

Making Related Service Decisions for Students with Severe Disabilities: Roles, Criteria, and Authority

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Effective delivery of related services requires a shared framework for decision making among educators, related service personnel, and families. This framework may be characterized by (a) the roles of related service professionals, (b) the criteria used to make related service decisions, and (c) the authority for making decisions. Differences among team members regarding roles, criteria, and authority may impede the development of a shared framework, while similarities may provide foundations upon which to advance collaborative efforts and appropriate services.

Identification of similarities and differences regarding roles, criteria, and authority were explored using a questionnaire distributed to parents, special education teachers, occupational therapists, physical therapists, and communication specialists who served students with severe disabilities in public schools. Comparisons were made using one-way ANOVA and Scheffé post hoc comparisons. Interpretations of results focus on conceptualizations for viewing roles, criteria, and authority regarding the provision of related services for students with severe disabilities.

DESCRIPTORS: decision-making, occupational therapy, physical therapy, related services, research, service delivery, speech therapy/pathology, teaming

For more than a decade Public Law 94-142 has focused national attention on the need for partnerships among various professional disciplines and teamwork in order to deliver appropriate services to children with handicapping conditions (McCormick & Lee, 1979; Orelove & Sobsey, 1987). Sirvis (1978) suggested that

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such cross-disciplinary relationships represented both a solution and a problem. Although *related services* (EHCA, §1401 [17], 1975) were designed to enhance appropriate educational programming, the involvement of many disciplines (e.g., occupational therapy, physical therapy, speech/language pathology) also has resulted in problems associated with coordination and decision making. Peterson (1980) echoed this concern, explaining that as the severity of a disability increases, so may the need for more and different related services. As the number of professional group members increases, so does the complexity of coordination and decision making. Despite the fact that decision making and coordination of educationally related services are widespread concerns, research is unavailable on these topics regarding students with severe disabilities, presumably the population most likely to require such supportive services.

Literature regarding the roles of related service providers indicates consistency between the Code of Federal Regulations (CFR 1987, §300.13) and national organizations representing major constituency groups such as the American Occupational Therapy Association (1983, 1987), American Physical Therapy Association (1985), American Speech-Language-Hearing Association (1984, 1985), and The Association for Persons with Severe Handicaps (1989). The roles most prominently cited include (a) prevention of regression, deformity, and/or pain; (b) promotion of normal developmental sequences; (c) remediation/restoration of identified deficits; (d) development of adaptations and/or equipment to encourage functional participation; (e) facilitation of functional skills and activities; (f) reciprocal consultation with colleagues; (g) removal or modification of barriers to participation; (h) provision of resources and supports to families; (i) service as a liaison between the medical community and school personnel; and (j) service as an advocate for students.

Agreement among team members regarding role perceptions can offer a basis for shared decision making, while disagreement can pose a barrier to effective group functioning (Bray, Coleman, & Gotts, 1981). Disagreements regarding roles primarily have been associated

with lack of role clarity (Albano, Cox, York, & York, 1981; Bray et al., 1981; Fenton, Yoshida, Maxwell, & Kaufman, 1979; Hutchinson, 1978). Magrun and Tigges (1982) caution that isolated satisfaction with one's own role identity may promote separation among group members rather than facilitating collaboration. This realization emphasizes the importance of developing an interdependent set of roles among group members to establish productive teamwork (Hutchinson, 1978).

Group members employ various criteria for making decisions regarding service delivery issues such as eligibility for related service, frequency of service, and mode of service (e.g., direct, indirect, combinations). A literature review regarding decision-making criteria yielded agreement regarding the importance of considering the impact of related services on a student's educational program. This agreement is consistent with the mandate of the federal law to provide related services if they are "... required in order to assist a handicapped child to benefit from special education" (EHCA, §1401 [17], 1975). Review of the literature uncovered divergent opinions regarding the appropriateness and application of other frequently mentioned criteria, including (a) age, (b) history and prognosis for remediation, (c) level of intelligence, (d) severity of impairment, (e) parental involvement, and (f) overlap among services (AOTA, 1984, 1987; APTA, 1985; Carr, 1989; Effgen, 1984; Shannon, 1977; Sternat, Messina, Nietupski, Lyon, & Brown, 1977) (see Giangreco, 1989b, pp. 58-92 for an in-depth summary).

Regardless of the roles or criteria used in decision making, someone or some group must actually make the service delivery decisions. Some people support the position that professionals should retain authority about decisions relating to their discipline based on the belief that specialists have expertise in their field, inferring that others are not qualified to make such decisions. An alternative view of decision making is that consensus should be reached among professionals and consumers based on an examination of the interrelationships among their recommendations (Pfeiffer, 1982).

