

Self-concept, Adjustment to Blindness, and Quality of Friendship Among Adolescents with Visual Impairments

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Abstract: The self-concept and quality of friendship of 40 adolescents with visual impairments (20 in public schools and 20 in a residential school) were compared to those of 41 sighted adolescents. The findings indicate a similar self-concept profile for sighted adolescents and adolescents with visual impairments, although the scores of the participants with visual impairments were higher in all domains except their fathers' concept of them. The implications of these findings are discussed.

This article is based on the master's dissertation of Ms. Hen.

Of the approximately 2,000 students with visual impairments in Israel, 183 attend high school. Of this number, 80% (143) attend public school--74% with low vision and 26% with blindness--and 20% (40) attend residential school. The Jewish Institute for the Blind is the only residential special education school for students with visual impairments (and no other disability) in Israel. The Israeli Special Education Law (1988) favors mainstreaming or placing students with visual impairments in regular education classrooms, although it has not been established whether placements in public schools are preferable to special schools for these students (Hatlen, 2004).

The objectives of the study reported here were to compare the personal (self-concept and adjustment to blindness) and social (quality of friendship and social-emotional adjustment as assessed

by teachers) adjustment of students with visual impairments and their sighted peers and to examine differences in these measures according to the educational setting and type of disability.

Personal adjustment is defined as the structural organization of the self, the personality and the behavior unique to this personality. *Social adjustment* is defined as the structure and relations between an individual and his or her social environment (Dodds et al., 1994). Studies of adolescents with visual impairments have focused on components of social adjustment (Huurre, Komulainen, & Aro, 1999) or personal adjustment (Lopez-Justicia, Pichardo, Amezcua, & Fernandez, 2001).

Theoretical background

Self-concept is a system of beliefs and attitudes that individuals have about themselves (Francis, 1996). The *extrospective approach* (Festinger, 1954; Sullivan, 1953) views self-concept as a product of a person's social interactions and society's reactions to that person. The *introspective approach* (Fitts, 1965; Rogers, 1951) focuses on the consciousness that underlies the self-image, and is defined as a consistent cognitive model of a person's perception of his or her attributes, values, and interpersonal relations.

Some studies (Beaty, 1992; Lopez-Justicia et al., 2001) have found that adolescents with visual impairments may feel inadequate and inferior because of their lack of social acceptance, academic underachievement, and physical disability. Other studies (Gronmo & Augestad, 2000; Huurre et al., 1999) indicated that psychological development outcomes of many adolescents with visual impairment were similar to that of their sighted peers. A person who loses his or her sight undergoes extensive behavioral-motivational, cognitive, and emotional adjustments (Dodds et al., 1994). On the basis of the assumption that stress and depression are produced by conscious and cognitive processes, Dodds, Flannigan, and Ng (1993) developed the Nottingham Adjustment Scale, claiming that attitudes toward

blindness and acceptance of the impairment affect self-worth, which directs motivational components such as locus of control and attribution style (that is, the way in which the individual ascribes internal or external causes to events).

Friendship is defined as a relationship that necessitates mutuality and long-term stability (Hartup, 1993). It is a dynamic emotional and cognitive process that changes throughout life. Many adolescents with visual impairments are socially isolated; have smaller social networks; and spend their time in passive activities, such as talking on the telephone (Kef, 2002; Sacks & Wolffe, 1998).

Gronmo and Augestad (2000) and Kielly (1993) found that the self-concept and social adjustment of adolescents with visual impairments were similar in different educational settings. However, small samples, different scales, and gender and cultural differences make it hard to draw conclusions from these studies (Hatlen, 2004).

Method

PARTICIPANTS

The sample consisted of 41 sighted adolescents (aged 13-18) attending a public high school and 40 students with visual impairments (and no other disability). Of the 40 adolescents with visual impairments, 20 who were enrolled in public high schools (grades 9-12) were matched on a group basis to 20 aged 13-21 (grades 9-14) who were enrolled in a residential school. Of the participants, 32% ($n = 16$) were blind and 68% ($n = 24$) had low vision. The clinical and educational definitions of blindness and low vision in Israel are compatible with the U.S. definitions (Israel Ministry of Welfare, 2002; National Eye Institute, 2002).

