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Impact of Instructional Consultation Teams on the Disproportionate Referral and Placement of Minority Students in Special Education

TODD A. GRAVOIS AND SYLVIA A. ROSENFIELD

ABSTRACT

The current study investigated the impact of implementing Instructional Consultation Teams (IC Teams) on the disproportionate referral and placement of minority students into special education. Data were collected on referral and placement patterns of minority students in 13 IC Teams schools and 9 comparison schools. Three accepted indices of disproportionality—including risk indexes, odds ratios, and composition indexes—were calculated and analyzed for the baseline and for 2 years of project implementation. After 2 years of implementation, there were significant decreases in the risk of minority students in IC Team project schools being referred to and placed in special education when compared to nonproject schools. Moreover, the odds of minority students’ being referred and placed in special education decreased by almost half in IC Team schools. Similar decreases in IC Team schools were noted when analyzing the composition indexes. The current findings also highlight the influence that quality classroom instructional practices have on the referral and placement of minority students for special education services.

WHEN LLOYD DUNN (1968) WROTE HIS HISTORIC article on the justification for special education, he introduced the educational community to the problem of disproportional representation of minority students in special education and offered recommendations to address the problem. Over the next three decades, few of Dunn’s recommendations were implemented, and the discrepancy that Dunn presented has remained (Artiles & Trent, 1994; Donovan & Cross, 2002; Patton, 1998; Reschly, 1988; 1997; Trent & Artiles, 1998), resulting in legal actions including civil rights enforcement throughout the United States (Losen & Welner, 2001). However, to move forward, two challenges remain: The first challenge is to fully define the extent of the problem, and the second is to actually address the problem through interventions within schools.

DEFINING DISPROPORTIONATE PLACEMENT OF MINORITY STUDENTS IN SPECIAL EDUCATION

The issue of disproportionate placement of minority students in special education continues to be documented at the national level and in many state and local education agencies (LEAs). Disproportionate placement generally refers to the representation of a particular group of students at a rate different than that found in the general population. Student placements can be considered disproportionate if they are overrepresented or underrepresented when comparing their presence in a particular class or category with their representation in the general population. By far the greatest attention in the literature has been given to the overrepresentation of minorities in special education and their underrepresentation...
In particular, African American students continue to be identified for special education at disproportionate rates compared to their White peers. For example, African American students are identified as mentally retarded (MR) at twice the rate of other races (see Donovan & Cross, 2002). As reported by Donovan and Cross, U.S. Department of Education Office of Civil Rights data have indicated that whereas African American students constituted 17% of the student population, they constituted nearly 35% of the students identified as MR. Of equal concern, African American students constituted approximately 26% of the students identified as seriously emotionally disturbed (SED), a diagnosis that often leads to exclusion from general education (Leone & McLaughlin, 1995). Such patterns of disproportionate placement of minority students are more striking when viewed at the state or local level. For example, in December 2002 in Maryland, whereas African American students made up 37.6% of the student population, their overall representation in special education was 39.6% (Maryland State Department of Education, 2003). Similar to national trends, nearly 61% of students identified as MR and nearly 50% of those identified as SED were African American.

However, defining disproportionality is more complex than it appears on the surface. One of three general calculations has typically been used to describe and discuss disproportionate representation in the literature (e.g., Donovan & Cross, 2002). These calculations include risk indexes, odds ratios, and compositions indexes, each of which is defined in Table 1. Each calculation offers a different view of the same data. For example, the risk index describes the percentage of a particular group (e.g., African American) that has been placed in a particular category (e.g., mental retardation), whereas the relative odds ratio compares the risk index of one group to that of another group. In essence, the same data are being viewed from a different perspective, with the hope of creating a better understanding of the impact.

