deaf children, and the majority of these are caring adults. Thus, the non integrated children in this study were not only physically insulated during the day, they were further insulated by the use of an exclusive communication system. The integrated children were insulated through limited vocabulary and the ability to

understand only those persons who made an effort to communicate with them. This insulation from potentially damaging reflected appraisals and unfavourable social comparison might have contributed to the inflated peer scores of the non integrated and to a lesser extent of the integrated children. As these children grow older, their communication skills increase as does their perception of more subtle forms of non verbal communication, so that this insulation is lessened.

Age Differences The partially integrated children had the lowest mean age. They were significantly younger than the integrated group. This discrepancy in age might explain in part why the partially integrated children had difficulty comprehending the self-esteem inventory. The integrated children had the highest mean age (12 yrs., 9 mths.). Rosenberg (1979), and Frank and Cohen (1979) found that children 12 to 14 years of age exhibit a drop in self-esteem, which reflects the stresses accompanying the onset of puberty. Because the mean age of the integrated children was in the 12 to 14 year age range, their mean self-esteem score might have been slightly lower than that of a somewhat younger group of integrated children.

Considerations for Future Research

The partially integrated children were unable to comprehend the majority of the items on the revised SEI. One of the main reasons that they were not as yet fully mainstreamed is that their language skills were too weak. A nonverbal self-esteem measure would be more appropriate for this group.

In order to ensure that the deaf subjects in this study fully comprehended the items on the revised SEI, standardization of test administration was lowered. It may be argued that the two following approaches which are more standardized are preferable. (1) In the first approach, the revised SEI would be read to the subject, but he would not be given the opportunity to ask questions and there would be no intervention on the part of the experimenter. Instead, the students would be asked to circle the numbers of the questions which they misunderstood. These questions would be clarified later. While this approach would increase the standardization of test administration, two problems would arise. a) A number of educators and parents whose students or children participated in this study cautioned the experimenter that deaf children often feign comprehension, particularly in novel situations with strangers. This

is a defense mechanism which deaf children learn because they so often find themselves in stressful situations when their language skills are insufficient. A forced choice test such as the revised SEI would lend itself to such a defense. Thus it is questionable as to how many misunderstood items would actually be marked. b) In addition, several of the younger deaf children asked for assistance when filling out the answer sheet. The additional task of circling misunderstood items would confuse these children further. (2) The second testing approach would be to simplify the language to such an extent as to guarantee that nearly every deaf child over a specified age would understand all of the test items. However, this approach would necessitate such radical simplifications, that the subtlety and depth of the self-esteem measure would be minimized.

A variable that should be considered in future studies is the type of support services available to oral deaf students by different schools after they are mainstreamed. While some schools such as the Oral School continue to offer a full range of support services to their integrated deaf students, other schools completely sever ties with their students. This lack of support might be reflected in lower self-esteem.

In view of the finding that partially integrated adolescents had low self-esteem, while fully integrated adolescents did not, future investigations might include interviews to explore the defenses which integrated students might be using to protect their self-esteem. Questions such as who and what they value most might tap some of these defenses.

Conclusions

The revised SEI appears to be a valid and useful measure of self-esteem for deaf children and adolescents.

Rosenberg's predictions regarding the self-esteem of minority group members were supported in that the partially integrated adolescents had low self-esteem whereas the non integrated adolescents had self-esteem similar to that of the hearing adolescents.

Integrated adolescents might be using some of the defenses described by Coopersmith and Rosenberg to protect their self-esteem.

Rosenberg's hypothesis that comparison with peers is not an important source of self-esteem for children, was supported in that the high 'peer' scores of the deaf children were not reflected in high 'self' scores, (indicative of high global self-esteem). The lack of significant differences among the mean total and self SEI scores

of integrated, non integrated and hearing children also supports this hypothesis.

Because high self-esteem is widely agreed to be essential to mental health, the low self-esteem of the partially integrated adolescents demands attention.

With adequate support services, in combination with the use of defenses, it appears that integrated deaf adolescents do not of necessity have low self-esteem despite comparison with a hearing referent group.