Roles, criteria, and authority beliefs represent a core set of issues that comprise decision making. Existing literature regarding these topics is dominated by unsubstantiated opinion. Descriptive and experimental data regarding related service decision making for students with severe disabilities are absent from the professional literature, thus precluding any data-based generalizations that can be applied by practitioners. Additionally, the few unvalidated models that do exist to assist groups in making related service decisions are limited by their focus within single disciplines such as occupational or physical therapy (AOTA, 1987; Carr, 1989; Effgen, 1984). Such unidisciplinary decision making typically does not account for the interdependencies among dis-

ciplines, thus increasing the likelihood that decisions made by each discipline individually will result in overlaps, gaps, or contradictions in service delivery recommendations.

The purpose of this study was to initiate the development of a descriptive data base by identifying the similarities and differences among the self-reported perceptions of parents, special education teachers, occupational therapists, physical therapists, and communication specialists regarding (a) roles, (b) criteria, and (c) authority used for making decisions regarding the provision of occupational, physical, and speech/language therapy as related services for students with severe disabilities.

Clarification of similarities and differences may assist parents and professionals as they attempt to develop a shared framework to make service delivery decisions for students with severe disabilities. Differences can be used by team members to understand better individual perspectives. Pinpointing the nature of group dysfunction would be essential if groups plan to implement strategies directed toward the development of a shared framework for decision making (Bailey, 1984). Similarities can be sources of support and agreement to bridge identified gaps within groups. Collaborative planning, implementation, and evaluation are unlikely to occur without the development of a shared basis for decision making. Such decision making may be reflected in a common understanding of the roles related service providers play in educational programs, the criteria used by the various group members to make decisions, and agreement regarding who shall retain authority for decision making. Although emerging agreement about related service roles, criteria, and authority will not necessarily ensure constructive group functioning, such an outcome would be less likely to occur in its absence.

Method

Subjects

Subjects included parents ($n = 58$), special education teachers ($n = 100$), occupational therapists ($n = 46$), physical therapists ($n = 37$), and communication specialists ($n = 71$). Parent subjects were at least 21 years old and had a school-aged child identified as "severely handicapped" (Brown et al., 1983, p. 77). These students received their education in regular classes and/or in self-contained special classes in schools predominantly attended by nonhandicapped students. Children of parent subjects received at least two of the three related services addressed in the study (i.e., occupational, physical, and speech/language therapy). Professional subjects (i.e., special education teachers, occupational therapists, physical therapists, and communication specialists) were certified in their area of specialty and worked full time with students identified as having

severe disabilities or part time in the case of itinerant related service personnel.

Design and Data Collection

A voluntary sample was surveyed using a questionnaire distributed by mail (Borg & Gall, 1983) to identify potential differences and similarities regarding related service roles, decision-making criteria, and decision authority. Lists of rural, urban, and suburban school systems that provided special education services in general education schools were obtained from two eastern state education departments. Twenty school systems in these two states participated in the study.

The study included parents and professionals from six urban school districts with community populations ranging from 35,000 to over 1,000,000. The remaining subjects were from 14 suburban and/or rural educational cooperatives representing 249 individual school districts.

A contact person at each site distributed the survey materials to appropriate personnel. Each teacher was given one additional survey to send home to a randomly selected parent who matched the parent subject qualifications. Respondents were instructed to return the completed questionnaire in the self-addressed stamped envelope that was provided to them. A total of 775 surveys were to be distributed.

Instrumentation

A questionnaire was developed based on (a) literature review, (b) 36 semi-structured interviews with parents and professionals, (c) 10 semi-structured interviews with national experts, and (d) pilot testing with a convenient sample of 20 persons from the respondent groups.

The finalized questionnaire included the following sections: (a) background information; (b) related service role perceptions; (c) decision-making criteria; (d) decision authority; and (e) comments (open narrative). Using a 10-point Likert-style scale, "1" was anchored with the phrase "Strongly Disagree" while "10" was anchored with the phrase "Strongly Agree."

Respondents used the 1 to 10 scale to indicate their level of agreement with 10 role statements. Subjects responded to the statements "Within the context of assessment, planning, implementation, and evaluation, an important role for specialists (i.e., OT, PT, SLP) serving students with severe handicaps in public schools is (a) prevention of regression, deformity and/or pain; (b) promoting normal developmental sequences; (c) remediation/restoration of identified deficits; (d) developing adaptations and/or equipment to encourage functional participation; (e) facilitation of functional skills and activities; (f) reciprocal consultation with colleagues; (g) removing or modifying barriers to participation; (h) being a resource and support to families; (i) being a liaison between the medical community and the school team; (j) serving as an advocate for students."