### TABLE 1. Three Calculations Used to Determine Disproportionate Representation

<table>
<thead>
<tr>
<th>Measure</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk index</td>
<td>Obtained by dividing the number of students of a given group served within a specific category by the total enrollment of that group within the school population.</td>
<td>A risk index of 4.4 means that 4.4% of African American students were categorized as having mental retardation.</td>
</tr>
<tr>
<td>Odds ratio</td>
<td>Obtained by dividing the risk index of one group (e.g., African American) with the risk index of another (e.g., European American), thereby providing a comparative index of risk. Ratios greater than 1.0 indicate a greater risk of being categorized within a specific category of comparison.</td>
<td>An odds ratio of 1.39 means that minority students are approximately 1.4 times more likely to be evaluated for special education when compared to nonminority students. Stated another way, minority students have a 40% greater chance of being evaluated for special education than their nonminority peers.</td>
</tr>
<tr>
<td>Composition index</td>
<td>Obtained by dividing the number of students in a given group (e.g., minority) within a category (e.g., evaluation) by the total number of students within that category. Composite indexes are best interpreted in relation to the total population composition.</td>
<td>A composition index of 42.7% means that nearly 43% of all evaluations were minority students and 57% of all evaluations were nonminority students. This can be interpreted relative to the general population, in which 34.5% of school enrollment is minority and 65.5% of school enrollment is nonminority.</td>
</tr>
</tbody>
</table>
• Effectiveness of instruction and intervention (i.e., prereferral) in addressing the academic and behavioral needs of at-risk students prior to consideration for specialized services.

Cultural Variables

A first major theme in the literature addressing disproportionality is the impact of cultural differences on teacher perceptions and practices related to minority students. Some educators have argued that minority students are being placed into special education classes to alleviate teachers’ problems in dealing with culturally diverse children and youth (e.g., Gottlieb, Alter, Gottlieb, & Wishner, 1994; Williams-Dixon, 1991). In an effort to address the disproportionate placement of minority students in special education, many policymakers have looked to preservice and inservice professional development of teachers in the area of multiculturalism.

These teacher education programs (TEPs) are designed to better prepare teachers to work with diverse populations of students (Artiles, Trent, Hoffman-Kipp, & Lopez-Torres, 2000). Conceptually, the idea of training teachers to develop new perceptions and practices that will produce greater student achievement and ultimately reduce the number of inappropriate referrals to special education holds great promise (Valles, 1998). California, for example, has implemented a cross-cultural, language, and academic development (CLAD) emphasis as part of its certification requirement for teachers. The explicit goal is to help teachers develop more effective teaching strategies to work with a diverse student population.

However, implementation and methodological issues continue to plague this area of research and its ability to address disproportionality. For example, resistance to training has decreased the ability to implement programs. When programs are implemented, there are methodological challenges to demonstrating how training influences teacher learning and behavior (Artiles & McClafferty, 1998). Even when researchers have attempted to implement multicultural education courses that examine the link between preservice teacher thinking and subsequent teacher actions in the classroom (Trent & Artiles, 1998), these studies have not investigated the impact of such training on special education referral patterns.

Bias in Assessment Procedures

The second major effort to remedy the overrepresentation of minorities in special education has examined the testing processes and tools themselves. As early as 1973, Sabatino, Kelling, and Hayden found biases evidenced in placement tests that did not accurately reflect the learning abilities of minority students. In response to such allegations, there have been attempts to address the biases found in educational tests (e.g., Fradd & Hallman, 1983). Educators have searched for culture-fair and culture-free tests and attempted to develop new tests. However, there has been little or no success in controlling for the specific bias evidenced in tests (Maheady, Towne, Algozzine, Mercer, & Ysseldyke, 1983; Reschly, 1997). Indeed, some researchers have suggested that the use of tests for classification rather than for diagnostic or prescriptive reasons contributes very little to curriculum or pedagogical validity and tends to perpetuate the observed patterns of disproportional placements (e.g., Hilliard, 1992).

Quality of Instruction and Intervention Services

Whereas the first two themes directly suggest that there is an interaction between the cultural backgrounds of minority students and the resulting disproportionate placement, the third theme found in the literature does not directly make such a link. This last theme takes a broader view of issues in the current special education system and postulates that the quality of instruction and intervention into learning problems influences whether students are ultimately referred for and placed in special education, regardless of race. Harry, Klingner, Sturges, and Moore (2002) suggested that the ecology of the classroom of the referred child is rarely considered, although the past Individuals with Disabilities Education Act (IDEA) regulations (e.g., 1997) have emphasized—and the recent reauthorization (2004) continues to emphasize—the need for early intervention in the general education arena prior to consideration for special education as a recognition that the highest quality of instruction in the classroom must be assured prior to placing the onus for failure on the student. As Harry et al. commented, “We have seen classrooms characterized by weak or nonexistent instruction and behavior management, and have never heard the question raised as to whether a child might learn more or behave better in a different classroom” (p. 82).

