Sociometry and Educationally Handicapped Children

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ABSTRACT. Sociometry is presented here as a useful method both for understanding peer relations and assisting in the development of intervention plans for educationally handicapped children. I provide descriptions of my previous research investigations with deaf and severely emotionally disturbed youth and then offer applied case examples drawn from my practice as a school psychologist. I conclude that sociometric assessments, given their advantages, are well suited to assist educators in meeting the challenges of school change.

HARTUP (1989) CONCEPTUALIZED close human relations as divided into two major groups: vertical or horizontal relationships. Vertical relationships are characterized by unequal power or position, such as parent and child or teacher and pupil. Horizontal relationships are those relations between people of roughly equivalent social power that most often include reciprocity and egalitarian expectations. Both forms of human relations are critical to healthy human development. My concern in this article is with horizontal relations, which provide a staging area for the development of companionship, close friendship, and love.

In my work as a school psychologist, I find that the children's most frequent complaints concern friendship difficulties. Specifically, these concerns may be described as too few friends—"I only have one friend in this school," the absence of friends—"nobody here likes me," peer rejection—"I am teased and bothered," or dissatisfaction with one's social position—"I'm not popular." My work with these children involves finding answers to these questions: How are we to understand these concerns, and, even more pertinent, how are we to help these children?

To understand the nature of these concerns and assist practitioners in offering helpful approaches for youngsters with problematic peer relations, Gresham and Elliot (1984) reviewed available social skills assess-

ment procedures. They concluded that only sociometric measures and ratings by others (teachers, parents, and peers) can provide reliable and valid assessments of a child's social position. Other widely used methods, such as child interviews, are of limited value. Indeed, I often find that children are quite confused about why "nobody likes" them or "people are always bothering" them. Classroom observation is generally of only limited value in these matters. Although an observation in a school's cafeteria or playground might provide some clues, the subtle nature of peer relations is not easily detected by behavioral observations. This is especially true for the youngsters who are ignored, not rejected, by their classmates.

The value of sociometric measures as predictor of future life-adjustment difficulties has been frequently noted in the literature. A comprehensive review performed by Parker and Asher (1987) concluded that socially rejected children are more likely to drop out of school, engage in criminal behavior, and exhibit adult psychopathology. In addition to its use as an indicator of social–emotional adjustment, sociometric measures have been used to assess the acceptability of minority children (Singleton & Asher, 1979) and handicapped children (Kennedy & Bruininks, 1977; Kistner & Gatlin, 1989; Morgan, 1977). Sociometric status has been viewed as an indicator of the possible success of mainstreaming and as a useful indicator of handicapped children in need of intervention (Ballard, Corman, Gottlieb, & Kaufman, 1977).

My interest in sociometric measures involves their use as methods of assisting us in understanding the social relations of groups of exclusively handicapped children, in particular the deaf and severely emotionally disturbed. I will discuss my recent use of sociometric assessment as part of conducted child evaluations of four youngsters within a second-grade classroom. In each case study, I believe sociometric assessment offers an effective means of understanding the social life of a group not easily studied by other methods.

Sociometric Methods

The two most widely used sociometric methods are peer nomination and a rating scale. The first method asks that students select three same-sex peers they would most like to associate with in a particular situation such as one at play, at work, or in a friendship (positive nomination). Then, students select least-liked peers, using the same situations (negative nomination). Coie, Dodge, and Coppotelli (1982) provided an excellent description of this method and explained the derivation of five

sociometric classifications: popular (numerous positive nominations), rejected (numerous negative nominations), neglected (few nominations), controversial (numerous positive and negative nominations), and average (remaining students). A second widely used method is that of a rating scale that presents students with a random listing of their classmates' names. They are first instructed to cross out their own name. Next, students are requested to rate each student, usually only same-sex children, based on their liking of that student, from 1 (low) to 5 (high) or some other range. These points on the rating scale may be anchored with a facial expression, for example, frown (1) to smiling (5), or with verbal descriptors.

