FALLING THROUGH THE CRACKS: DISPROPORTIONALITY IN SPECIAL
EDUCATION AT ONE SCHOOL BASED ON RACE, GENDER, SOCIOECONOMIC
STATUS, AND BEHAVIOR DIFFICULTIES

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ABSTRACT

Disproportionality in special education is an important topic that has been a problem for decades (Hosp & Reschly, 2002). There are many factors that contribute to disproportionality, including the evaluation process (Donovan & Cross, 2002; Hobbs, 1975; Mercer, 1973). This study examined recent archival data at a middle school for the presence of disproportionality. It was hypothesized that students who had behavior problems, minority status, economic disadvantage, and were male would have higher representation in special education compared to peers. It also was hypothesized that there would be significant relationships between achievement scores and discipline problems. Using 545 student participants, chi-square analyses found a significant difference by gender and special education placement, $\chi^2(1) = 5.320$, $p = 0.021$, $c = 0.098$. Additionally, correlations demonstrated that achievement scores were negatively related to office discipline referrals, $r(543) = -0.224$.

TABLE OF CONTENTS

LIST OF APPENDIXES

LIST OF TABLES

CHAPTER I

Introduction

Overview

Change in education is not new. In the beginning of the 19th century, attendance at schools was optional. This changed with the passing of compulsory education laws that were enacted in all states by 1918 (Ysseldyke & Algozzine, 1984). Compulsory education occurred when society adopted a new perspective that teaching children important skills could help improve society in the longterm (Fagan & Wise, 2007).

Even with compulsory attendance, children with a wide variety of serious disabilities could be excluded from public education (Christie, 2005; Fagan & Wise, 2007). This exclusion was confirmed by the decisions of several court cases. For example, in *Watson v. City of Cambridge* (1893), the courts ruled that children who were "weak of mind" would not benefit from education and therefore could be excluded. Then, in the *Department of Public Welfare v. Haas* (1958), the courts ruled that children who were "feeble minded" or "mentally deficient" were not required to be included in public education because those deficits would prevent them from benefiting from formal education.

The fight for equality for students with disabilities found support with the ruling of *Brown v. Board of Education* (1954). The ruling decided that separating schools because of race was a violation of human rights protected under the Fourteenth Amendment. Less well known is that in *Brown v. Board of Education*, the Supreme Court also ruled that segregating schools because of a student's unalterable characteristic was

unconstitutional (Yell, Rogers, & Rogers, 1998). This ruling fueled advocacy for students with disabilities to be included in special education.

Two landmark cases furthered the cause of including students with disabilities in public education. In *Pennsylvania Association for Retarded Children (PARC) v. Commonwealth of Pennsylvania* (1972), the Supreme Court ruled that states had to provide education to students with disabilities because all students are capable of learning and exclusion would be a violation of the Fourteenth Amendment. Then, in *Mills v. Board of Education of the District of Columbia* (1972), the Supreme Court ordered the Board of Education of the District of Columbia to provide free and appropriate public education to children with mental, physical, or emotional disabilities and handicaps.

In 1975, President Gerald Ford signed the Education for All Handicapped Children Act (EAHCA) into law (Conroy, Yell, Katsiyannis, & Collins, 2010). This law, also called P.L. 94-142, provided federal funding to states in order to help schools educate students with disabilities (Yell, Rogers, & Rogers, 1998). The law required states to follow six guidelines in order to receive federal funding: (a) free and appropriate public education (FAPE) for all school-aged children, (b) nondiscriminatory assessment and placement, (c) individualized education program (IEP), (d) least restrictive environment, (e) due process, and (f) full participation by parents.

Since the implementation of P.L. 94-142, it was amended and renamed to the Individuals with Disabilities Education Act (IDEA) in 1990 (Conroy, Yell, Katsiyannis, & Collins, 2010). In 1986, amendments to IDEA extended FAPE to children with disabilities aged 3-5. The 1996 amendments included optional early intervention

programs for infants and toddlers that included individualized family service plans for their families. Changes in 1990 included a transition to person-first language, a change in the terminology from handicapped students to students with a disability, inclusion of autism and traumatic brain injury as possible classifications, and a transition plan for exiting school when students turn 16-years-old (Yell, Rogers, & Rogers, 1998).

The law was signed again by President Bill Clinton in 1997, known as P.L. 105-17 (Yell, Rogers, & Rogers, 1998). This revision reemphasized that students with disabilities were to be placed in the least restrictive environment consistent with sound education practices. The 1997 law required the consideration of assistive technology for each special education student.

More recently, Congress reauthorized IDEA in 2004, calling it the Individuals with Disabilities Education Improvement Act (Turnbull, 2005). This law closely followed standards set forth by the No Child Left Behind Act (NCLB) of 2004. NCLB has six principles: (a) academic accountability, (b) employing highly qualified teachers, (c) using scientifically based instructional methods, (d) some unspecified degree of local decision making, (e) safety at school, and (f) emphasizing parental participation (Turnbull, 2005).

The changes to the Individuals with Disabilities Education Improvement Act (IDEIA), similar to NCLB, also included additional funding and the use of Response-to-Intervention (RtI) in order to diagnose students with learning disabilities (Russo, Osborne, & Borreca, 2005). Other changes in IDEIA included an emphasis on intervening early, reducing excess paperwork, and reducing disproportionality. The

change involving RtI allows schools to intervene immediately if students are not responding to research-based interventions (Gresham, 2007).