Supporting this theme are findings in the literature that systematic interventions, especially those that support the delivery of quality instruction, have been successful in reducing overall special education referrals and placements (Fuchs, Fuchs, & Bahr, 1990; Gravois & Rosenfield, 2002; Hartman & Fay, 1996; Kovaleski, Tucker, & Duffy, 1995; Ott, 1993) and in providing satisfactory support to teachers (Chalfant & Pysh, 1989; Fudell, 1992). However, although the evidence indicates that early intervention for at-risk students does decrease the overall number of students referred to and placed in special education, less is known about the impact of these prereferral and early interventions on the referral and placement of minority students in special education (Serna, Forness, & Nielsen, 1998).

Two studies have investigated the impact of intervention teams on the referral and placement of minority students in special education. Rock and Zigmond (2001) investigated the patterns of referral and placement of African American students serviced by Instructional Support Teams (ISTs) in nine schools. They found that African American students were referred to the IST in disproportionately greater numbers than...
their representation in the population in five of the nine schools studied. Rock and Zigmond further suggested that these African American students were more likely to be referred and deemed eligible for special education services than their White peers.

Gravois and Rosenfield (2002) presented the results of three studies investigating the impact of Instructional Consultation Teams (IC Teams; Rosenfield & Gravois, 1996) on referral patterns for special education. In all three studies, the results indicated that the overall referral and placement of students in special education was reduced when IC Teams were implemented. One of the three studies specifically investigated the impact of IC Teams on the referral and placement of minority students compared to existing prereferral practices in 20 schools involved in the first year of a statewide training consortium. Analysis of special education referral and placement patterns according to student race revealed that significantly fewer African American students who were supported by the IC Teams in their school were referred for evaluation or placed in special education when compared to existing prereferral practices.

The present study builds on and extends the earlier investigation reported by Gravois and Rosenfield (2002) and specifically evaluates the pattern of referral and placement of minority students served by IC Teams in 13 project schools over a 2-year period compared with nonproject schools. A description of IC Teams and the training consortium developed for implementation precedes the method, results, and discussion sections.

**Instructional Consultation Teams**

The primary goal of the IC Team model (Rosenfield & Gravois, 1996) is to create and maintain student success within the general education environment by supporting the classroom teacher. The IC Team is theoretically grounded in and serves as a delivery system of instructional consultation (Rosenfield, 1987, 2002). By focusing both on the content (i.e., curriculum-based assessment, evidence-based academic and behavioral interventions) and the process (i.e., data collection, problem-solving steps, the reflective relationship established for the classroom teacher), instructional consultation seeks to improve, enhance, and increase student achievement through improving, enhancing, and increasing teachers’ performance. It is the explicit emphasis on supporting teachers’ professional capacity to develop and deliver effective instruction in the general education classroom that distinguishes instructional consultation from other forms of consultation and teaming. The model is based on the premise that quality instructional and management programming, matched to a student’s assessed entry skills, increases student success, reduces behavioral difficulties, and avoids the need for special education evaluation and placement.

The IC Team is a complex innovation package, characterized by three features: (a) a delivery system structured around an interdisciplinary team; (b) a collaborative instructional consultation process; and (c) an evaluation design to ensure that the innovation package has been implemented with integrity. The collaborative instructional consultation process is detailed in *Instructional Consultation* (Rosenfield, 1987), and the delivery system and process for implementing IC Teams is described in *Instructional Consultation Teams: Collaborating for Change* (Rosenfield & Gravois, 1996). Furthermore, there is a comprehensive training package for teams, including a training manual (Gravois, Rosenfield, & Gickling, 2002), facilitation manual (Vail, Gravois, & Rosenfield, 1998) and evaluation materials (Gravois, Fudell, & Rosenfield, 1998).