Statements on the survey regarding criteria were asked with directionality based on opinions reflected in the literature. Subjects responded to the statements "When making decisions about the provision of related services for a student with a severe handicap, such as eligibility for related services, frequency of service, and type (direct by therapist or consultation) (a) The younger the age, the more important it is for the student to receive services; (b) The more favorable history and prognosis for remediation, the more important it is for the student to receive services; (c) The higher the level of intelligence, the more important it is for the student to receive services; (d) The more severe the impairment, the more important it is for the student to receive services; (e) The more the related service is required in order for the student to benefit from his/her educational program, as defined by the IEP goals, general curriculum, and management needs related to instruction, the more important it is for the student to receive services; (f) The greater the probability of parental involvement, the more important it is for the student to receive services; and (g) The more a specialist's skills are needed for student support but are not possessed by other team members (absence of skill overlap), the more important it is for the student to receive the services of that particular specialist."

Last, the study explored the decision-making authority perceptions of parents, special education teachers, and related service professionals regarding related service delivery. Subjects responded to the statements (a) "Specialists (i.e., OT, PT, SLP) should share their recommendations with team members (including family) for their consideration, but specialists should retain final decisions regarding their own discipline; and (b) Specialists and team members (including family) should make recommendations based on group consensus where no one team member has more decision-making power than another."

Data Analysis and Display

Similarities and differences among the subject groups were explored using one-way analysis of variance (ANOVA). The General Linear Model (GLM), Type III, was used to calculate the ANOVA using the *Statistical Analysis System* (SAS, 1985). Any time a repeated series of statistical tests, in this case ANOVA, are conducted on the same data set, the probability of committing Type I errors increases. Known as *experimentwise error rate*, this problem can be addressed by applying the assumptions of Bonferroni inequality (Howell, 1987, p. 339). The Bonferroni adjustment to control for experimentwise error rate consists of dividing the alpha level by the number of variables on which ANOVA will be conducted to set a new, more stringent, alpha level. In this case $(.05/19 = .00263)$; therefore, only the *F* values with probability levels below .00263 were considered significant.

Post hoc analyses were conducted using the Scheffé test of multiple comparisons. In addition to its conservative nature, the Scheffé procedure was selected because it can be used to compare groups of unequal numbers (Kirk, 1982, p. 121) and for its usefulness in reducing experimentwise error rate (Glasnapp & Poggio, 1985, p. 477; Winer, 1971, p. 201). Returned questionnaires were excluded from analysis if they were (a) returned by persons from schools that exclusively served students with disabilities; (b) returned by persons not matching subject descriptions, such as teacher aides and certified occupational therapy assistants; or (c) filled out incompletely or incorrectly.

ANOVA and post hoc Scheffé data are displayed using a standard tabular format. Superscript letters positioned to the right of the standard deviation (SD) column indicate if groups are significantly different. Groups that share a common superscript letter are not significantly different. Conversely, if two or more groups do not share a superscript letter, it indicates that a significant difference exists.

Results

An overall response rate of 48% ($n = 374$) was achieved. Three-hundred twelve questionnaires were deemed eligible for data analysis. Due to the sampling procedures employed, the number of surveys received by the subjects is unknown; therefore, the reported response rate represents the most conservative estimate.

One-Way Analysis of Variance

Responses to the 19 role, criteria, and authority statements were examined using one-way ANOVA to determine if differences existed among the subject groups. After controlling for experimentwise error rate on the 19 ANOVA at the alpha level of .05 using the Bonferroni adjustment, 4 of the 19 statements had statistically significant F scores below the adjusted alpha level of .00263.

Roles of Related Service Providers

One-way ANOVA were conducted to identify potential differences among the subject groups in reference to the 10 related service roles. No significant differences were noted among any of the subject groups regarding role perceptions. Table 1 depicts rank-ordered mean scores and standard deviations for all role variables.

Criteria for Related Service Decision Making

One-way ANOVA were conducted to identify potential differences among the subject groups in reference to seven criteria used in related service decision making. Significant differences were noted among groups on the variables (a) favorable history and prognosis for remediation, $F(4,307) = 11.00, p < .0001$; and (b) higher level of intelligence, $F(4,307) = 18.68, p < .0001$ (see Table 2). As depicted in Table 2, parents differed from occupational therapists, communication specialists, and

physical therapists in reference to both variables (i.e., favorable history and prognosis for remediation, higher level of intelligence). Special education teachers differed from communication specialists on both variables (i.e., favorable history and prognosis for remediation, higher level of intelligence). It is interesting to note that on the variable favorable history and prognosis for remediation, special education teachers differed significantly from communication specialists, but not from physical therapists who had a higher mean score (7.97) than the communication specialists (7.92). This apparent contradiction can occur when making pairwise comparisons using the Scheffé post hoc analysis, because the procedure accounts for different group sizes. Since there were fewer physical therapists ($n = 37$) than communication specialists ($n = 71$), it reduces the degrees of freedom, thus making it more difficult to obtain significance.