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APPENDIX A

Revised and Original Versions of
the Coopersmith Self-Esteem Inventory

Appendix A

Revised Coopersmith Self-Esteem Inventory

- Self 1. I daydream often.
- Self 2. I often wish I were someone else.
- Peer 3. People like me.
- Home 4. My parents and I have fun together.
- Lie 5. I never worry about anything.
- School 6. I find it very hard to talk in front of the class.
- Self 7. I wish I were small again.
- Self 8. I wish I could change many things about myself.
- Peer 9. People have fun with me.
- Home 10. I get upset easily at home. (feel bad, angry, worried, sad, not happy)
- Lie 11. I always do the right thing. (I never do the wrong thing)
- School 12. I'm proud of my school work.
- Self 13. I often feel bad for the things I do.
- Peer 14. Other kids like me.
- Home 15. My parents care about my feelings.
- Lie 16. I'm always happy.
- School 17. I try to do very good work.
- Self 18. I give up very easily.

- Self 19. I'm happy most of the time.
- Peer 20. I like to play with kids smaller than me.
- Home 21. My parents want me to do too many things.
- Lie 22. I like all the people I know.
- School 23. I like to take my turn in class. (ask questions, be called on)
- Peer 24. Kids usually follow my ideas.
- Home 25. My parents don't listen to me.
- Lie 26. People never scold me.
- School 27. I'm not good enough in school.
- Self 28. I can decide for myself.
- Self 29. I don't like being a boy/girl.
- Self 30. I don't like myself.
- Peer 31. I like to be alone.
- Home 32. Sometimes I want to leave home/run away.
- Lie 33. I'm never shy.
- School 34. I often feel upset in school. (feel bad, angry, worried, sad, not happy)
- Self 35. I often feel ashamed of myself.
- Self 36. I'm not as pretty/handsome as most people.
- Self 37. I am not afraid to say what I think.
- Peer 38. Kids are mean to me very often. (pick on me)
- Home 39. My parents understand my problems.
- Lie 40. I always tell the truth.

- School 41. My teacher makes me feel my work is poor.
- Self 42. I don't care what happens to me in the future.
- Self 43. I don't know how to do things. (I'm a failure)
- Home 44. My parents always tell me what to do. (are pushing me)
- Lie 45. I always know what to do.
- School 46. I often give up at school.
- Self 47. Things don't bother me most of the time.
- Self 48. I keep my promises.

Deleted Items

- Self 49. I'm pretty sure of myself.
- Self 50. I can make up my mind without too much trouble.
- Self 51. Someone always has to tell me what to do.
- Self 52. It takes me a long time to get used to anything new.
- Self 53. I can usually take care of myself.
- Self 54. I understand myself.
- Self 55. It's pretty tough to be me.
- Self 56. Things are all mixed up in my life.
- Self 57. I get upset easily when I'm scolded.
- Peer 58. Most people are better liked than I am.

Answer Sheet
For The Revised Coopersmith
Self-Esteem Inventory

	SAME AS ME	NOT SAME AS ME		SAME AS ME	NOT SAME AS ME
1	_____	✓ _____	20	_____	✓ _____
2	_____	✓ _____	21	_____	✓ _____
3	✓ _____	_____	22	_____	✓ _____
4	✓ _____	_____	23	✓ _____	_____
5	_____	✓ _____	24	✓ _____	_____
6	_____	✓ _____	25	_____	✓ _____
7	_____	✓ _____	26	_____	✓ _____
8	_____	✓ _____	27	_____	✓ _____
9	✓ _____	_____	28	✓ _____	_____
10	_____	✓ _____	29	_____	✓ _____
11	_____	✓ _____	30	_____	✓ _____
12	✓ _____	_____	31	_____	✓ _____
13	_____	✓ _____	32	_____	✓ _____
14	✓ _____	_____	33	_____	✓ _____
15	✓ _____	_____	34	_____	✓ _____
16	_____	✓ _____	35	_____	✓ _____
17	✓ _____	_____	36	_____	✓ _____
18	_____	✓ _____	37	✓ _____	_____
19	✓ _____	_____	38	_____	✓ _____

	SAME AS ME	NOT SAME AS ME
39	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40	<input type="checkbox"/>	<input checked="" type="checkbox"/>
41	<input type="checkbox"/>	<input checked="" type="checkbox"/>
42	<input type="checkbox"/>	<input checked="" type="checkbox"/>
43	<input type="checkbox"/>	<input checked="" type="checkbox"/>
44	<input type="checkbox"/>	<input checked="" type="checkbox"/>
45	<input type="checkbox"/>	<input checked="" type="checkbox"/>
46	<input type="checkbox"/>	<input checked="" type="checkbox"/>
47	<input checked="" type="checkbox"/>	<input type="checkbox"/>
48	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Original Coopersmith Self-Esteem Inventory