Special Education Referral and Placement

Currently, there are 13 federal disability categories a school can use in order to place a student in special education: autism, deaf-Blindness, deafness, developmental delay, emotional disturbance, hearing impairment, intellectual disability, multiple disabilities, orthopedic impairment, other health impaired, specific learning disability, speech or language impairment, traumatic brain injury, and visual impairment (including blindness) (National Dissemination Center for Children with Disabilities, 2012). Additionally, the state of Tennessee includes gifted and functionally delayed (Tennessee Department of Education, 2012c). By far the largest category in special education is specific learning disability (Sattler, 2008).

Current Placement Process

The referral process is an important first step in providing services to children (Dunn, Cole, & Estrada, 2009). There are a variety of ways a student can be referred (e.g., parents, professional staff, and agencies) (Tennessee Department of Education, 2008). General education teachers are the most common source of referrals to special education (Gresham, 2007). Once a referral has been made, the case goes to a school support team where the student is screened to see if there is enough evidence that the student is in need of possible special education placement (Tennessee Department of Education, 2008). If so, an evaluation takes place. This typically consists of extensive, time-consuming formal assessments, informal assessments, observations, interviews, and

a review of records (Sattler, 2008; Tennessee Department of Education, 2008).

Participants in the evaluation process include parents, teachers, school psychologists,

administrators, and other necessary personnel. These professionals prepare a report that

summarizes the findings and may include possible placement options.

Current Placement Process in Tennessee

Tennessee requires public schools to go through seven steps in order for a student

to be placed in special education (Tennessee Department of Education, 2008). First, the

student must be referred for an evaluation. A team consisting of parents, teachers, and

administrators then decides if an evaluation to determine eligibility is necessary. If so, the

evaluation occurs and a meeting to determine the eligibility takes place. If the student

qualifies for special education, an individual education plan is developed then

implemented, and reviewed annually.

Evaluations for every student vary because requirements to qualify are different

for each disability category (Tennessee Department of Education, 2008). All evaluations

must follow precise guidelines and are required to include information from a wide

variety of sources that should be documented and reviewed. The information may include

but is not limited to record reviews, parent and teacher input, as well as observations.

Response to Intervention (RtI)

For each special education category there is a specified process that school

personnel must go through in order to determine whether a student qualifies for that

disability. Typically, tests and discrepancies have been used to make the diagnoses, but

with the 2004 revisions to IDEIA, a Response-to-Intervention (RtI) approach is permitted

and encouraged for children with learning disabilities (Tennessee Department of Education, 2008).

RtI is a problem solving method that attempts to intervene with struggling students early and quickly (Reschly, 2008). The traditional RtI model consists of three tiers all using scientifically-based instructional methods. Tier 1 is sometimes referred to as the standard curriculum. The greatest number of students, typically 80% of the population, will benefit from the core instruction and not need additional support (Tilly, 2008). However, some students (approximately 15% of the student body) will struggle making progress with Tier 1 instruction alone. These students will move to Tier 2, which consists of supplemental instruction also using scientifically-based interventions. This instruction takes place in general education, but is more intense and consists of smaller groups. Students who do not respond to Tier 2 move on to Tier 3. This tier includes more intense scientifically-based interventions; if the students do not respond then they will be considered for and placed in special education.

RtI has many advantages over the traditional test-and-place process (Hoover, 2010). For example, rather than having to be placed in special education, students receive help immediately and are monitored frequently. Also, during RtI, a student receives extra assistance based on actual classroom performance rather than the judgment of an educational team. Therefore, the focus on data-based decision making has the potential of reducing overrepresentation of populations in special education.

Possible consequences of RtI are that fewer children may need special education for learning disabilities and disproportionality for minorities may be reduced. Tucker and

Sornson, (2007) examined archival data from a school district consisting of eight schools in Connecticut and found that the disproportionality of minority students placed in special education was drastically reduced after the implementation of an RtI-like data-based intervention approach. For example, after 3 years of having RtI implemented, the percentage of referred students who were placed in special education went from 95% to 7% for Hispanic students, 36% to 3% for African American Students, and 48% to 3% for Caucasian students. The total number of students in special education also dropped impressively as a consequence of the program.

Evaluation of the Test-and-Place Method for Placement and Intervention

Nationally, while RtI is specifically permitted in the 2004 version of IDEIA, the traditional test-and-place method has a long history and remains more common than RtI (Dunn, Cole, & Estrada, 2009; Gresham, 2007). Sometimes the detractors of the traditional-test-and-place method call it the "wait-to-fail" model because in order for students to be referred, they need to be having intense enough troubles to be singled out, assessed, and then qualify (Gresham, 2007). During the identification process, problems typically intensify even more before interventions begin (Bradley, Danielson, & Doolittle, 2007). Often times, these students are identified so late in their education careers that the interventions that are eventually provided have no measurable effects. Also, there are children who are having troubles in school but don't receive additional services because their troubles are not severe enough. Because of the traditional test-and-place method's prominence, it is important to consider the characteristics of children who qualify for special education placement. Many drawbacks have been identified for the

traditional test-and-place method (Bradley, Danielson, & Doolittle, 2007; Gresham, 2007).