The different age ranges of the students in the public school and residential school stemmed from the relatively small number of students in the residential school and the difficulty in matching

them by gender, age, academic level, and type of impairment with the students with visual impairments in the public schools and the sighted students. The need for a matched group has been confirmed in studies of people with physical disabilities (King, Chaters, Miller Polgar, MacKinnon, & Havens, 2000) or visual impairments (Gronmo & Augestad, 2000), as a result of the great variance among participants and the difficulty of matching them on various demographic variables.

The Israeli Education Ministry required that we distribute the questionnaires used in this study only to an entire class at once in the public schools rather than to each student individually. Therefore, 91 randomly chosen 9th- to 12th-grade students without disabilities answered the questionnaires, 41 of whom were chosen according to a match to the group with visual impairments according to gender, age, and academic level. All the students' families were classified as middle class. The students' academic levels in Hebrew, English, and mathematics were evaluated by the teachers as high (mean grade 85-100), medium (70-84), or low (below 70). Seven students with low academic levels were excluded, and those with medium and high academic levels were compared. No correlations were found between the study measures and chronological age. Thus, the fact that the sighted and mainstreamed students with visual impairments were distributed between four (9-12) and six grades (9-14) did not affect the results.

MEASURES

Personal adjustment

The self-concept of the students was measured by "I Am/He Is," an Israeli questionnaire (Glanz, 1981) validated on a population of 1,442 sighted students ($\alpha = .91$) and among blind students ($\alpha = .80$). This questionnaire was preferred because it has fewer items (38) and fewer choices for each question (a scale of 1-3) than other measures. The participants were presented with a figure that served as a model and were asked to evaluate

themselves in comparison to a statement attributed to this figure-- such as "He is healthy" (1, "I am not so healthy"; 2, "I am like him"; or 3, "I am very healthy"), with 114 being the highest possible score. The 38 items were divided into six categories: (1) personal self-concept of one's traits and activities, including physical and mental aspects of personality: 18 items (such as "He is smart" and "He is a kind person," $\alpha = .83$); (2) concept held by friends: 4 items (such as "His friends like him," $\alpha = .79$); (3) concept held by teachers: 3 items (such as "His teachers think he is a good student," $\alpha = .77$); (4) concept held by the father: 3 items (such as "His father likes him," $\alpha = .63$); (5) concept held by the mother: 3 items (such as "His mother likes him," $\alpha = .64$); and (6) attitude toward school: 4 items (such as "He thinks that learning is useful," $\alpha = .69$). The means of each category and of the entire sample were calculated. Glanz ranked the mean scores of self-concept as follows: 1.84, low; 1.86-2.13, balanced; 2.15-2.42, high; 2.44-2.71, very high; and 2.73, inflated.

Adjustment to blindness was measured by the Nottingham Adjustment Scale (Dodds et al., 1993, translated by Lifshitz, 1997), which was originally designed for adults, and Dodds et al.'s study (1994) was conducted among persons aged 21 and older. Dodd's permission to use this scale with adolescents was obtained. Of the 55 items, experts in visual impairment (the chief psychologist in the Education Ministry's Department of Visual Impairment, a school principal, and an academic scientist) selected 20 questions in three categories that are relevant to adolescents: (1) attitude toward blindness (7 items), such as "Blind people fail at most things they attempt" ($\alpha = .80$); (2) acceptance of the disability (9 items), such as "Because of the disability, I feel miserable most of the time" ($\alpha = .81$); and attribution style (4 items), such as "When things go wrong, it is because circumstances are beyond my control" ($\alpha = .81$). The answers were scored on a 5-point Likert scale, with higher scores indicating better adjustment to the disability.