A distinguishing feature of the IC Team model is the systematic, data-based support provided to classroom teachers by a trained team. The IC Team is composed of administrators, support personnel, and representatives from special and general education. Instead of a teacher meeting with the entire team to engage in “group problem solving,” the teacher meets one-on-one with his or her assigned team member, termed a case manager. In regularly scheduled meetings, it is the case manager’s responsibility to support the teacher in engaging in a structured, data-driven problem-solving process. The IC Team case manager manages the process and ensures support for the teacher through each of the critical stages of problem solving. Working collaboratively, the case manager and the teacher design and implement instructional and management practices within the classroom to address specific and measurable goals. The entire IC Team membership remains available to support the case manager and the teacher at any point where assistance is required or requested.

Over the past 5 years, the Laboratory for Instructional Consultation Teams at the University of Maryland, has engaged in multisite, multistrict consortia to “scale up” the application and implementation of IC Teams This comprehensive structure of implementing IC Teams is fully described by Gravois and colleagues (2001) and has been replicated with consistent outcomes in more than 150 schools from approximately 40 districts and 7 states, as documented in a series of program evaluations, technical reports, and publications (e.g., Gravois & Rosenfield, 2002).

**Method**

**Participating Schools**

A total of 22 schools constituted the sample in the current study. All schools were located in five districts in a mid-Atlantic state, some of which were located in rural communities and others in small cities. Thirteen schools were selected by their district administration to participate in a 2-year training consortium to implement IC Teams as a means to address issues of overidentification of minority students for special education services. The nine comparison schools were selected from the remaining schools that were not involved in
the IC Team model within each district. Although there were originally 10 comparison schools, one school did not provide complete data during the 2-year project period and thus was excluded from the analysis. Table 2 provides a description of the 22 project schools and their composition at the time of selection and during the 2 years of program implementation.

**Data Collection**

Student population and referral data used for the current study were collected by school and district personnel. Data were collected the summer prior to project implementation (2002) to establish the baseline, and again in June of each subsequent year of project implementation. The data included the school student population according to race, referrals for special education evaluation according to race, and the number of students placed in special education each year according to race. The vast majority of students in these districts were categorized as either White (non-Hispanic) or African American. For this study, the data were then divided into the two categories of minority and nonminority students.

**Data Analysis**

Data were calculated and analyzed using the three common indices accepted in the literature in defining and describing the disproportionality of minority students (see Table 1). Although these indices are typically used to compare the representation of racial groups in specific special education categories (e.g., MR, SED), the current study was specifically interested in the proportional representation of minority students at the two critical stages of referral for evaluation and placement, regardless of the specific category of disability.

Once the risk indexes were calculated, 95% confidence intervals were computed to allow comparison between and within IC Team project and nonproject schools (Smithson, 2003). The use of confidence intervals allows both practical and statistical interpretations of the data, because each interval means there is 95% confidence that the true risk index is within the stated range. Moreover, to account for known and probable design concerns (e.g., unequal group sizes), confidence intervals were developed using an estimated design effect (DEFF) of 1.2. Finally, chi-square analyses were also conducted on the composition index calculations comparing IC Team project and nonproject schools.

**The Instructional Consultation Team Consortium**

The 13 treatment schools participated in a structured, comprehensive implementation of the IC Team model. The training and technical support process provided in the development of the IC Teams included a 4-day introductory training; a semester of online coaching of team facilitator skills as instructional consultants; seven on-site training sessions providing demonstration and practice; follow-up, on-site technical support; and participation in program evaluation to ensure program integrity in participating schools. Specifically, IC Team members were trained in (a) collaborative and reflective communication skills; (b) systematic problem-solving skills; (c) curriculum-based assessment (e.g., Gravois & Gickling, 2002); and (d) collection, charting, and analysis of classroom data. It is noted that although the concern regarding disproportionality is discussed as part of the general rationale for introducing IC Team into a school, no specific training or professional development was designed to primarily focus on minority students. Instead, the process and skills introduced were considered important for the development and delivery of instruction within the classroom for all students. Faculty and staff of the Laboratory for Instructional

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**TABLE 2. Mean Demographic Data on Instructional Consultation Team and Comparison Schools Over the Three Years of the Study**