Not all evaluations of RtI are positive. For example, the Council for Exceptional Children (2008) pointed out in their position statement that RtI neither identifies nor rules out disabilities effectively. Kavale and Flanagan (2007) go even further and say that RtI should not be used exclusively to determine who is eligible for special education because of validity concerns.

Teacher Referral Patterns when Using the Traditional Test-and-Place Method

Teachers are the most common source of referrals, and there has been research regarding what factors they use to determine which students to refer (Harry & Klingner, 2006). Teachers tend to base their referrals on academics and behavior, comparing children to each other (Gresham, 2007). Hutton (1985) found eight common characteristics teachers use to determine who needs referred to special education: (a) peer relationship difficulties, (b) frequency of outbursts when frustrated, (c) academic weaknesses, (d) timid and shy, (e) antisocial, (f) altercations, (g) academic noncompliance, and (h) inattention. Dunn (2006), in addition to Hutton's characteristics, found that common characteristics related to frequency of referral included frequent assistance provided, time that students require to complete tasks, and how the student looks. Dunn also considered difficulty students have with English language skills as leading to increased chances of being referred to special education.

Students who exhibit both academic and behavioral problems may be referred more often than students who have academic troubles but show limited behavioral

problems (Soodak & Podell, 1993). This study consisted of 192 general and special

education teachers in New York reading scenarios of students and stating whether they

thought the target student was in the correct classroom placement and if the student

should be referred for special education. The teachers also completed efficacy surveys,

that is, they rated their perceived effectiveness as teachers. The authors found that

students who displayed both academic and behavioral problems were more likely to be

referred for special education compared to students who displayed behavioral problems

but no academic problems.

Researchers have found that teacher variables as well as student variables predict

special education referral rates. Harry and Klingner (2006) observed teaching styles at 12

low-income, predominately Black elementary schools, and discovered that teachers who

have clear rules that are implemented consistently and manage their classrooms

effectively tend to refer students based on low achievement rather than behavioral

problems. This is because classroom management allows for behavioral problems to be

less of a disturbance.

In the Soodak and Podell (1993) study mentioned above, looking at 192 preschool

through senior high school general and special education teachers in the New York

metropolitan area, results showed a relationship between teacher characteristics and

special education referral rates. Teachers who believed that they were in control of the

classroom and that they were able to manage their students effectively were less likely to

refer students compared to teachers who felt like they had less control over the students'

behaviors. The teachers with less control reported believing that special education would benefit their students.

McIntyre (1990) examined the relationship between teacher standards and aggression of students. He reanalyzed a study consisting of 92 teachers from 11 elementary public schools in Oregon using a different form of analysis in order to determine if teacher standards affected special education referral making. McIntyre concluded that teachers with high behavior standards refer children more often if the students' aggressiveness exceeds teacher expectations. However, if a student is perceived to be overly aggressive, the teacher may not refer them because they do not believe special education would be beneficial to them. Taken together, these studies support the point that teacher attitudes relate to special education referral rates.

Disproportionality

Another problem with the current referral process is disproportionality, or the overrepresentation of certain populations in special education. This too is not a new problem. In the 1970s, Nicholas Hobbs and Jane Mercer wrote eloquently and frequently about the unfairness of assessment strategies that resulted in children from minority groups and from poverty ending up labeled as intellectually disabled (Hobbs, 1975; Mercer, 1973).

Race and disproportionality.

A well-researched topic regarding disproportionality is the higher percentage of minority students than majority students in special education. Disproportionality has been a problem for four decades (Hosp & Reschly, 2002). A disproportionally high percentage

of minority children (e.g., culturally and linguistically diverse, African American, Native American, and Spanish speaking) are placed in special education (Tucker, 1980). More specifically, African American, Native American, and Spanish speaking students are more likely to be placed as having an intellectual disability, formally known as mental retardation, specific learning disability, emotion disturbance, and speech or language impairment (Harry & Klingner, 2006). This is true in Tennessee as well as the United States as a whole (Tennessee Department of Education, 2012b).

One reason minority students are at a greater risk of being identified for special education is because of the evaluation process (Donovan & Cross, 2002). In many of the federal categories, such as deaf-blindness, orthopedic impairment, and visual impairment, little clinical judgment is required to determine eligibility because medical records and objective data aid in the decision. The disproportionality most often occurs in intellectual disability, specific learning disability, and emotional disturbance because the eligibility for those categories is based partially on perceptions, interpretations, and professional judgment.

The process for determining admission into special education is an important factor that influences disproportionality (Rhodes, Ochoa, & Ortiz, 2005). For example, minority groups have lower scores on intelligence tests than majority groups. This leads to greater placement into special education, especially for the intellectual disability category (Harry and Klingner, 2006). Because of suspected bias, minority families from California went to the courts and argued that the standardized tests of intelligence should not be used in placement decisions (*Larry P. v. Riles*, 1979).

Another way tests are biased against minority populations has to do with English Language Learners (Rhodes, Ochoa, & Ortiz, 2005). When students are assessed in a language they do not know, their scores will be lower and will lead to higher rates of placement in special education. It can be difficult to determine which language to assess because the students are either not proficient in any language, or they may seem to be proficient in English because of their good communication skills but have very little understanding of the English language. This causes schools to believe the students have a learning disability when in fact the tests that are being administered are heavily language loaded.