Social adjustment

The Quality of Friendship Scale (Parker & Asher, 1993; Hebrew version, Margalit, 1995) was administered. The scale was validated on a population of 880 U.S. students in Grades 3-5 ($\alpha = .90$), as well as among students with learning disabilities (Margalit, 1995), intellectual disabilities, and attention deficit hyperactivity disorder (Heiman, 2005). Students with these disabilities exhibited a lower quality of friendship.

The 36 items were divided into six categories on a 5-point Likert scale (higher scores indicating a higher-quality friendship): (1) support and appreciation (9 items), including support and interest in the relationship ($\alpha = .83$); (2) confrontation resolution (3 items): fair and effective solution of confrontations ($\alpha = .67$); (3) confrontation and betrayal (6 items): argument and lack of trust in the relationship ($\alpha = .47$); (4) help and guidance (7 items, $\alpha = .83$); (5) spending leisure time together (5 items, $\alpha = .69$); and (6) intimacy (4 items): sharing intimate information ($\alpha = .73$).

The Teachers' Evaluation of Social and Emotional Adjustment Scale (Zwiebel & Weisel, 1989), designed for students with hearing impairments, was administered because of the absence of quantitative instruments for examining teachers' evaluations of students with visual impairments. Three experts in visual impairment adapted the scale to the study population by deleting two items that are relevant to deafness, by replacing the term *hearing impairment* with *visual impairment*, and by adapting items related to hearing impairment to visual impairment.

The 56 items, on a 4-point scale (from 1--not at all to 4--greatly) included the following categories: behavioral disorders (21 items, $\alpha = .92$; such as obeys rules and exhibits aggressive behavior); social relations (12 items, $\alpha = .87$; such as is accepted by his peers); emotional stability: self-image, neurotic symptoms (15 items, $\alpha = .81$; such as has phobias and is happy); and coping with the disability (10 items, $\alpha = .69$; such as refuses to form relationships with sighted students). Means were calculated for each category and for the entire questionnaire.

PROCEDURE

The sighted adolescents completed the self-concept and quality-of-friendship questionnaires during a 45-minute period in class. The second author read the self-concept, adjustment, and quality-of-friendship questionnaires to each student with visual impairment during a 90-120 minute session. The study's purpose was explained, and the participants were promised that their anonymity would be maintained.

Findings

DEMOGRAPHIC CHARACTERISTICS

The *t*-test yielded significant differences in the ages of the students with visual impairments ($M = 17.38$, $SD = 1.64$) and the sighted students ($M = 16.54$, $SD = .60$), ($F[1,79] = 3.09$; $p < .001$), as a result of the need to correlate the groups according to academic level. No gender differences were found between the groups or by visual status.

The academic achievements of the two groups in Hebrew, English, and mathematics were similar ($\chi^2 = .58$; $df = 1$; $p > .05$), with 45% exhibiting a high academic level ($n = 18$ in each group) and 55% exhibiting a medium academic level ($n = 22$ and 23 of those with and without a visual impairment, respectively). No differences were found in relation to visual status.

RESEARCH VARIABLES

Adolescents with visual impairments versus their sighted peers

A 2×6 multivariate analysis of variance (MANOVA) yielded significant differences in the overall self-concept ($F[1,79] = 12.65$; $p < .001$) and the six categories ($F[5,75] = 4.64$; $p < .001$) between the adolescents with and without visual impairments. A univariate analysis of variance (ANOVA) revealed significant differences between the groups in all categories except concept

held by the father (see [Table 1](#) and [Figure 1](#)).

The findings indicate the same profile for both groups. Concept held by the mother received the highest scores, whereas attitude toward school received the lowest. According to Glanz's (1981) ranking levels, six categories and the total score of the sighted participants were considered balanced. The total score and three categories of those with visual impairments were classified as high, and the other three were classified as balanced.