No differences were identified among communication specialists, physical therapists, and occupational therapists, nor between special education teachers and parents. In each case, related service professionals agreed with criteria statements more strongly than parents or teachers, who either agreed less strongly or disagreed with the statements. Table 3 depicts rank ordered mean scores and standard deviations for all criteria variables.

Authority Perceptions

One-way ANOVA were conducted to identify potential differences among the subject groups regarding two divergent authority perceptions used in related service decision making. Significant differences were noted for both professional retention of authority, $F(4,307) = 34.15, p < .0001$, and consensus decision making, $F(4,307) = 12.05, p < .0001$ (see Table 4). Parents and special education teachers differed from each related service group (i.e., OT, PT, SLP) regarding professional retention of authority. Teachers also differed from parents on this variable. No significant differences were identified among the related service groups. Overall, professionals agreed with professional retention of authority to varying degrees, while parents in the study tended to disagree.

Each related service group (i.e., OT, PT, SLP) also differed from parents regarding consensus decision making. Special education teachers differed from communication specialists and physical therapists regarding consensus. Overall, parents and teachers favored consensus decision making more strongly than any of the related service groups.

Discussion

Although this study identified a number of differences and similarities among parents and professionals, results must be interpreted cautiously, because it is unknown whether self-reports match actual behavior. Regional sampling, modest response rates, and poten-

Table 1
Rankings of Related Service Roles Used for Students with Severe Disabilities

| Rank | Overall* N = 312 M (SD) | Parents n = 58 M (SD) | Special educators n = 100 M (SD) | Occupational therapists n = 46 M (SD) | Physical therapists n = 37 M (SD) | Communication specialists n = 71 M (SD) |
|------|---|---|---|--|--|--|
| 1 | Adaptation 9.54 (0.86) | Adaptation 9.43 (0.99) | Adaptation 9.38 (1.30) | Adaptation 9.76 (0.57) | Adaptation 9.78 (0.48) | Adaptation 9.34 (0.97) |
| 2 | Functional skills 9.34 (1.00) | Functional skills 8.95 (1.39) | Functional skills 9.23 (1.08) | Functional skills 9.61 (0.71) | Functional skills 9.65 (0.68) | Functional skills 9.24 (1.15) |
| 3 | Reciprocal consulting 8.93 (1.47) | Family support 8.95 (1.66) | Removal of barriers 8.89 (1.46) | Reciprocal consulting 9.20 (1.20) | Removal of barriers 9.27 (0.93) | Reciprocal consulting 8.94 (1.38) |
| 4 | Removal of barriers 8.87 (1.47) | Preventing regression 8.90 (1.90) | Preventing regression 8.84 (1.83) | Removal of barriers 8.76 (2.00) | Preventing regression 9.24 (1.32) | Remediating deficits 8.92 (1.25) |
| 5 | Preventing regression 8.80 (1.76) | Removal of barriers 8.76 (1.41) | Reciprocal consulting 8.79 (1.75) | Preventing regression 8.65 (1.90) | Remediating deficits 9.22 (0.92) | Family support 8.73 (1.49) |
| 6 | Family support 8.74 (1.58) | Normal development 8.62 (2.01) | Remediating deficits 8.56 (1.62) | Normal development 8.52 (1.99) | Reciprocal consulting 9.19 (1.22) | Removal of barriers 8.69 (1.56) |
| 7 | Remediating deficits 8.60 (1.63) | Reciprocal consulting 8.52 (1.78) | Family support 8.51 (1.86) | Family support 8.50 (1.44) | Family support 9.03 (1.44) | Normal development 8.41 (1.78) |
| 8 | Normal development 8.42 (2.02) | Advocate for student 8.31 (1.75) | Normal development 7.80 (2.51) | Remediating deficits 8.26 (2.11) | Advocate for student 8.77 (1.23) | Preventing regression 8.38 (1.87) |
| 9 | Advocate for student 8.12 (1.96) | Remediating deficits 8.05 (2.27) | Advocate for student 7.74 (2.51) | Advocate for student 8.09 (2.05) | Normal development 8.73 (1.84) | Advocate for student 7.70 (2.25) |
| 10 | Liaison with physicians 7.69 (2.16) | Liaison with physicians 7.22 (2.35) | Liaison with physicians 7.55 (2.38) | Liaison with physicians 7.72 (2.12) | Liaison with physicians 8.70 (1.63) | Liaison with physicians 7.25 (2.31) |

* Overall mean scores and standard deviations were calculated by giving equal weight to each group.

tially idiosyncratic interpretations of presented items also should be considered when interpreting these data.