Poverty and disproportionality.

Poverty has been identified as a risk factor for academic troubles because of the effects it has on families (Artiles, Harry, Reschly, & Chinn, 2002). This has been related to to a lifetime of limited medical care and less educational enrichment at home. Minority students from poverty have been identified as being placed more often in special education than minority students not in poverty (Oswald, Coutinho, Best, & Singh, 1999). Children from lower socioeconomic status backgrounds also have been identified and placed at a higher rate compared to middle-class children (Low & Clement, 1982), but other studies have shown no relationship between poverty and special education placement rates (Skiba, Poloni-Staudinger, Simmons, Feggins-Azziz, & Choong-Geun, 2005). Skiba et al. (2005) examined archival data from 295 midwestern school districts for one academic year. Their data sources included the children's type of disability, whether students were place in general education or special eduation, the students' race,

and socioeconomic level. The authors considered the amount of local resources invested in education and included academic and social outcomes as dependent variables. Using correlational analyses, the authors concluded that poverty was an inconsistent indicator of special education placement.

Gender and disproportionality.

There has also been disproportionality in regards to gender and placement into special education. For example, the authors discovered that boys are more often referred than girls because boys display their problems more externally (Wehmeyer & Schwartz, 2001). The authors spent three years examining archival data of students from three southern districts (rural, medium-sized city, suburban). All of these students qualified for special education. The authors hoped to determine any possible explanations for why male students are placed in special education more often than female students. The authors discovered that not only are boys referred more often than girls, but that girls may be under-referred. Wehmeyer and Schwartz concluded that even if they have academic problems, girls are often not referred because they do not display serious behavioral problems. The authors also found that students who had higher occurrences of aggressive behavior, which tended to be boys, were referred more often.

In a lengthy, classic treatise, Grossman and Grossman (1994) have also discovered gender difference that may influence special education placement decisions. In their book, they reviewed various factors that contribute to gender differences in the educational setting, concerns of educators in regards to gender differences, and how school systems can approach the gender issue in order to facilitate both types. They

discovered that behaviors desired by teachers (e.g., seek feedback, are quieter) are displayed by girls more often than boys, and that girls can be overlooked when they are having problems but are not acting out.

Behavior problems and disproportionality.

Although race, poverty, and gender have consistent and predictable relationships with disproportionality, behavior problems have less clear relationships with likelihood of referral to special education. Walker et al. (1990) found that teachers were more likely to refer students with challenging aggressive behaviors and less likely to refer students who were school avoidant, depressed, and socially ioslated. Skiba, Poloni-Staudinger, Gallini, Simmons, and Feggins-Azziz (2006) described how easy it is for aggressively acting male minority students to end up on their teachers' special education referral list. However, de La Paz and Graham (1995) wrote in complaint of nonaggressive children being overlooked during special education referral and DeMarco and Deretich (2006) described inconclusive results when correlating internalizing/externalizing problems and referrals to special education. Thus, there may be subtle or not so subtle administrative pressures or pressures from colleagues that promote referral of children with behavioral problems (e.g., getting these children extra assistance out of teachers' classrooms). DeMarco and Deretich (2006) listed other pressures that would lead teachers to delay referrals. These included vagueness of placement criteria, and the extensive paperwork involved when seeking special education placement.

As mentioned before, disproportionality is the overrepresentation of various groups in special education and can be caused by a number of factors (e.g., race, gender,

poverty). Disproportionality is a problem because it unfairly targets specific populations for special education, therefore stigmatizing students (Hobbs, 1975; Mercer 1973).

Special education referral processes using the traditional test-and-place method have been associated with disproportionality for years. However, just because they have been linked in the past does not mean that the link continues. For that reason, this study continued to investigate the strength of this connection.

Hypotheses

The current study was focused on the presence of disproportionality in special education. The author took frequency counts of the number of students placed into special education by disability status, poverty, gender, and behavior record in order to find any significant relationships.

1. It was hypothesized that during the 2011-2012 academic year in a middle school in Tennessee, having discipline problems would result in a greater placement in special education than having few or no discipline problems.

2. It was hypothesized that being classified as a minority student would result in a greater placement in special education than being classified as a majority student.

3. It was hypothesized that being classified as an African-American student would result in greater placement in special education, followed by Hispanic-American students, and finally Euro-American students.

4. It was hypothesized that having an economic disadvantage (ED) would result in greater placement in special education than not having an economic disadvantage.

5. It was hypothesized being a male student would result in a greater placement in special education than being a female student.

6. It was hypothesized that there would be a significant relationship between achievement scores and discipline problems.

CHAPTER II

Method

Participants

This study examined student archival data from a middle school in Tennessee.

See Appendix A for a copy of the Institutional Review Board approval letter. In order to

be included in the sample, the students had to be low achieving. Low achievement was

defined by using the Tennessee Value-Added Assessment System (TVAAS), which is a

statistical analysis of achievement data (Tennessee Department of Education, 2012d). For

our purposes, a low achiever was defined as having a 50% chance or lower of reaching

proficiency on the Tennessee Comprehensive Assessment Program (TCAP). The TCAP

is an achievement test students in Grades 3-8 take each spring (Tennessee Department of

Education, 2012a). There were a total of 545 student archival entries.