<table>
<thead>
<tr>
<th>Year/group</th>
<th>School enrollment</th>
<th>Minority enrollment</th>
<th>Special education enrollment</th>
<th>Special education evaluations</th>
<th>Special education placements</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002 (baseline)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICT schools⁠a</td>
<td>489</td>
<td>167</td>
<td>68</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Comparison schools⁠b</td>
<td>481</td>
<td>59</td>
<td>67</td>
<td>25</td>
<td>14</td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICT schools⁠a</td>
<td>490</td>
<td>170</td>
<td>64</td>
<td>16</td>
<td>9</td>
</tr>
<tr>
<td>Comparison schools⁠b</td>
<td>497</td>
<td>55</td>
<td>69</td>
<td>21</td>
<td>12</td>
</tr>
<tr>
<td>2004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICT schools⁠a</td>
<td>462</td>
<td>178</td>
<td>62</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Comparison schools⁠b</td>
<td>459</td>
<td>60</td>
<td>66</td>
<td>16</td>
<td>10</td>
</tr>
</tbody>
</table>

*Note. ICT = instructional consultation team.
*ₘᵣᵣ = 13, ₙᵣᵣ = 9.*
Consultation Teams at the University of Maryland provided all training. Gravois, Knotek, and Babinski (2001) provided a full description of the consortium training procedures and processes associated with the current study. The nine comparison schools continued to implement the existing prereferral processes mandated by their districts (e.g., pupil service teams, educational management teams, student support teams).

**RESULTS**

**Risk Index**

Table 3 presents the risk indexes (RI) for special education evaluation and placement of minority students in IC Team and comparison schools. The creation of 95% confidence intervals allows the interpretation of significance (i.e., non-overlapping confidence intervals between any pair of risk indexes represent significant differences). For example, when viewing Table 3, the risk indexes for the evaluation of minority students within IC Team schools show a noted decrease from baseline (3.3%) to 2 years of program implementation (1.9%). Although substantial, this decrease is not considered significant, because the confidence intervals at baseline (2.5–4.2) overlap with the confidence intervals at 2 years (1.4–2.6).

However, when making between-group comparisons in Table 3, we note that the risk for minority students being evaluated and placed in special education was actually lower in IC Team (1.3–2.6) than in comparison (1.7–4.9) schools in the baseline year—though not significantly different, as there is overlap in the confidence intervals. After 2 years of implementation, however, there was significantly less risk of minority students being evaluated or placed in special education when compared to their nonminority peers. At the same time, minority students in the comparison schools had nearly equal odds of being evaluated for and placed in special education (1.02 and 1.05, respectively) when compared to their nonminority peers. Viewing special education placements (see Figure 2) during the baseline year, a minority student in the IC Team schools had nearly a 50% greater chance (1.53 vs. 1.05) of being placed in special education than a minority student in the comparison schools. However, after 2 years, the odds for minority students in IC Team schools of being placed into special education were nearly half those found in comparison schools (0.66 vs. 1.11).

The impact of implementing IC Teams on odds ratios can also be seen when viewing within-group changes (i.e., comparing IC Teams schools at baseline and at Year 2). When comparing baseline (OR = 1.53) and 2-year data (OR = 0.66), the odds ratios for minority students in IC Team schools of being placed into special education were reduced nearly by half after 2 years of IC Team program implementation.

**Composition Index**

The composition index (CI) is a calculation often used to analyze the proportionality of students in special education that compares the proportion of a particular group within a category (e.g., students referred for evaluation) to the proportion

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TABLE 3. Risk Indexes and 95% Confidence Intervals for Referrals for Evaluation and Special Education Placements for Minority Students in Instructional Consultation Team Project and Comparison Schools

<table>
<thead>
<tr>
<th>Group</th>
<th>2002 (baseline)</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RI</td>
<td>CI</td>
<td>RI</td>
</tr>
<tr>
<td><strong>Referral for Evaluation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IC Team</td>
<td>3.3</td>
<td>2.5–4.2</td>
<td>2.4</td>
</tr>
<tr>
<td>Comparison</td>
<td>5.2</td>
<td>3.5–7.6</td>
<td>3.9</td>
</tr>
<tr>
<td><strong>Special Education Placement</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IC Team</td>
<td>1.9</td>
<td>1.3–2.6</td>
<td>1.6</td>
</tr>
<tr>
<td>Comparison</td>
<td>3.0</td>
<td>1.7–4.9</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Note. RI = risk index (%); CI = 95% confidence interval.