In conducting my research, I selected the How I Feel Toward Others (HIFTO) sociometric device reported by Morrison (1981). This rating scale was developed for use with mentally retarded youngsters, and I found it was useful first in my work with deaf and later with severely emotionally disturbed youth. The HIFTO requires that students respond to a query about each of their classmates with one of four possible choices: not acquainted with the classmate (don't know), dislike the classmate (dislike), do not care one way or another about the classmate (neutral), and like the classmate (like). Each of the choices corresponds to a circular face with a either a question mark, a frown, a straight mouth, or a smile. With these collected peer ratings, one can derive percentage scores for each student on the four response categories, resulting in measures of acquaintance, rejection, tolerance, and acceptance. Also, each student may be assigned a weighted sociometric rating using the following point system: 3 = like, 2 = neutral, and 1 = dislike. The student's sociometric average is computed by dividing the number of points by the number of nominators minus one, excluding all don't know ratings from the computation.

One difficulty in using a sociometric device with the deaf is their very poor reading skills. Teachers at the site of my study were doubtful if their deaf students would be able to read the names of their classmates. Fortunately, the school where the study was conducted had available color photographs (3 cm × 5 cm) of each student left over from the school's yearbook photographs. I was able to place each photograph in a coin holder with the student's name typed underneath. Students were then presented with their classmates' pictures in a random order, their own photograph having been excluded, and instructed to sort the photos on a poster sheet into the four HIFTO categories. The HIFTO was administered to each student individually by a person skilled in sign language. Although administering this measure to over 200 students was a lengthy process, it did go very smoothly. I can recall very few difficulties, as students seemed to grasp immediately the nature of the task and easily sorted their classmates photos into the four categories.

Later, I used the HIFTO with severely emotionally disturbed adolescents. In this case, students were asked to circle a particular response. I met the students in small groups of 6 to 10 and read aloud each of their classmates' names, while students followed along in silence, circling their choice. I carefully monitored student responses to ensure that they did not lose track of their places as they moved down the roster listing of 62 students. I found that heavy double lines between each rated student were very useful. Once again, despite its use with students who had substantial educational and emotional handicaps, I found that the sociometric measure was easily understood by the students and did not present any administration difficulties. Last, I administered both the HIFTO and a peer-nomination measure to a second-grade class, and again the administration went very smoothly. I must note that other typically used paper-and-pencil methods, such as questionnaires, would have presented a variety of problems and even been of questionable value for each of these groups of students.

Sociometry and Deaf Children

The site of my investigation was a school for the deaf serving youngsters from preschool age to 18 years. I was interested in the possible differences among accepted and rejected students, using this exclusive population of deaf students (Hagborg, 1987). I also wanted to explore possible differences in sociometric status with reference to placement (day vs. residential), gender, and race. The school's enrollment was approximately 50% day students, and 20% of the students were minority (Black and Hispanic).

Comparing sociometric extremes of accepted and rejected children identified by the HIFTO average scores, I found that accepted students more often were female and exhibited a superior social-emotional adjustment, based on teacher ratings using the Behavior Problem Checklist (Quay & Peterson, 1979). These groups did not differ on socioeconomic status, placement, intelligence, academic skills, and oral communications skills (intelligible speech/lip reading). Using correlational findings with the entire sample, I did find a pattern of correlations that is consistent with earlier sociometric research. Small but significant correlations were found between the HIFTO and socioeconomic status, placement (positively related to residential placement), intelligence, and academic skills. In subsequent   using only upper school adolescent students, I examined soc   tings pertaining to gender and race

(Hagborg, 1989). Once again, the sociometric ratings were consistent with other findings with hearing samples (Singleton & Asher, 1979). Female students received higher ratings by both male and female students, a finding that I attributed to their superior social–emotional adjustment, as evidenced by teacher ratings on the Behavior Problem Checklist. Next, I found that White students exhibited a sociometric preference (higher scores) for same-race students when compared with cross-race (minority) students, whereas a significant racial preference was not found for minority students. This finding is consistent with earlier research with hearing children on racial preferences. Hartup (1970) reported that the racial group with the larger numbers, regardless of race, most often exhibits a same-race preference when compared with the racial group with fewer numbers.