Measures

A cooperating school psychologist retrieved demographic and student misconduct

data from a school's files. The demographic data included: age, gender, grade, race,

number of absences, and number of tardies. These data also included economic

disadvantage status, which was classified as whether or not the student was eligible for

free or reduced lunch.

Additionally, the author created a behavioral measure, the Krupla Transgression

Index (KTI), specifically for this project. To earn KTI points, students had to be caught

breaking school rules. They received 1 point for each office discipline referral (ODR)

they receive, 5 points for every day of in-school-suspension (ISS), 25 points for everyday

of out-of-school-suspension (OSS), and 100 points for every zero tolerance infraction (ZTI). These values were then summed for a total KTI:

$$KTI = (1 \text{ x \# of ODR}) + (5 \text{ x \# of days in ISS}) + (25 \text{ x \# of days in OSS})$$

$$+ (100 \text{ x \# of ZTI}).$$

ODR were defined as the number of times teachers sent the student to the office because of behavior problems, and could include: assault/battery on a student, bomb threat, bullying/harassment of a student, cell phone, cheating/forgery, cutting class/leaving school without permission/hooky, damage/destruction/theft of school/private property, defiance of authority, disruption and interference with school, dress code violation, drinking/possession/distribution of alcohol, fighting, gambling or possession of gambling material, gang gestures/symbols/literature/colors/drawings, possession of a weapon or dangerous instrument, possession of over the counter/prescribed medications without a doctor's orders, profanity (words or gestures), rude and disrespectful behavior, sexual misconduct, threat of assault/harassing school employee/school resource officer/student, and use of possession of tobacco products. ISS was the number of days the students was suspended in school and OSS was the number of days a student was suspended out of school. ZTIs were defined as the number of times the student broke a zero tolerance rule which could include: assault/battery on school employee or school resource officer, bomb threat, possession and/or use of drugs or drug paraphernalia, and possession of a firearm. In addition, information concerning the student's disabilities (or lack thereof) was also obtained from the schools files.

Procedures

A school psychologist employed at the middle school recorded and categorized the measures described above into an Excel file. The school psychologist divided the students into two groups based on whether or not they were placed in special education. Additionally, the psychologist divided the groups into five categories: No Placement, Specific Learning Disability, Speech or Language Impaired, Other Health Impaired, and Other Categories. The No Placement group included students who were not placed in special education. The students with Specific Learning Disabilities, Speech or Language Impairment, and Other Health Impairments included students placed in their respective IDEIA disability category. The Other Categories group included students who were placed in the following IDEIA categories: autism, emotional disturbance, functional delay, hearing impairment, intellectual disability, multiple disabilities, and traumatic brain injury as defined by IDEIA.

The Krupla Transgression Index (KTI) for the 2011-2012 school year determined the degree to which students displayed behavior problems. As stated above, students received 1 point for each office referral they received, 5 points for every day of ISS, 25 points for everyday of OSS, and 100 points for every zero tolerance infraction. These values were then summed for a total KTI. The subjects were then categorized based on a Zero, Low, Medium, or High KTI. A Zero value on the KTI indicated that the subject had no infractions of any kind. A Low KTI value was defined as 1 to 6; a Medium KTI value was defined as 7 to 28; a High KTI was defined as 29 and higher.

Analysis

Chi-square analyses were used to test the first five hypotheses. The first hypothesis related to discipline problems as measured by the KTI categories and whether or not the students were placed in special education. A 2 x 4 contingency table with 2 categories of placement and 4 categories of the KTI was used to address Hypothesis 1. The second and third hypotheses related to student race and whether or not the students were placed in special education. A 2 x 2 contingency table with two categories of placement and two categories of race, and a 2 x 3 contingency table with two categories of placement and three categories of race, respectively were employed to assess these hypotheses. The fourth hypothesis related to economical disadvantage status and whether or not the students were placed in special education. The author used a 2 x 2 contingency table with two categories of placement and two categories of economic disadvantage status to address this hypothesis. The fifth hypothesis related to gender and whether or not the students were placed in special education. Once again the author used a 2 x 2 contingency table with two categories of placement and two categories of gender as well as a 2 x 1 contingency table with two categories of gender and one category for placement in special education.

Finally, the data were analyzed using a stepwise regression as well as Pearson Correlation Coefficients in which all variables were correlated with one another in a large correlation matrix. The alpha level of 0.05 was used to define statistical significance in all analyses.

CHAPTER III

Results

Demographic Statistics

Percentages and frequencies of the demographic data are shown in Appendex B,

Table 1. The archival data consisted of 23.9% ($n = 130$) fifth graders, 26.1% ($n = 142$)

sixth graders, 25.3% ($n = 138$) seventh graders, and 24.8% ($n = 135$) eighth graders. The

archival data consisted of 52.3% ($n = 285$) males and 47.7% ($n = 260$) females. Of the

archival data, 21.8% ($n = 119$) did not have an economic disadvantage and 78.2% ($n =$

426) were economically disadvantaged. The special education placement of the archival

data consisted of 72.3% ($n = 394$) who were not in special education and 27.7% ($n = 151$)

were placed. When looking at the disability categories of those children placed in special

education, there were 15.4% ($n = 84$) in Specific Learning Disability, 6.4% ($n = 35$) in

Speech or Language Impairment, 2% ($n = 11$) in Other Health Impaired, and 3.9% ($n =$

21) in Other Categories.