Analysis of Data Regarding Roles of Related Service Providers

These data represent an initial validation that parents, special education teachers, occupational therapists, physical therapists, and communication specialists substantively agree that the roles of related service providers included in the questionnaire are important to varying degrees when providing educational related services to students with severe disabilities (see Table 1). It is theorized that these roles may be conceptualized on two levels. The highest level may be considered *outcome/enabling roles*, because they are used by school personnel to achieve functional outcomes for students and/or to enable students to pursue those outcomes. Each group strongly rated (a) developing adaptations and/or equipment to encourage functional participation and (b) facilitation of functional skills and activities as the two most important roles potentially engaged in

by related service personnel within the context of assessment, planning, implementation, and evaluation: the remaining roles in this category include (c) reciprocal consultation with colleagues; (d) removing or modifying barriers to participation; (e) prevention of regression, deformity, and/or pain; and (f) being a resource and support to families. These six roles held the highest overall rankings among the studied role variables.

The second level of roles, ranked 7 through 10 on Table 1, are theorized to be more or less prominent for individual students based on whether they are possible or needed. These *discretionary roles* include (a) remediation/restoration of identified deficits, (b) promoting normal developmental sequences, (c) serving as an advocate for the student, and (d) being a liaison between the medical community and the school team. For example, parents and professionals would likely be supportive of remedial, restorative, or normal developmental approaches if they were perceived as vehicles

Table 2
ANOVA and Post Hoc Results Regarding Criteria Used to
Make Related Service Decisions

| Criteria: Favorable History and Prognosis for Remediation | | | |
|---|----------|----------|--------------------|
| Alpha = 0.05 Confidence = 0.95 DF = 307 | | | |
| MSE = 8.05556 Critical Value of $F = 2.40$ | | | |
| $F = 11.00 p < 0.0001$ | | | |
| Group | <i>n</i> | <i>M</i> | <i>SD</i> |
| Communication specialists | 71 | 7.92 | 2.24 ^a |
| Physical therapists | 37 | 7.97 | 1.76 ^{ab} |
| Occupational therapists | 46 | 7.17 | 2.73 ^{ab} |
| Special educators | 100 | 6.30 | 3.18 ^{bc} |
| Parents | 58 | 5.02 | 3.44 ^c |

| Criteria: Higher Level of Intelligence | | | |
|---|----------|----------|--------------------|
| Alpha = 0.05 Confidence = 0.95 DF = 307 | | | |
| MSE = 7.59489 Critical Value of $F = 2.400$ | | | |
| $F = 18.68 p < 0.0001$ | | | |
| Group | <i>n</i> | <i>M</i> | <i>SD</i> |
| Communication specialists | 71 | 6.66 | 2.70 ^a |
| Physical therapists | 37 | 5.54 | 2.18 ^{ab} |
| Occupational therapists | 46 | 5.17 | 3.03 ^{ab} |
| Special educators | 100 | 3.89 | 2.87 ^{bc} |
| Parents | 58 | 2.88 | 2.72 ^c |

Note. Superscript letters positioned to the right of the standard deviation column indicate if groups are significantly different. Groups that share a common superscript letter are not significantly different. Conversely, if two or more groups do not share a superscript letter, it indicates that a significant difference exists.

that would lead to participation and functional outcomes. Given the population of persons with severe disabilities, it seems evident that survey respondents believed adaptation and facilitation of functional skills were higher probability routes to success. Similarly, advocacy and liaison with physicians may be more or less prominent as roles of the related service provider, depending on factors such as the characteristics of the learner, characteristics of the school district, and the roles served by the family or other team members. The identified similarities in role perceptions represent a common denominator among parents, educators, and specialists and may be a foundation for developing a shared framework regarding roles of related service providers who work with students with severe disabilities.

Analysis of Data Regarding Criteria Used in Making Related Service Decisions

Generally, scores regarding decision-making criteria had lower means and wider standard deviations among respondent groups than was present regarding roles. Related service professionals reported that it was more important to provide services to students with favorable histories and prognoses for remediation, and those with higher levels of intelligence. Special education teachers and parents favored these criteria less strongly than related service professionals or tended to disagree with the direction of the bias. Differences regarding decision-making criteria highlight foundational problems among

the groups in achieving team functioning. It will be difficult for a group of individuals representing diverse disciplines to reach a consensus if they approach decision-making processes using criteria that may be based on competing assumptions.