Using a sociometric measure, I was able in this investigation to provide a global view of peer relations within a sample of deaf children. Consistent with previous research with hearing youth, social acceptance was found to be based largely on social–emotional adjustment, gender, and, to some extent, race. Characteristics such as socioeconomic status, placement, intelligence, and academic skills were of lesser importance, and a student's oral communication skills were unimportant.

Sociometry and Severely Emotionally Disturbed Adolescents

I conducted an investigation at a school serving severely emotionally disturbed youth because I was curious about youngsters who found themselves frequently in need of crisis intervention or, more specifically, were briefly removed from their classroom (Hagborg, 1988). Beyond their problematic behavioral adjustment, I was interested in the possible contribution of social rejection. Could it be that social rejection was exacerbating the behavioral adjustment of many of our students, thereby resulting in more frequent instances of crisis intervention?

Along with student background characteristics (e.g., IQ and standardized achievement scores), I collected the teachers' ratings from the Revised Behavior Problem Checklist (Quay & Peterson, 1987) as a measure of behavioral adjustment and administered the HIFTO. Using stepwise multiple regression analysis, with crisis intervention instances serving as the criterion or dependent variable, I found that sociometric status (rejection scores) did make a significant contribution to the explained variance of crisis intervention. Later, I investigated the relationship between teacher ratings on the RBPC and intelligence, academic achievement, and sociometric status (Hagborg, 1990). As I found previously with nonhandicapped children, students' conduct problems and imma-

turity were significant correlates of sociometric status. However, with this sample, I also found that children's psychotic-like behavior and excessive motor activity resulted in lower sociometric ratings.

With the use of the HIFTO, this investigation demonstrated the importance of peer rejection as a contributor to instances of acting-out behavior. This finding suggests that practitioners working with these youngsters should consider both the social circumstances of the acting-out youngster as well as the youth's behavioral needs. Typically, schools serving emotionally disturbed youth use behavior modification procedures that focus on individual behavior plans or contracts, with accompanying individual consequences, neglecting the possible role of peer relations. This investigation supports the examination of the role of a student's social milieu as a contributor to his or her acting-out behavior. My other findings indicate the importance of the wide range of psychopathology as it may relate to social acceptance among severely emotionally disturbed youth.

Sociometry and Public School Children

During the past academic school year, I was asked to provide the psychoeducational assessments of four different children from a single second-grade classroom. As part of these evaluations, I requested that the classroom teacher complete a Conners Teacher Rating Scale (Conners, 1989) on each evaluated child. Also, to further assist us in understanding their social–emotional needs, we performed both peer nomination and rating scale sociometric assessments for this class. The teacher's Conners scores and the sociometric assessments for these four children are listed by pseudonyms in Table 1.

Jane was described by her teacher as a perfectionist who demanded of herself a near-perfect performance on all academic tasks. Because Jane's parents were not placing excessive demands on her, Jane's difficulties were attributed to her personal style or temperament. Evidence of an educational handicap was not found. These covert difficulties did not appear to impair her overt social functioning because she was viewed by her classmates as a valued friend. The other three children were each socially rejected by their classmates. Although they were similar in this regard, other findings suggest three quite distinct patterns of school adjustment. Mary was found to be frequently off task during class, engaging her classmates in a wide range of attention-getting, socially immature behaviors. Mary's difficulties were quite evident during the classroom observation. The evaluation found that Mary was a slow learner (WISC—III Full Scale IQ of 78), and, although not educationally handi-

TABLE 1
Conners Teacher Ratings and Sociometric Status
of Four Second Graders

Student	Conners Teacher Ratings Scales							Sociometric status	
	H	CD	AP	EO	A	DA	HI	Category[a]	Average[b]
Jane	46	45	81	68	55	43	42	Popular	2.78
Mary	92	100	57	77	81	73	90	Rejected	1.72
John	64	74	54	76	73	71	64	Rejected	2.11
Tom	80	75	46	74	70	56	75	Rejected	1.95