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**Odds Ratio**

Odds ratios (OR) compare the risk for minority students’ being evaluated or placed in special education to the risks for nonminority students being evaluated or placed in special education. Figures 1 and 2 portray the odds ratios for minority student referrals and placements in IC Team and comparison schools during baseline and 2 years of data collection. As noted in both figures at baseline, minority students in IC Team schools were 1.38 times more likely to be evaluated and 1.53 times more likely to be placed in special education when compared to their nonminority peers. The risk index for minority students within IC Team schools show a noted decrease from baseline (3.3%) to 2 years of program implementation (1.9%). Although substantial, this decrease is not considered significant, because the confidence intervals at baseline (2.5–4.2) overlap with the confidence intervals at 2 years (1.4–2.6).

However, when making between-group comparisons in Table 3, we note that the risk for minority students being evaluated and placed in special education was actually lower in IC Team (1.3–2.6) than in comparison (1.7–4.9) schools in the baseline year—though not significantly different, as there is overlap in the confidence intervals. After 2 years of implementation, however, there was significantly less risk of minority students being evaluated or placed in special education when compared to their nonminority peers. At the same time, minority students in the comparison schools had nearly equal odds of being evaluated for and placed in special education (1.02 and 1.05, respectively) when compared to their nonminority peers. Viewing special education placements (see Figure 2) during the baseline year, a minority student in the IC Team schools had nearly a 50% greater chance (1.53 vs. 1.05) of being placed in special education than a minority student in the comparison schools. However, after 2 years, the odds for minority students in IC Team schools of being placed into special education were nearly half those found in comparison schools (0.66 vs. 1.11).

The impact of implementing IC Teams on odds ratios can also be seen when viewing within-group changes (i.e., comparing IC Teams schools at baseline and at Year 2). When comparing baseline (OR = 1.53) and 2-year data (OR = 0.66), the odds ratios for minority students in IC Team schools of being placed into special education were reduced nearly by half after 2 years of IC Team program implementation.

**Composition Index**

The composition index (CI) is a calculation often used to analyze the proportionality of students in special education that compares the proportion of a particular group within a category (e.g., students referred for evaluation) to the proportion
of that group within the overall population. As depicted in Table 4, no significant differences were noted in the CI for either IC Team or comparison schools during the baseline year (2002). Significant differences were found during the 2 years of the implementation of IC Teams with respect to the proportion of minority students evaluated for special education. As Table 4 shows, after 2 years of IC Team implementation, there were significant differences in the CI, whereby minority students represented 26% of all evaluations for special education while representing almost 39% of the school population.

**Discussion**

The results of the current study demonstrate the impact of implementing IC Teams on the special education referral and placement patterns of minority students when compared to students in comparison schools in the same districts. As previously described, IC Teams seek to focus the work of the team and the problem-solving process on improving the quality of instruction and intervention provided to students. This intense focus on supporting teachers’ delivery of instruction is intended to enhance student achievement—especially minority student achievement—in the classroom, thereby reducing the need to identify students for evaluation or placement in remedial services. The results also suggest that the choice of calculation used to define disproportionality is influential in and of itself and should be considered carefully in future research. These results are discussed in greater detail in the following sections.

**Impact of IC Teams on Disproportionality**

The implementation of the IC Team model over the past 10 years has consistently resulted in a reduction of total referrals and placements of students in special education (Gravois & Rosenfield, 2002; Levinsohn, 2000). Indeed, these previous studies have demonstrated that the introduction of the systematic, collaborative IC Team process has resulted in decreases in the number of referrals to, evaluations for, and ultimately placements in special education when comparing pre- and postreferral patterns and when compared to existing team structures (see, e.g., Levinsohn, 2000).