Based on a conceptual analysis of the data, it is theorized that one of the criteria on which differences were identified among the groups (i.e., favorable history and prognosis for remediation) had practical significance only when applied to *discretionary roles*. For example, the criterion of favorable history and prognosis for remediation might be considered when deciding whether to pursue certain *discretionary roles* such as promoting normal developmental sequences or remediating identified deficits. Conversely, this same criterion would have little or no impact when considering *outcome/enabling roles* such as making adaptations, facilitating functional skills, providing reciprocal consultation with colleagues, removing or modifying barriers to participation, or being a resource and support to families. This same logic can be applied to the criteria of young chronological age and severity of impairment.

The higher rating of these criteria (favorable history and prognosis for remediation, young chronological age, and severity of impairment) by related service professionals may indicate a disproportionate emphasis on directing service provision toward *discretionary roles* such as promoting normal developmental sequences and remediating identified deficits, which are closely associated with traditional medical models (Shannon, 1977). This hypothesis is further supported by the background data collected from the questionnaire. All respondent groups indicated that related services still are provided primarily in direct modes and in physically isolated environments. Such service delivery models are consistent with a traditional focus on developmental and remediative approaches. Conversely, several of the *outcome/enabling roles* are linked more logically to indirect service delivery. One interpretation of these data is that while therapists, teachers, and parents reported that roles served in indirect ways (e.g., adaptation, reciprocal consultation, removal of barriers, support to families) often are the most important for related service personnel to provide to students with severe disabilities, as noted in Table 1, the current practice of primarily having therapists directly provide related services in isolated settings does not match the stated priority to serve indirect roles.

Although several strong differences were evident among groups regarding criteria used to make related service delivery decisions, the rankings displayed in Table 3 also represent basic similarities among parents, special education teachers, occupational therapists, physical therapists, and communication specialists that can be conceptualized as three levels of decision-making criteria.

Table 3
Rankings of Criteria Used to Make Related Service Decisions for Students with Severe Disabilities

| Rank | Overall* N = 312 M (SD) | Parents n = 58 M (SD) | Special educators n = 100 M (SD) | Occupational therapists n = 46 M (SD) | Physical therapists n = 37 M (SD) | Communication specialists n = 71 M (SD) |
|------|---------------------------------------|---------------------------------------|--|--|---|--|
| 1 | Educational program 8.57 (1.95) | Educational program 8.95 (2.11) | Educational program 8.61 (1.89) | Student age 8.78 (1.52) | Educational program 8.59 (1.89) | Absence of overlap 8.37 (1.66) |
| 2 | Absence of overlap 8.34 (1.94) | Absence of overlap 8.59 (2.04) | Absence of overlap 8.27 (2.10) | Educational program 8.52 (1.85) | Student age 8.49 (1.71) | Student age 8.21 (2.06) |
| 3 | Student age 8.05 (2.32) | Severity of impairment 7.48 (3.34) | Student age 7.57 (2.87) | Absence of overlap 8.48 (1.85) | History & prognosis 7.97 (1.76) | Educational program 8.18 (2.00) |
| 4 | Severity of impairment 6.87 (2.61) | Student age 7.22 (3.42) | Severity of impairment 7.44 (2.65) | History & prognosis 7.17 (2.73) | Absence of overlap 7.97 (2.06) | History & prognosis 7.92 (2.24) |
| 5 | History & prognosis 6.87 (2.67) | History & prognosis 5.02 (3.44) | History & prognosis 6.30 (3.18) | Severity of impairment 6.00 (2.42) | Severity of impairment 6.19 (2.41) | Severity of impairment 7.24 (2.22) |
| 6 | Student intelligence 4.83 (2.70) | Parental involvement 4.53 (3.39) | Parental involvement 4.50 (3.08) | Student intelligence 5.17 (3.03) | Student intelligence 5.54 (2.18) | Student intelligence 6.66 (2.70) |
| 7 | Parental involvement 4.65 (2.90) | Student intelligence 2.88 (2.72) | Student intelligence 3.89 (2.87) | Parental involvement 4.22 (2.54) | Parental involvement 4.46 (2.55) | Parental involvement 5.52 (2.92) |

* Overall mean scores and standard deviations were calculated by giving equal weight to each group.

It is theorized that the highest level, *essential criteria*, are those that logically should be considered when making all related service decisions. These criteria include (a) that the related service is required to assist the child to benefit from his or her educational program and (b) consideration of what overlap is present or absent in terms of services available to the student through existing school services or those to be developed subsequently. As indicated in Table 3, there was a high level of agreement that both of these criteria were important. Both are embedded in the definition and litigative history of related services (Code of Federal Regulations, 1987; EHCA, 1975; *Board of Education of the Hendrick Hudson Central School District v. Rowley*, 1982; *Irving Independent School District v. Tatro*, 1984).