			LIKE ME	UNLIKE ME
Self	1.	I spend a lot of time daydreaming.	()	(✓)
Self	2.	I'm pretty sure of myself.	(✓)	()
Self	3.	I often wish I were someone else.	()	(✓)
Peer	4.	I'm easy to like.	(✓)	()
Home	5.	My parents and I have a lot of fun together.	(✓)	()
Lie	6.	I never worry about anything.	()	(✓)
School	7.	I find it very hard to talk in front of the class.	()	(✓)
Self	8.	I wish I were younger.	()	(✓)
Self	9.	There are lots of things I'd change about myself if I could.	()	(✓)
Self	10.	I can make up my mind without too much trouble.	(✓)	()
Peer	11.	I'm a lot of fun to be with.	(✓)	()
Home	12.	I get upset easily at home.	()	(✓)

			LIKE ME	UNLIKE ME
Lie	13.	I always do the right thing.	()	(✓)
School	14.	I'm proud of my school work.	(✓)	()
Self	15.	Someone always has to tell me what to do.	()	(✓)
Self	16.	It takes me a long time to get used to anything new.	()	(✓)
Self	17.	I'm often sorry for the things I do.	()	(✓)
Peer	18.	I'm popular with kids my own age.	(✓)	()
Home	19.	My parents usually consider my feelings.	(✓)	()
Lie	20.	I'm never unhappy.	()	(✓)
School	21.	I'm doing the best work that I can.	(✓)	()
Self	22.	I give in very easily.	()	(✓)
Self	23.	I can usually take care of myself.	(✓)	()
Self	24.	I'm pretty happy.	(✓)	()

			LIKE ME	UNLIKE ME
Peer	25.	I would rather play with children younger than I am.	()	(✓)
Home	26.	My parents expect too much of me.	()	(✓)
Lie	27.	I like everyone I know.	()	(✓)
School	28.	I like to be called on in class.	(✓)	()
Self	29.	I understand myself.	(✓)	()
Self	30.	It's pretty tough to be me.	()	(✓)
Self	31.	Things are all mixed up in my life.	()	(✓)
Peer	32.	Kids usually follow my ideas.	(✓)	()
Home	33.	No one pays much attention to me at home.	()	(✓)
Lie	34.	I never get scolded.	()	(✓)
School	35.	I'm not doing as well in school as I'd like to.	()	(✓)
Self	36.	I can make up my mind and stick to it.	(✓)	()
Self	37.	I really don't like being a boy/girl.	()	(✓)

LIKE ME UNLIKE ME

- | | | | LIKE ME | UNLIKE ME |
|--------|-----|---|---------|-----------|
| Self | 38. | I have a low opinion of myself. | () | (✓) |
| Peer | 39. | I don't like to be with other people. | () | (✓) |
| Home | 40. | There are many times when I'd like to leave home. | () | (✓) |
| Lie | 41. | I'm never shy. | () | (✓) |
| School | 42. | I often feel upset in school. | () | (✓) |
| Self | 43. | I often feel ashamed of myself. | () | (✓) |
| Self | 44. | I'm not as nice looking as most people. | () | (✓) |
| Self | 45. | If I have something to say, I usually say it. | (✓) | () |
| Peer | 46. | Kids pick on me very often. | () | (✓) |
| Home | 47. | My parents understand me. | (✓) | () |
| Lie | 48. | I always tell the truth. | () | (✓) |
| School | 49. | My teacher makes me feel I'm not good enough. | () | (✓) |
| Self | 50. | I don't care what happens to me. | () | (✓) |
| Self | 51. | I'm a failure. | () | (✓) |

			LIKE ME	UNLIKE ME
Self	52.	I get upset easily when I'm scolded.	()	(✓)
Peer	53.	Other people are better liked than I am.	()	(✓)
Home	54.	I usually feel as if my parents are pushing me.	()	(✓)
Lie	55.	I always know what to say to people.	()	(✓)
School	56.	I often get discouraged in school.	()	(✓)
Self	57.	Things usually don't bother me.	(✓)	()
Self	58.	I can't be depended on.	()	(✓)

APPENDIX B
Children's and Adolescents' Mean Raw
Scores and Standard Errors on the
Revised Self-Esteem Inventory