A 2×6 MANOVA indicated no significant differences between the groups in quality of friendship, $F(1,78) = .50; p < .05$. However, the MANOVA indicated significant differences for the six categories, $F(6,73) = 3.58; p < .01$. The univariate ANOVA (see [Table 2](#)) for each category showed that the scores for the participants with visual impairments on confrontation and betrayal and spending leisure time together were significantly lower than were those of the sighted participants.

Nottingham Adjustment Scale. A repeated-measures MANOVA among the three variables yielded significant differences, $F(2,38) = 45.92; p < .001$. A pairwise comparison test indicated significant differences between attribution style ($M = 3.94, SD = .83$) and attitudes toward blindness ($M = 2.50, SD = .96; F[1,39] = 79.63; p < .001$), between attribution style and acceptance of the disability ($M = 1.88, SD = .83; F[1,39] = 37.29; p < .001$), and between attitudes toward blindness and acceptance of the disability, $F(1,39) = 24.40; p < .001$.

Educational setting and type of impairment

The results did not demonstrate differences in the foregoing scales for type of impairment or educational setting. No significant differences were found in the teachers' evaluations of social and emotional adjustment in relation to visual status, $F(4,32) = 1.07; p > .05$. Significant differences were found in relation to educational setting, $F(4,32) = 0.61; p > .05$. A univariate ANOVA yielded higher scores for the students

attending public schools ($F[1,35] = 8.75; p < .01$) on the behavioral component ($M = 3.39, SD = .30; M = 3.00, SD = .45$); for the public and residential groups, respectively) and in the general score, $M = 3.23, SD = .28; M = 3.02, SD = .28; F(1,35) = 8.75; p < .01$.

Correlations between the research variables

A Pearson's correlation was performed for the research variables for the entire sample and for each group separately (blind, low vision, and sighted). Differences between the correlations for each group were compared using Fisher's Z transformation.

No significant correlations were found between the self-concept and quality-of-friendship categories for the participants with visual impairments. Significant correlations were found, however, between the general self-concept score and concept held by friends and coping with the disability (teachers' evaluation of emotional and social adjustment): $r = .33, p < .05$, and $r = .35, p < .05$, respectively; among personal concept, concept held by teachers, and concept held by mothers (Glanz, 1981) versus attribution style in the Nottingham Adjustment Scale ($r = .42-.58, p < .01$); and between confrontation and betrayal versus coping with the disability in the teachers' evaluation of social and emotional adjustment ($r = .41, p < .01$). A unidirectional MANOVA yielded no gender differences for the research variables. No correlations were found among age, academic achievement, and the research variables.

Discussion

The study focused on the personal and social adjustment of adolescents with visual impairments who are at the stage of formulating their personal and social identity while coping with salient issues, such as the permanence of their disability and its impact on their professional, familial, and personal future.

SELF-CONCEPT

Similar self-concept profiles were found for the adolescents with and without visual impairments in all categories, indicating a similar hierarchy of key figures for both groups. Both groups rated esteem by their mothers and teachers as higher than esteem by their friends, and rated esteem by their fathers as low. The ranking of attitude toward school as the lowest by both groups confirms the assertion that the importance of school decreases during adolescence (Cardinali & D'Allura, 2001).

Our results support those of others (Kef, 2002; Lopez-Justicia et al., 2001) that there are no differences in self-concept between sighted adolescents and those with visual impairments (no differences in gender and academic achievements were found between the groups, except for age; no Pearson's correlations were found between age and the study variables). The students had the same priorities and had normative orientations toward life as expressed in the study measures.

However, the scores of the participants with visual impairments were significantly higher than those of their sighted peers in all categories except concept held by the father. Social volition and defense mechanisms can serve as explanations for this phenomenon. Regarding social volition (Rothschild, 1970), the questionnaire was read individually to each student who was visually impaired. Exposure to the examiner may have led the students to present an ideal self-concept. However, the lower quality-of-friendship scores and the differences in scores in the self-concept domains refute the claim of social volition and indicate that the responses were genuine. Regarding defense mechanisms, people with disabilities may cope with feelings of inferiority by creating an ideal concept (Beaty, 1992), which is not always realistic but can raise their self-esteem. Furthermore, psychological problems (awareness of the permanence of the disability) may cause adolescents who are visually impaired to fear that they will pass the impairment to their offspring (Kroksmark & Nordell, 2001; Rosenblum, 2000). The higher self-

concept may be a way of dealing with these feelings.