The second proposed level may be referred to as *discretionary criteria*, because these criteria are useful primarily when applied to *discretionary roles* as discussed previously. Discretionary criteria include (a) age, (b) severity of impairment, and (c) history and prognosis for remediation. If such criteria were applied to *discretionary roles*, they would only represent a component of the decision-making process. Their use in isolation of the *essential criteria* likely would be ineffective and potentially inappropriate.

The final proposed level is *inappropriate criteria*.

These include (a) level of intelligence and (b) probability of parental involvement. It is the opinion of the author that such criteria embody serious ethical and legal flaws, because they may promote discrimination against persons based on (a) the perceived intelligence of an individual and/or (b) the socio-economic, cultural, or personal traits of students or their families. Each respondent group rated these as the lowest among the listed criteria (see Table 3). The selection of criteria for decision making continues to represent one of the most challenging barriers to effective related service decision making.

Analysis of Data Regarding Perceptions of Decision-Making Authority

At the heart of any group effort is a common understanding and agreement regarding the nature of authority within the group. The results of this study strongly indicate significant differences among related service professionals, special education teachers, and parents regarding authority for related service decision making. The mean scores of all three related service disciplines strongly indicate that, while they believed they had a responsibility to share their recommendations with other team members, including parents, they also reported that they should retain final decision authority regarding their own discipline.

Special education teachers were split in their opinion

Table 4
ANOVA and Post Hoc Results Regarding Decision Making
Authority Perceptions Held by Related Service Providers,
Parents, and Educators

| Authority Perception: Specialists Should Retain Decision Authority | | | |
|---|----------|------|--------------------|
| Alpha = 0.05 Confidence = 0.95 DF = 307 | | | |
| MSE = 6.94979 Critical value of $F = 2.40$ | | | |
| $F = 34.15 p < 0.0001$ | | | |
| Group | <i>n</i> | M | SD |
| Physical therapists | 37 | 8.51 | 1.54 ^a |
| Communication specialists | 71 | 8.35 | 2.42 ^a |
| Occupational therapists | 46 | 8.35 | 2.31 ^a |
| Special educators | 100 | 5.77 | 3.16 ^b |
| Parents | 58 | 4.00 | 2.68 ^c |
| Authority Perception: Decisions Should be Made Based on Group Consensus | | | |
| Alpha = 0.05 Confidence = 0.95 DF = 307 | | | |
| MSE = 7.35 Critical Value of $F = 2.40$ | | | |
| $F = 12.05 p < 0.0001$ | | | |
| Group | <i>n</i> | M | SD |
| Parents | 58 | 8.76 | 2.19 ^a |
| Special educators | 100 | 7.89 | 2.26 ^{ab} |
| Occupational therapists | 46 | 6.67 | 3.03 ^{bc} |
| Communication specialists | 71 | 6.18 | 3.20 ^c |
| Physical therapists | 37 | 5.73 | 3.11 ^c |

Note. Superscript letters positioned to the right of the standard deviation column indicate if groups are significantly different. Groups that share a common superscript letter are not significantly different. Conversely, if two or more groups do not share a superscript letter, it indicates that a significant difference exists.

regarding professional retention of authority. This split placed special education teachers in a significantly different position from both the related service professionals and the parents. Parents predominantly reported that they disagreed with professional retention of authority.

As an internal check on the validity of subject responses, one statement was designed to be the antithesis of professionals retaining decision-making authority. This statement asked respondents to indicate whether they agreed that specialists and team members, including the family, should make recommendations based on group consensus, where no one team member has more decision-making power than another. The pattern of group responses was inverse, although slightly weaker (see Table 4).

These data indicate that a substantial number of special education teachers and allied health professionals support a model of related service decision making, where each discipline makes decisions in isolation of the others based on the claim of expertise and appropriate control within their discipline. Such groups typically share information with each other and may agree to pursue potentially separate or disjointed courses of action. In this model, the professionals make decisions and then inform parents and other group members of their decisions. It is the opinion of the author that an *autocratic* (each discipline retains authority) or even

democratic (one vote one person) approach to decision making can be problematic for both parents and professionals. Either form of decision making may encourage parents to defer to professionals despite the wealth of knowledge parents bring to team interactions. Since these models assume that professionals from particular disciplines have exclusive domain over decision making in certain specialty areas, or that majority rules, there is little incentive for team members to consider seriously the perspectives of the family or other group members. Additionally, such autocratic or democratic approaches used in educational settings may polarize groups on an issue where differences exist and typically provide no mechanisms for managing conflicts or differences of opinion, short of due process, when parents or other group members are overruled or outvoted. The alternative of consensus decision making, favored most strongly by parents in this study, is believed to account for the aforementioned limitations of autocratic and democratic approaches. Consensus decision making is known to require a significant investment of time and energy, as well as a degree of role release among group members, but has been reported to be worth the effort (Albano, 1983).