Descriptive Statistics

Means and standard deviations of the demographic data are shown in Table 2. The

mean age was 12.03 years old ($SD = 1.25$), the mean Tennessee Comprehensive

Assessment Program (TCAP) probability score was 13.65% ($SD = 15.01$), the mean

number of absences was 9.68 ($SD = 10.79$), and the mean number of tardies was 3.55 (SD

$= 5.41$). In regards to behavioral data, the mean number of office discipline referrals

(ODR) was 7.70 ($SD = 10.31$), the mean number of days of in-school-suspension (ISS)

was 1.78 ($SD = 3.07$), the mean number of days in out-of-school-suspension (OSS) was

1.78 (*SD* = 7.19), the mean number of zero tolerance infractions (ZTI) was 0.01 (*SD* =

0.12), and the mean Krupla Transgression Index (KTI) was 26.60 (*SD* = 53.36).

Inferential Statistics

Hypothesis 1 stated that having discipline problems would result in a greater

placement in special education than having few or no discipline problems. This was

tested using a 2 x 4 chi-square analysis comparing the frequency of special education

placement between students who had zero behavior problems, low behavior problems,

medium behavior problems, and high behavior problems as reported by the Krupla

Transgression Index (KTI). The frequencies of participants in each group are shown in

Table 3, Panel A. No significant chi-square was found among the four behavior problem

groups and special education placement, $\chi^2(3) = 1.431$, $p = 0.698$.

Hypothesis 2 stated that being classified as a minority student would result in a

greater placement in special education than being classified as a majority student. A 2 by

2 chi-square was computed comparing the frequency of special education placement

between majority (Caucasian) and minority (African American, Hispanic, and American

Indian) students. The frequencies are shown in Table 3, Panel B. No significant chi-

square was found among the four groups, $\chi^2(1) = 0.502$, $p = 0.479$.

Hypothesis 3 stated that being classified as an African-American student would

result in a greater placement in special education, followed by Hispanic-American

students, and finally Caucasian students. A 2 by 3 chi-square was computed comparing

the frequency of special education placement between Caucasian, African American, and

Hispanic students. The frequencies are shown in Table 3, Panel C. No significant chi-square was found among the five groups, $\chi^2(2) = 3.428$, $p = 0.180$.

Hypothesis 4 stated that having an economic disadvantage (ED) would result in greater placement in special education than not having an economic disadvantage. A 2 by 2 chi-square was computed comparing the frequency of special education placement between students who have and who do not have an economic disadvantage. The frequencies are shown in Table 3, Panel D. No significant chi-square was found among the four groups, $\chi^2(1) = 1.326$, $p = 0.249$.

Hypothesis 5 stated that being a male student would result in a greater placement in special education than being a female student. A 2 by 2 chi-square was computed comparing the frequency of special education placement between male and female students. The frequencies are shown in Table 3, Panel E. A significant chi-square was found among the four groups, $\chi^2(1) = 5.320$, $p = 0.021$, $c = 0.098$. An additional one-way chi-square was conducted comparing the number of males to females who had been placed into special education and a significant difference was found as well, $\chi^2(1) = 6.364$, $p = 0.012$.

The sixth hypothesis stated that there would be a significant relationship between achievement scores and discipline problems. Four measures of discipline problems were analyzed: office discipline referrals (ODR), in-school-suspension (ISS), out-of-school-suspension (OSS), and zero tolerance infractions (ZTI). These correlations are shown in Table 4. A Pearson product-moment correlation was computed between the TCAP probability score and number of ODR and a significant negative relationship was found,

$r(543) = -0.224$, $p = 0.000$. A significant negative relationship was found between the

TCAP probability score and days in ISS, $r(543) = -0.217$, $p = 0.000$. A significant

negative relationship was found between TCAP probability score and days in OSS,

$r(543) = -0.142$, $p = 0.001$. A nonsignificant relationship was found between TCAP

probability score and ZTI, $r(543) = -0.013$, $p = 0.757$. The complete correlational matrix

is shown in Table 5, Panels A and B.

The author conducted several supplementary analyses to complete the project and

to determine the best predictors of placement from the available data. A stepwise

regression analysis was conducted. The TCAP probability score was shown to be the best

predictor, placement = (-0.010)(TCAP) + (1.414). Additionally significant improvements

in prediction were found when ODR, age, and grade were added to the model, placement

= (-0.010)(TCAP) + (-0.004)(ODR) + (0.114)(age) + (-0.107)(grade) + (0.775).

However, the R^2 change was rather small, indicating that TCAP probability score is the

best predictor of placement.

CHAPTER IV

Discussion

Findings

The current study yielded mixed results depending on the type of analysis

performed (chi-square, correlations, and a stepwise regression). Dunn (2006) and Hutton

(1985) found that behavior problems were a predictor of referral to special education and

the present study predicted that there would be a higher placement of students with

behavior problems into special education compared to students with fewer behavior

problems. However, the results did not support this hypothesis, which supports the

findings of Walker et al. (1990).

Regarding Hypotheses 2 and 3, Harry and Klingner (2006) found that the race of

a student, particularly if they were from a minority group, increased the risk of being

placed into special education. The current study hypothesized that race would lead to

disproportionality in special education; however, results did not support this claim. Low

and Clement (1982) found that poverty contributed to higher placement in special

education; but another insignificant difference was found in the current study between

special education placement and economic disadvantage status. This finding is similar to

the Skiba et al. (2005) finding that poverty is an inconsistent factor predicting

disproportionality.