Note. Conners subscales' names: H—Hyperactivity, CD—Conduct Disorder, AP—Anxious/Passive, EO—Emotional Overindulgent, A—Asocial, DA—Daydream/Attendance, and HI—Hyperactivity Index. Scores shown are standard scores ($M = 50$, $SD = 10$). [a]These status category classifications are based on the Coie et al. (1982) system. [b]The mean sociometric rating scale score for this class was $M = 2.27$ ($SD = .36$).

capped, she was overwhelmed by the academic demands presented by her teacher.

John's difficulties were far less evident within the classroom. However, in the less structured playground or cafeteria, John would often become demanding, refusing to cooperate with peers, and at times even aggressive. Exploration of John's behavior revealed that he often misread social situations and was convinced that others were unfair to him. In general, he was not a classroom behavior problem, yet he was seen as an undesirable play or work partner by his classmates. John was found to have a reading disability and was classified as learning disabled. Tom was an extremely aggressive youngster. He was physically restrained on several occasions by the school's principal and was feared by most of his classmates. Tom was classified as emotionally disturbed and was eventually moved to a self-contained, special education placement.

These brief case illustrations demonstrate the possible value of sociometric measures as well as their limitations. Despite Jane's perfectionistic style, she displayed strong social skills and was accepted by her classmates. Our intervention for her focused on the development of more reasonable expectations, and we consulted and provided advice to her parents. Mary's social rejection came as somewhat of a surprise to her teacher. Based on the other evaluation findings, we concluded that her immature behaviors, which both distracted and annoyed her classmates, were in fact secondary to her academic difficulties. Essentially, Mary had

been asked to complete school work well beyond her skill levels, and she responded with avoidance and immature behaviors, resulting in peer rejection. In Mary's case, our intervention began with the making of several adjustments to her academic program. John's social rejection, which was most evident on the playground, appeared to be a part of that often-noted cluster of interpersonal characteristics of learning-disabled children (Swanson & Malone, 1992). Social skills training was recommended, focusing on these skill areas: listening, joining with others, and taking turns. Finally, Tom's social rejection was seen as part of a much larger picture of severe conduct problems. Tom had a long history of behavior problems that were recently intensified by acute family difficulties. Along with a change in educational placement, his family was to be seen in family therapy.

Although Tom's social rejection was quite obvious to his teacher, the social status of the other three students was far less evident. Thus, the sociometric assessment brought to our attention the problematic relations of two students and the strengths of another student. In order to work toward specific interventions for each student, I needed further assessments. The origins of the social rejection of each of these children were found to reside in three different sources, eventually leading to three quite different interventions.

Beyond the Sociometric Assessment to Intervention

Sociometric tools provide important methods of understanding global peer relations. They are far too global, however, to offer a practitioner more specific concerns for intervention. Youngsters may be socially rejected or neglected for a variety of reasons, as we saw in the case examples cited in this article. Interventions should be tailored to specific concerns of each child. Too often I have found that counselors and psychologists propose groups for social skills, development based on a manual of social skills, to clusters of readily identifiable participants, such as emotionally disturbed or learning-disabled children (Hagborg, 1991). These students soon find themselves grouped with several "undesirable" classmates, working on social skills that may be unrelated to their particular needs. In my experience, these social skills groups usually meet with little, if any, success.

I recommend that practitioners begin with a global assessment, using a sociometric measure, and then move to identifying specific social skills through other evaluations that include teacher ratings, observations in less structured settings (e.g., school cafeteria and playground), and interviews with peers. I, in fact, have found interviews with peers especially

enlightening. A socially competent peer can often provide a variety of examples of a classmate's problematic social behavior. With this information, a more fine-grained analysis would be derived that would include precise descriptions of the circumstances (e.g., school bus, by the lockers) and the particular behavior (e.g., talks too loud, makes embarrassing remarks, uses humor inappropriately, ignores comments of others, interrupts conversations of others). The practitioner is then ready to begin appropriate intervention.