Five categories and the total score of the sighted participants were defined as balanced (Glanz, 1981), whereas the total score and three categories (personal self-concept, concept held by the mother, and concept held by teachers) of those with visual impairments were classified as high and three were classified as balanced. The higher scores may be a consequence of the empowerment activities conducted by the Israeli Education and Welfare Ministries in residential and public high schools for students who are visually impaired, as well as guidance and training of the mothers and teachers of those students. However, caution should be used, since self-concept was not examined before and after these activities.

PERSONAL SELF-CONCEPT

The empowerment activities aim to reinforce the self-concept and self-esteem of students with visual impairments and encourage them to value themselves without reference to their disability. On the items "He is healthy" and "He is strong," the group with visual impairments rated themselves as stronger than and as beautiful or healthy as the sighted group. Their claim "What does all this have to do with blindness?" indicated a distinction between the visual impairment and physical dimensions. Their high scores may support Beaty's (1992) assertion that individuals with disabilities evaluate themselves in comparison to their peers, not to those without disabilities. Future research should examine the model used by those with visual impairments.

CONCEPT HELD BY MOTHERS AND TEACHERS

Mothers and teachers are taught to empower individuals with visual impairments and provide experiences of success. Further research on the attitudes of mothers toward their children who are visually impaired is needed. In addition, the participants assumed that their teachers' evaluation of them was high and positive, and the means on the teachers' social-emotional adjustment

questionnaire confirmed this assumption. The high scores in the three categories can also be explained by the association between self-concept and adjustment to the disability.

SELF-CONCEPT AND ADJUSTMENT TO THE DISABILITY

The participants exhibited lower scores on attitudes toward the disability and acceptance of the disability, whereas their scores on attribution style were significantly higher. Furthermore, correlations with the attribution style were found in the three categories of self-concept that yielded "high" scores according to Glanz (1981).

Regarding attitudes toward blindness, the participants agreed with the claim that "most people with visual impairments believe that loss of vision is the worst thing that could happen to them." As for acceptance of the disability, they agreed that "the problem of seeing prevents me from doing many things." Low acceptance of the disability does not reflect denial of its existence (Beaty, 1992). Rather, it indicates awareness of the barriers it causes. However, the participants' scores on attribution style indicated an internal control and adaptation to the disability: "When things go wrong, it's not because circumstances go beyond my control." Dodds et al. (1994) found significant correlations between attribution style and internal self-worth. Our findings confirm their assertion of an association between self-esteem and coping with the disability, although self-concept in our study was measured by another scale.

The higher scores on attribution styles and in the three self-concept domains can be explained by the resilience effect. Resilience refers to a pattern of positive adaptation in the face of significant risk or adversity (Garmezy & Matsen, 1994). It indicates that a person is "doing OK" and that a significant risk has to be overcome. Children and adolescents with various types of disabilities, such as mental illness and cerebral palsy, succeed in adapting to life in spite of the risk of adversity (King et al., 2000).

Specht, King, and Francis (1998) stated that individuals experiencing difficulties with growth may transform this experience into a positive view that is expressed by their self-concept and the labels they use to describe themselves. Without using the term *resilience*, studies (Huurre & Aro, 1998; Komulainen & Aro, 1999; Kef, 2002) found that psychological outcomes such as self-esteem and psychological adjustment of adolescents with visual impairments did not differ from that of their sighted peers. One can argue that this high self-concept may lead to a rude awakening later in life. However, it may also provide strength to cope with life's demands despite the disability. Further research on the resilience effect in a population with visual impairments is recommended.