Appendix B

Children's Mean Raw Scores and Standard
Errors on the Revised SEI

Group	Integrated \bar{X} (SE)	Non Integrated \bar{X} (SE)	Hearing \bar{X} (SE)
<u>Measure</u>			
Total /40 (Subscales)	30 (2.0)	33 (2.8)	28 (1.6)
Self /17	12 (1.0)	14 (1.2)	12 (.7)
Peer /7	5 (.5)	6 (.4)	4 (.6)
School /8	7 (.4)	6 (.7)	6 (.5)
Home /8	6 (.6)	6 (1.0)	6 (.4)
Lie / 8	5 (1.0)	5 (.9)	5 (.6)

Adolescents', Mean Raw Scores and Standard
Errors on the Revised SEI

Group	Integrated (\bar{X}) (SE)	Partially Integrated \bar{X} (SE)	Non Inte- grated \bar{X} (SE)	Hearing \bar{X} (SE)
<u>Measure</u>				
Total /40 (Subscale)	31 (2.0)	26 (1.2)	31 (1.6)	30 (1.6)
Self /17	14 (1.0)	12 (.7)	14 (.5)	13 (.7)
Peer /7	5 (.2)	5 (.6)	6 (.2)	6 (.2)
School /8	6 (.6)	5 (.5)	7 (.7)	5 (.7)
Home /8	6 (.6)	5 (.3)	5 (.8)	6 (.6)

Lie /8	7 (.6)	4 (.7)	5 (.4)	7 (.5)

APPENDIX C
ANOVA Summary Tables

ANOVA Between Groups of Children
for the Revised SEI Scores

	Source of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate
<u>Measure</u>				
	Total Score	Between 241.2	2	120.6 = S_b^2
		Within 1144.7	18	63.6 = S_w^2
	Total	1385.9	20	F=1.9
Self	Between	65.0	2	32.5 = S_b^2
	Within	255.3	18	14.2 = S_w^2
	Total	320.3	20	F=2.3
Peer	Between	54.1	2	27.1 = S_b^2
	Within	117.4	18	6.5 = S_w^2
	Total	171.5	20	F=4.2*
School	Between	2.3	2	1.2 = S_b^2
	Within	85.7	18	4.8 = S_w^2
	Total	88.0	20	F=.3
Home	Between	.1	2	.05 = S_b^2
	Within	116.3	18	6.5 = S_w^2
	Total	116.4	20	F=.007
Lie	Between	4.2	2	2.1 = S_b^2
	Within	183.9	18	10.2 = S_w^2
	Total	188.1	20	F=.2

*p < .05

ANOVA Between Groups of Adolescents
for the Revised SEI Scores

	Source of Variance	Sum of Squares	Degrees of Freedom	Variance Estimate
Measure	Between	412.4	3	137.5= S_b^2
	Within	1653.3	29	57.0= S_w^2
	Total	2065.7	32	F=2.4
Self	Between	69.7	3	23.2= S_b^2
	Within	305.3	29	10.5= S_w^2
	Total	375.0	32	F=2.2
Peer	Between	10.8	3	3.6= S_b^2
	Within	80.6	29	2.8= S_w^2
	Total	91.4	32	F=1.3
School	Between	37.8	3	12.6= S_b^2
	Within	251.4	29	8.7= S_w^2
	Total	289.2	32	F=1.4
Home	Between	36.5	3	12.2= S_b^2
	Within	227.6	29	7.8= S_w^2
	Total	264.1	32	F=1.6
Lie	Between	84.7	3	28.2= S_b^2
	Within	217.8	29	7.5= S_w^2
	Total	302.5	32	F=3.8*

* $p < .05$

ANOVA Between Groups of Children and Adolescents
for the PM Scores

	Source of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate
<u>Group</u>				
Children	Between	1559.5	3	519.8= S_b^2
	Within	22249.2	24	927.1= S_w^2
	Total	23808.7	27	F=.6
Adolescents	Between	6018.2	3	2006.1= S_b^2
	Within	14956.0	29	515.7= S_w^2
	Total	20974.2	32	F=3.9*

* $p < .05$

ANOVA Between Groups of Children and Adolescents
for Age

	Source of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate
<u>Group</u>				
Children	Between	3738.9	3	1246.3= S_b^2
	Within	8994.1	24	374.8= S_w^2
	Total	12733.0	27	F=3.3*
Adolescents	Between	1852.1	3	617.4= S_b^2
	Within	10175.2	29	350.9= S_w^2
	Total	12027.3	32	F=1.8

* $p < .05$