The current results extend these previous findings and demonstrate a specific impact on the disproportionate evaluation and placement of minority students when compared to schools that continue to use their traditional prereferral process. Minorities in IC Team project schools showed decreases on all three disproportionality indices with respect to referral for evaluation and placement into special education. In all instances, the risk indexes, odds ratios, and composition indexes of evaluation and placement of minority students decreased over the course of IC Team implementation in project schools. These findings were true when viewing in both within-group changes and comparisons with nonproject schools. Most notable was the significant decrease in the risk of referral for evaluation and placement for minority students after the implementation of IC Teams compared to the rates observed in comparison schools.

**Influence of Quality Instruction and Intervention on Disproportionate Placement**

In disproportionality research, it is agreed that (a) there is a recognized achievement gap between minority and nonmi-
nority students in schools (see, e.g., Education Trust, n.d.) and (b) minority students tend to be disproportionately represented in referrals to and placements in special education, especially in the categories of mental retardation and emotional disturbance (e.g., Donovan & Cross, 2002). However, there is less agreement as to why this is true. There are multiple hypotheses about the influences on lack of achievement and disproportionate placement of minorities into special education. Whereas some researchers relate disproportionate minority placement to the adequacy of eligibility processes (i.e., fairness of testing; see, e.g., Maheady, Towne, Algozzine, Mercer, & Ysseldyke, 1983; Reschly, 1997), others view it as related to a difference in cultural experiences between teachers and minority students (see, e.g., Gottlieb et al., 1994; Williams-Dixon, 1991). There is no doubt that incidents of racial discrimination and bias do occur and need to be addressed. Furthermore, clear standards of practice need to be established to reduce bias in the eligibility process for special education services. However, we believe that there is sufficient literature demonstrating the critical role that instruction plays in achievement. The current findings reinforce this position and suggest that instructional influence on learning and special education placements deserves an equal—if not central—focus in addressing disproportionality. The effectiveness of IC Teams lends credence to Harry et al.’s (2002) recommendation that “the quality of the instruction and the classroom management of the referring teacher must be considered crucial variables” (p. 88).

Recent studies (e.g., Costas, Rosenfield, & Gravois, 2003; Knotek, Rosenfield, Gravois, & Babinski, 2003) have offered a better understanding of the impact that the implementation of IC Teams has on overall teacher instructional practices. Costas et al. (2003) found that a large percentage (80%) of teachers reported learning new strategies (e.g., a particular reading, math or behavioral strategy) as an outcome of receiving support from the IC Teams in their school. However, teachers also reported learning more about the problem-solving process itself. For example, teachers reported that they were supported in better defining and prioritizing their concerns.

Using a microethnographic research approach, Knotek et al. (2003) discovered that teachers’ practices were influenced not just by the particular strategies generated together with the IC Teams, but also by the professional relationships that were established between the teacher and the IC Team case manager. Specifically, Knotek et al. related that the collaborative, structured, and data-driven conversations between teachers and ICTeam case managers allowed the classroom teacher an opportunity to reflect on the presenting problem as well as on their own instructional practices. They found that whereas teachers’ initial descriptions of their concerns were largely framed around the student as the source of the problem (i.e., internal student deficit), over the course of the instructional consultation process, teachers were able to reframe the problem to include the influence that instructional variables had on student learning outcomes. In essence, the teachers did not just adopt strategies to help a student with a presumed disability; instead, they adopted strategies because they gained an understanding that instructional practices in and of themselves can promote or hinder student learning. This “alternative hypothesis” (Knotek et al., 2003, p. 324) of the underlying cause of student learning problems represents a fundamental shift in how teachers view both student learning and the influence of their own instructional practices. It also has important implications for forming hypotheses about the causes of disproportionate placements of minority students into special education and the resulting solutions to the problem.