Nevertheless, empowerment activities conducted in facilities of adolescents with visual impairments should aim to balance the adolescents' self-concept. Dodds et al. (1994) presented a five-stage model for accepting disability: empowering self-esteem; creating positive attitudes toward the disability by receiving accurate information on the impairment; helping individuals to perceive themselves as having control over their actions; helping individuals to accept their disability; and helping individuals to increase their self-efficacy. A balanced self-concept will help the individual cope with the disability in the present and in the future.

QUALITY OF FRIENDSHIP

Both groups exhibited similarity in four of six subscales. However, the sighted adolescents scored significantly higher on spending leisure time together and on confrontation and betrayal than did those who were visually impaired. These findings confirm Sacks and Wolffe's (1998) findings of a low quality of friendships and social interactions among adolescents with visual impairments, whose inability to use nonverbal communication makes it difficult for them to acquire social skills.

Hartup (1993) argued that a certain level of confrontation and

betrayal is essential for a healthy friendship. However, confrontation may threaten the security of a friendship. The social relations of individuals with visual impairments involve a certain amount of dependence. The lower level of confrontation and betrayal found in this group may reflect their fear of losing their friends. However, confrontations and betrayal correlated with coping with the impairment (on the teachers' adjustment questionnaire); that is, the higher the participants' confrontations and betrayal scores, the higher their score on coping with the impairment. Further qualitative research is necessary to elucidate this population's concept of friendship.

EDUCATIONAL SETTING

The small sample may explain the lack of differences between the school settings. However, similar findings have been reported (Gronmo & Augestad, 2000). Inclusion has not succeeded in providing adolescents with visual impairments with a personal network similar to that of sighted adolescents (Hatlen, 2004; Kef, Hox, & Habekothé, 2000). Harter's (1990) competence motivation theory argues that the quality of the individual's behavioral and emotional experience, not the educational setting, affects the individual's self-concept. The residential and mainstream settings that were studied are not diametrically different, since students in both settings meet peers who are sighted or visually impaired. Thus, the two groups gave similar responses for self-concept and attitude toward disability. However, the students with visual impairments in public schools received higher scores on the total and the behavioral category in the teachers' adjustment questionnaire than did those in the residential school. Their interaction with sighted students apparently affects their behavior. A larger sample is needed to confirm these results.

VISUAL STATUS

The small sample may explain the absence of differences by visual status, although other forces may be at play. King et al.

(2000) noted that coping with a disability affects stress and depression more than does the severity of the impairment. When choosing a friend, the participants who were visually impaired placed greater importance on the level of independence than on the degree of the impairment. They preferred an "independent" blind friend who is competent and well adjusted to a "dependent" friend with low vision. Further research is needed to support this finding.

Conclusion

Similar self-concept profiles were found for the groups. However, the scores of the adolescents who were visually impaired were significantly higher than those of the sighted adolescents, except for concept held by the father. A sociometric study of social acceptance should be conducted, parallel to the self-concept and parents' attitudes toward their low-vision offspring, to examine whether their self-concepts are realistic. The reference groups used by the participants when forming their self-concept--a sighted group or a group of similar peers--should be clarified.

This study had several limitations. First, the questionnaires were read individually to the students with visual impairments by the examiner, which may have led the students to present an ideal self-concept. Second, although age was not correlated with the study measures, homogeneous ages are recommended in future studies. Third, the study yielded higher scores on attribution style (adjustment to blindness) than on the two other subscales; thus, further research on this population's resilience is recommended. Fourth, a larger sample will also expand knowledge about differences that are due to educational setting and visual status.

The quality of friendship of adolescents with visual impairments was found to be lower than that of the sighted adolescents in two categories. Interventions aimed at fostering protective factors, such as effective problem-solving skills, good coping abilities, and realistic expectations and demands, will enhance the self-

worth and resilience of adolescents with visual impairments (King et al., 2000). The pre- and posttest effects of such interventions should be examined.

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