Across role, criteria, and authority variables, differences among groups were identified exclusively among related service providers (i.e., OT, PT SLP), teachers, and parents, with no differences among occupational therapists, physical therapists, and communication specialists. This absence of differences among the three related service disciplines supports the notion that allied health professions share philosophical orientations potentially based on similar professional socialization. The differences between professionals (i.e., related service professionals, teachers) and parents may suggest that approaches taken by professionals continue to require evaluation and improvement to address the needs and potential contributions of consumers within the service delivery decision-making process.

It is speculated that balancing consumer empowerment and professional authority continues to plague group decision making, and consequently the quality of educational and related services provided to students with handicapping conditions. Pursuit of consensus decision making has a logical basis. It is the opinion of the author that the absence of a consensus decision-making framework in which to apply decision-making criteria has exacerbated conflicts among professionals and consumers, resulting in outcomes that include (a) gaps in service, (b) overlaps in service, (c) contradictory recommendations by persons from various disciplines, and (d) services that do not match student or family needs. The logic underlying consensus decision making was, in part, expressed by each respondent group when they agreed that an important criterion to consider is the existence or absence of overlap among disciplines.

By rating this criterion so highly, they lend support to the notion that decisions made in relative isolation are potentially inappropriate or incomplete. Yet, the responses of professionals regarding the criterion of overlap and the retention of authority appear to be internally inconsistent. Simply sharing isolated decisions does not preclude the possibility that professionals will agree to pursue separate, disjointed, and potentially conflicting approaches. Only through exploring the existence or absence of overlap among disciplines within the context of a unified set of goals for a student can effective coordination of services be achieved. Such a process requires consensus decision making.

Implications and Future Research

Congruence among the roles, criteria, authority perceptions, and actual practice in related service decision making may be an important area to explore in our attempts to meet student needs. It is conceivable that our current practices regarding related service delivery decision making have become so commonplace that we have neglected to study carefully how such decisions are made, how we might improve them, and what impact such decisions have on students, families, and professionals. The data from this study may be applied to meet the needs of students with disabilities in a variety of ways that include the development of (a) interdependent team-level strategies designed to coordinate decision making and service delivery based on a shared framework of roles, criteria, and consensus decision making; (b) inservice education and staff development; (c) administrative policies and guidelines, and (d) modifications to university preparation of professionals. For example, Giangreco (1988; 1989a) developed a two-stage consensus model for making certain related service decisions (e.g., need for related services, functions served by related service providers, mode of service, and frequency of service) for students with severe disabilities. During the first stage of the process, team members compare potential roles/functions they may serve within the student's educational program (e.g., IEP goals, breadth of other general learning outcomes, and management needs related to instruction). Unlike many traditional approaches, this individual analysis does not result in autocratic decisions or the proverbial rubber stamp approval by the team. Rather, the individual analysis serves as a preparatory activity to be used later during a team meeting to analyze the potential gaps, overlaps, and contradictions among the individual disciplinary analyses. This model combines the *outcome/enabling roles* validated in the study, *essential criteria* (educationally supportive, consideration of overlap with other disciplines), and a consensus decision-making framework so that the descriptive data generated by this study can be applied in practical ways by teams. Readers should be cautioned that this model

is not described fully here and although promising, has undergone only limited field-testing.

As the nature of service delivery changes to include more students with severe disabilities in regular schools and regular classes, issues regarding the delivery of related services in these less restrictive environments will undoubtedly surface with increasing frequency (Giangreco, York, & Rainforth, 1989). In an effort to address those related service issues, future research might focus on (a) adding foundational descriptive research using multiple research paradigms so that related service phenomena may be better understood; (b) pursuing field-based action research to develop and evaluate practical related service decision making models; (c) exploring approaches to providing related services that assist individual students to benefit from instruction, and which are consistent with regular education classroom routines; and (d) evaluating the impact and efficacy of decision making on students, families, and staff.

The results of this study offer a beginning point to understand better the phenomena that surround related service decision making. Through further research efforts, information can be generated to assist professionals and parents as they work together to facilitate the inclusion, participation, and education of students with severe disabilities in integrated environments.

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