The only significant difference this study found using chi-square was between

special education and gender. Male students were placed more often than female students

in special education, but this was a small difference. Possible reasons for this difference

were explained in Grossman and Grossman (1994) when teachers noticed the acting out

behaviors in boys but not the internalizing behaviors of girls. The present findings are consistent with those of Wehmeyer and Schwartz (2001); female students were underreferred because they did not exhibit the same acting out behaviors as male students. This suggests that because girls tend to be more quiet when they struggle, they are over-looked by teachers and thought to be adjusting well.

The stepwise regression found TCAP probability scores, which predict academic success, were the strongest predictors of special education placement. The lower the probability score the more likely that the student would be placed in special education. This is similar to studies that indicate underacheivment is a factor teachers consider when making a referral (Dunn, 2006; Hutton, 1985). TCAP probability scores were also correlated with office discipline referrals; the more referrals a student had, the lower their TCAP probability score tended to be.

TCAP probability scores were also negatively correlated with age. It is possible that characteristics of the TCAP (expecations of success in school increases with age) cause the negative relatationship with age. TCAP probability scores were also negatively correlated with race, but as arbitrary codes (0 = White, 1 = African American, 2 = Hispanic, 3 = American Indian) were used to identify races, it is difficult to ascribe meaning to its correlation to TCAP probability.

Another negative correlation with TCAP scores was economic disadvantage status (ED). It is well known (e.g., Mercer, 1973) that children of poverty struggle in school compared to middle-class children. Finally, TCAP probability was negatively correlated with absences. In order to qualify for special education, the school must rule

out that lack of appropriate education is not the cause of education problems (Tennessee Department of Education, 2008). Therefore, if a student is not receiving instruction, they will not understand the material and will perform poorly in their classes.

Similar to the discussion of Hypothesis 1, special education placement was not strongly related to behavior problems which were quantified using the number of office discipline referrals (ODR), days of in-school-suspension (ISS), days of out-of-school-suspension (OSS), and number of zero tolerance infractions (ZTI). This finding supports the nonsignificant chi-square amongst the special education placement groups and Krupla Transgression Index (KTI) groups.

The author concludes that the issue of disproportionality, when using chi-square analyses to determine its presence, is not a major issue at the middle school used in the current study. There was a significant difference between the placement of boys and girls in special education, but overall the findings were not concerning. It is not a bad thing that TCAP probability scores were the best predictors of placement into special education because the purpose of special education is to help those struggling learners have more success in school. Using correlational analyses, which were used here to supplement the findings, the study concluded that two measures of behavior problems correlated negatively with likely school success. This is not surprising; it has been long established that children who severely act out perform worse in school.

Limitations

One limitation of the current study was including one school in the sample. Generalizing

the results to the whole district or beyond is difficult because the make-up of one school

(e.g. poverty, race, location) could be vastly different from another.

The measures used to define behavior problems provide a second limitation. The

current study used office referral data, but there are more specific ways to identify

students with behavior problems. For example, this could be done by observing children

and having teachers complete rating scales.

A third limitation was the archival data that were accessed. For example, the

archival entries did not include the participants' status in the referral status. Instead it

only included the special education placement of each student. Thus, a student could have

been nearing a placement decision and continue to register as a general education student.

Having the referral information would have been beneficial because much of the research

focuses on the disproportionality of teacher referrals rather than the actual placement.

Other entries not included were the age of the student when referred or placed in special

education and the specific infractions the students committed, which could have shown a

pattern as well.

Future Research

It would be beneficial for future research to look in detail into the students' status

into the referral process. It would also be beneficial to conduct a longitudinal study

comparing disproportionality in a district transitioning from a traditional test-and-place

method to a RtI procedure. Future research would be better served in regards to behavior

problems and special education placement if the students actual disciplinary infractions were compared to the initiation of the special education process.

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APPENDIXES

Appendix A

Institutional Review Board Approval Letter

**MIDDLE
TENNESSEE**
STATE UNIVERSITY

May 23, 2012

Kaitlin Krupla, Dr. James Rust
Department of Psychology
kk2y@mtmail.mtsu.edu, jorust@mtsu.edu

Protocol Title: "Falling Through the Cracks: Bias Towards Admission of Children with Problem Behavior into Special Education"

Protocol Number: 12-326

Dear Investigator(s),

The exemption is pursuant to 45 CFR 46.101(b) (4). This is because your study involves the use previously collected data and the information was recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

You will need to submit an end-of-project report to the Office of Compliance upon completion of your research. Complete research means that you have finished collecting data and you are ready to submit your thesis and/or publish your findings. Should you not finish your research within the three (3) year period, you must submit a Progress Report and request a continuation prior to the expiration date. Please allow time for review and requested revisions. Your study expires on May 23, 2015.

Any change to the protocol must be submitted to the IRB before implementing this change. According to MTSU Policy, a researcher is defined as anyone who works with data or has contact with participants. Anyone meeting this definition needs to be listed on the protocol and needs to provide a certificate of training to the Office of Compliance. **If you add researchers to an approved project, please forward an updated list of researchers and their certificates of training to the Office of Compliance before they begin to work on the project.** Once your research is completed, please send us a copy of the final report questionnaire to the Office of Compliance. This form can be located at www.mtsu.edu/irb on the forms page.