Although the results of the current study are neither conclusive nor exhaustive, they do demonstrate the influence that

### TABLE 4. Composition Indexes for Referrals for Evaluation and Placements in Special Education for Minority Students in Instructional Consultation Team Project and Comparison Schools

<table>
<thead>
<tr>
<th>Group</th>
<th>2002 (baseline)</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SpEd</td>
<td>TSP</td>
<td>SpEd</td>
</tr>
<tr>
<td><strong>Referral for Evaluation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IC Team</td>
<td>41.5</td>
<td>34.2</td>
<td>25.4</td>
</tr>
<tr>
<td>Comparison</td>
<td>12.5</td>
<td>12.3</td>
<td>10.3</td>
</tr>
<tr>
<td><strong>Special Education Placement</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IC Team</td>
<td>43.2</td>
<td>34.2</td>
<td>28.7</td>
</tr>
<tr>
<td>Comparison</td>
<td>12.8</td>
<td>12.3</td>
<td>9.0</td>
</tr>
</tbody>
</table>

*Note.* SpEd = composition index (%) for minority students referred/placed in special education; TSP = composition index (%) for minority students relative to total school population.

<sup>a</sup>χ<sup>2</sup>(1, N = 213) = 4.34, *p* < .05.  
<sup>b</sup>χ<sup>2</sup>(1, N = 171) = 6.03, *p* < .025.
classroom instruction has on disproportionate placement of minority students in special education. Furthermore, these results indicate that solutions to reduce disproportionate placement of minority students may be found in the implementation of effective early intervention support to teachers that specifically focuses on improving the instructional delivery in the general education classroom. IC Teams, as a collaborative problem-solving process, represent a model of early intervention support for classroom teachers; the results of this study demonstrate how assessing students’ entry skills and then systematically designing appropriate instruction matched to those entry skills decreased the risk indexes and odds ratios for minority students being referred for evaluation and ultimately placed in special education.

**Importance of Multiple Presentations of Disproportionality**

A final finding of the current study relates to the importance of presenting all accepted calculations when reporting disproportionality. The definition of disproportionate placement of minority students has typically been viewed as specific to particular categories of special education (e.g., mental retardation, emotional disturbance), often using only one of three different calculations (i.e., risk index, odds ratio, or composition indexes). Depending on which special education category is monitored, and depending on which calculation is used, a school, district, or state could or could not be considered disproportionate. However, if only one index is reported when discussing disproportionality, the picture can be skewed and potentially misleading.

The current findings demonstrate that the calculation chosen to represent disproportionality can itself provide different interpretations. For example, if only risk indexes were considered (see Table 3), it would appear that minority students in IC Team schools were less at risk for being evaluated for or placed in special education when compared to minority students in nonproject schools (e.g., 3.3% vs. 5.2%, respectively). Such a finding might lead one to conclude that concerns about the overidentification of minority students in IC Team schools were not as great as for students in non-project schools, because a smaller percentage of the minority population was placed into special education. However, when the odds ratios were examined (see Figure 1), the odds of minority students in IC Team schools being placed in special education was nearly 1.5 times greater than that of minority students in comparison schools. In this instance, reporting all three calculations of disproportionality provides a more comprehensive context for interpreting the data.

From a broader perspective, we see that the variations in how disproportionality is calculated and reported can be a potential hindrance toward rectifying the problem. In order for progress to be made in decreasing disproportionality, there needs to be an accepted means of calculating and reporting findings. Our view is that until a better method is established, all three types of calculations should be reported and discussed.

**Limitations**

Although the results of the current study provide insight into the impact of effective support services on addressing the disproportionate referral for and placement of minority students in special education, they must be viewed in the context of the design presented. Future studies that randomly assign schools to treatment and control conditions will strengthen the causal link between the application of effective instructional practices and the referral and placement patterns noted in this study. Likewise, a greater understanding of the control schools’ existing prereferral practices would provide information about the critical components that differentiate effective from less effective support practices. Finally, the minority populations of the schools involved in this study were largely African American, and other minority groups were less well represented. Additional investigation of the impact of IC Teams on varied student populations would be beneficial.

**Conclusion**

As the categorical model of special education service delivery enters its third decade, so does the challenge to define,
understand, and address the continuing achievement gap of minority students and the related disproportionate placement of minority students into special education. The current study attempts to describe Instructional Consultation Teams (IC Teams), a particular model of intervention services, and to compare its impact to existing prereferral models in schools. There is consistent evidence in the literature that disproportionate patterns of special education referrals, evaluations, and placements can be reduced with effective support provided to teachers. The current results suggest that the early support of the instructional process within the general education classroom can be effective in addressing the disproportionate placement of minority students in special education.

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