In selecting an intervention program, practitioners can proceed in one of two directions, using either a "pull out of class" intervention or a "leave in class" intervention. One example of a pull-out intervention is provided by Bierman and Furman (1984). They began with a sociometric assessment to identify youngsters with low social acceptance. These children were then observed in peer-group interactions, and only those youngsters with weaknesses in conversational skills were selected for intervention. The intervention focused on conversational skills, with the therapist working in a small group with each targeted youngster and two randomly chosen same-sex classmates rather than other socially incompetent children. The crucial features of this successful social skills intervention were instruction, modeling, behavioral rehearsal, performance feedback, and generalization. A second approach provides an intervention within the child's class, using cooperative learning procedures. Ballard et al. (1977) suggested this form of intervention, using small cooperative groups to enhance the social acceptance of educable mentally retarded (EMR) children. The ingredients of successful cooperative learning are fivefold: positive interdependence, face-to-face promotive interaction, individual accountability, interpersonal skills training, and group processing (Johnson, Johnson, & Holubec, 1990). The advantage of using a leave-in intervention is the far greater likelihood of the child's generalization of behaviors to a wider range of peer relations.

As schools move to abandon tracking and increase mainstreaming for handicapped children, it is quite evident to me that school practices must be substantially altered. The more traditional instructional approaches that depend on large-group teaching methods, following a lockstep curriculum with rigid performance expectations, will only ensure failure for many youngsters who were previously confined to special education classes or low-track educational programs. Given the crucial place of social-emotional engagement (Wehlage, Rutter, Smith, Lesko, & Fernandez, 1990), successful educators need to be aware of the social contours of their class groupings. Sociometric assessments can be a place to begin to sort out and understand student relations, assisting teachers and counselors in the development of effective work groups. Then, with the

use of more varied instructional methods and evaluation procedures, schools can begin to develop communities of learning.

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Physical Attractiveness, Social Skills, and Same-Sex Peer Popularity

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ABSTRACT. We completed three studies to assess the amount of variance contributed by facial attractiveness and social skills to the prediction of same-sex popularity. Study 1 was an observational investigation that examined the influence of facial attractiveness, visual attention, and dispensing and receiving positive, neutral, and negative behaviors for peer popularity. Study 2 was a replication-extension that added teacher assessments of social skills and competencies. Both investigations used preschool-aged children. Study 3 included kindergarten, fourth-, and seventh-grade children and extended the investigation to a larger age range. As we hypothesized, facial attractiveness, social competence, and antisocial behaviors predicted same-sex peer popularity. For both boys and girls, social competence most strongly predicted popularity. Although developmental age differences were anticipated, only two nonsignificant trends were observed. We discuss our findings in terms of the social power of attraction, expulsion, and action.

CONSIDERABLE EVIDENCE INDICATES that the degree to which one is liked or valued by peers has important ramifications for understanding social behavior and individual development (Asher, 1983; Coie & Dodge, 1983; Coie & Kupersmidt, 1983; Putallaz, 1983; Rubin, 1985). Long-term effects of a child's popularity are increasingly being documented (e.g., Cowen, Pederson, Babijian, Iszzo, & Trost, 1973). For example, one extensive review of the literature (Parker & Asher, 1987) concluded that unpopularity during childhood is predictive of later maladjustment.

Two separate lines of research have focused on the study of peer popularity in early childhood. Social psychologists have studied the role of physical appearance in influencing likability or desirability as a friend or playmate. Developmental psychologists have examined the role of social skills in predicting peer popularity. Numerous studies (e.g., Dion, 1973; Dion & Berscheid, 1974) have disclosed that a child's attractiveness plays
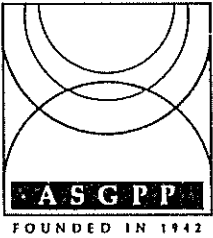
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