Also, all research materials must be retained by the PI or **faculty advisor (if the PI is a student)** for at least three (3) years after study completion. Should you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,
Tyler Hubbard
Graduate Assistant to:
Emily Born
Compliance Officer
615-494-8918
eborn@mtsu.edu

Appendix B

Tables

Table 1

Demographic Statistics of the Archival Data (N = 545)

Characteristic	Number	Percentage
Grade		
5th	130	23.9%
6th	142	26.1%
7th	138	25.3%
8th	135	24.8%
Gender		
Male	285	52.3%
Female	260	47.7%
Economic Disadvantage		
No	119	21.8%
Yes	426	78.2%
Special Education Placement		
None	394	72.3%
Placed	151	27.7%
Disability Category		
Specific Learning Disability	84	15.4%
Speech or Language Impaired	35	6.4%
Other Health Impaired	11	2.0%
Other Categories	21	3.9%

Table 2

Descriptive Statistics of the Archival Data (N = 545)

Characteristic	Mean	SD
Age	12.03	1.25
TCAP Probability	13.65	15.01
Number of Absences	9.68	10.79
Number of Tardies	3.55	5.41
Office Discipline Referrals	7.70	10.31
In-School-Suspension	1.78	3.07
Out-of-School-Suspension	1.78	7.19
Zero Tolerance Infraction	0.01	0.12
Krupla Transgression Index	26.60	53.36

Table 3

Number of Students Not Placed or Placed in Special Education According to Various Demographics

A.		Krupla Transgression Index Sum			
		Zero	Low	Medium	High
	Not Placed	94	103	100	97
	Placed	31	38	38	44

B.		Race	
		Majority	Minority
	Not Placed	196	198
	Placed	70	81

C.		Race		
		Caucasian	African American	Hispanic
	Not Placed	196	155	42
	Placed	70	70	10

D.		Economical Disadvantage	
		No	Yes
	Not Placed	91	303
	Place	28	123

E.		Gender	
		Male	Female
	Not Placed	194	200
	Placed	91	60

Table 4

*Pearson Correlation Coefficients for TCAP Probability Scores and Behavioral
Data (N=545)*

	TCAP	ODR	ISS	OSS	ZTI
TCAP	---	-0.224**	-0.217**	-0.142**	0.013
ODR	-0.224**	---	0.716**	0.466**	0.030
ISS	-0.217**	0.716**	---	0.368**	0.036
OSS	-0.142**	0.466**	0.368**	---	0.094*
ZTI	0.013	0.030	0.036	0.094*	---

*p < 0.05 **p < 0.01.

Table 5

Complete Pearson Correlation Coefficient Matrix (N=545)

A.	*Pearson Correlation Coefficients for All Variables*					
	Grade	Gender	Race	AGE	TCAP	SES
Grade	---	0.068	0.079	0.892**	-0.082	-0.025
Gender	0.068	---	-0.021	0.017	0.088*	0.016
Race	0.079	-0.021	---	0.061	-0.169**	0.259**
Age	0.892**	0.017	0.061	---	-0.129**	0.005
TCAP	-0.082	0.088*	0.169**	-0.129**	---	-0.159**
ED	-0.025	0.016	0.259**	0.005	-0.159**	---
Absences	0.031	-0.072	-0.058	0.033	-0.147**	0.140**
Tardies	0.023	0.028	0.039	0.041	-0.066	0.139**
SPED	0.044	-0.099*	0.001	0.121**	-0.337**	0.049
ODR	0.012	-0.094*	0.147**	0.037	-0.224**	0.165**
ISS	-0.011	-0.214**	0.141**	0.019	0.217**	0.157**
OSS	-0.036	-0.123**	-0.004	-0.012	-0.142**	0.093*
ZTI	-0.097*	0.035	0.007	-0.075	0.013	0.048

B.	*Pearson Correlation Coefficients for Remaining Variables*						
	Absences	Tardies	SPED	ODR	ISS	OSS	ZTI
Grade	0.031	0.023	0.044	0.012	-0.011	-0.036	-0.097*
Gender	-0.072	0.028	-0.099*	-0.094*	-0.214**	-0.123*	0.035
Race	-0.058	0.039	0.001	0.147**	0.141**	-0.004	0.007
Age	0.033	0.041	0.121**	0.037	0.019	-0.012	-0.075
TCAP	-0.147**	-0.066	-0.337**	-0.224**	-0.217**	-0.142	0.013
ED	0.140**	0.139**	0.049	0.165**	0.157**	0.093*	0.048
Absences	---	0.112**	0.062	0.283**	0.221**	0.309**	0.058
Tardies	0.112**	---	0.065	0.207**	0.155**	0.002	0.005
SPED	0.062	0.065	---	-0.005	0.055	0.008	0.011
ODR	0.283**	0.207**	-0.005	---	0.716**	0.466**	0.030
ISS	0.221**	0.155**	0.055	0.716**	---	0.368**	0.036
OSS	0.309**	0.002	0.008	0.466**	0.368**	---	0.094*
ZTI	0.058	0.005	0.011	0.030	0.036	0.094*	---

$*p < 0.05$ $**p < 0.01$.