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ED/BD eligibility related to gender and community size in West Virginia|ED/BD Eligibility Related to Gender and Community Size in West Virginia

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ED/BD Eligibility Related to Gender and Community Size in West Virginia

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ABSTRACT

Over-representation of males in special education is an area of concern. Research studies have confirmed West Virginia as one of the states having the highest male-to-female ratios for Emotionally Disturbed/Behavior Disorder (ED/BD) students. The current study compares the most and least populated areas in West Virginia with regard to ED/BD eligibility. Male/female student ratios of ED/BD were examined utilizing chi-square analysis. This study used the September 2009 regulations under West Virginia Policy 2419, and those regulations were in place when these data were collected. Results indicated that a statistically significant difference exists between the total number of ED/BD students made eligible into special education when comparing West Virginia's most and least populated counties, with respect to total student enrollment. It was found that a significant difference did not exist when comparing the male-to-female ratios in West Virginia's most and least populated counties.

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Chapter 1

Literature Review

Over-representation of Males in Special Education

In the United States, special education has been criticized for decades concerning the number and overrepresentation of males in special education. Much of this is due to various studies that declare males are overrepresented in special education referrals and placements. Research has confirmed that males are more likely to be placed in special education classrooms (Coutinho, Oswald, Nagle, & Best, 2003).

There are many reports suggesting that males outnumber females in special education from between a 2:1 and 3:1 ratio (Bentzen, 1966; Hayden-McPeak, Gaskin, & Gaughn, 1993; Mumpower, 1970). In 1992, the U.S Department of Education reported that 72% of learning disabled students are male, as compared to 28% being female (Lerner, 1993). Of secondary-aged youth receiving special education services in the United States, 58% of Mentally Impaired (MI) students are male, and 76% of Serious Emotional Disturbance (SED) are male (Valdes, Williamson, & Wagner, 1990). In further study in 1998, the U.S. Department of Education found that 73.4% of students receiving services for a Learning Disability were male (Jans & Stoddard, 1999). The 1995 U.S. Census also showed that boys are twice as likely to be reported by their parents as having a learning disability, speech impediment, or emotional disturbance (Grimes & Thomas, 2002). Learning Disabled (LD), Serious Emotional Disturbance/Emotional Disturbance/Behavior Disorder (SED/ED/BD), and Mental Impairment (MI) are the three most common categories found to have the most disproportionate ratios and percentages in relation to the eligibility of males in special education. The SED category is

considered the same as a student made eligible under the Emotional Disturbance (ED) or Behavior Disorder (BD) category of special education. In the years that all of this research was collected from 1966 and 1999, the ratios and percentages of males being overrepresented in special education remained consistent throughout three decades from the 1960's to the 1990's, despite many changes in special education placement laws.

There have been numerous studies to evaluate the disproportionality of males and females in special education. Coutinho and Oswald (2005) found that there is a significant difference in state-to-state variations among LD labeled students in special education, in respect to male overrepresentation. On the other hand, the study found that states did not have a significant gender variation or difference among SED/ED/BD and MR labels. The data for this study in 2002 was obtained from the U.S. Office of Civil Rights. In the data, 14,645 school districts reported membership by gender. The study examined 88,650 schools total. The study also examined five categories of ethnicity/race. The results also showed the figures for all fifty individual states. Many individual states showed a significant gender difference in variation in comparison to the national average ratios in terms of male-to-female figures. The national figures used from the Office of Civil Rights data were 3.5:1 for SED. In terms of SED eligibility, the highest three state ratios were West Virginia at 5.95, Ohio at 4.81, and Kentucky at 4.81. The lowest SED ratio was found in Hawaii at 2.71. A 5.95:1 ratio in West Virginia would indicate that 5.95 out of 6.95, or 85.6% of the male students in the study were labeled as SED. Males were also over-represented in LD and MI eligibility overall.

Wehmeyer and Schwartz (2001) conducted a study, in which three school districts were selected. The purpose of the study was to examine the proportion of males and

females made eligible into special education services, as well as some of the factors contributing to admission. School district A was a rural school in the Southern United States with a student population between 14,473 and 14,659. District B consisted of schools in a medium-sized city in the same state as District A with a student population between 10, 405 and 10,452 students. District C was a suburban school district near a large metropolitan area in the southwestern United States with a student population between 18,852 and 19,235 students. District A was reviewed during the 1992-1993 school year. District B was reviewed during the 1994-1995 school year. District C was reviewed during three school years: 1992-1993, 1993-1994, and 1994-1995. Results of the study found that 695 students were made eligible for special education services in all three school districts combined. Of these students, 462 (66%) of the students were male, and 233 (33%) of the students were female. A total of 609 of the students had learning disabilities. In terms of gender, 417 (68.5%) of the learning disabled students were males, and 192 (31.5%) of the students were females. A total of 86 students were made eligible for special education services in the mental retardation category. Also among gender difference, 45 (52.3%) of the mentally retarded students were male, and 41 (47.3%) of the students were female. The mean age for males being admitted into special education was 9.41 years (SD=2.41), while the mean age for females was 9.45 years (SD=2.40). The mean intelligence scores for males made eligible was 94.72 (SD=14.72) and 90.11 (SD=15.72). An analysis of variance for gender by age found that significant differences were found for IQ scores at the time of eligibility determinations for special education services [F(691,1)=12.93, p=.0001] Significant differences were also found for students only with learning disability placements that showed significant differences by

gender with the mean IQ scores for males at the time of admission being 97.55 for males and 95.31 for females [F(607,1)=4.92, p=.027]. In the discussion portion of the study, it was found that 2.5% of females admitted had behavior reasons listed in comparison to nearly 20% of the males having behavior reasons listed.

Placement of Students into Special Education

The unequal ratio of males to females may alert the need to examine how students are placed into special education. The federal government has set criteria and guidelines that are mandated by law for school systems to follow in the identification, referral, and eligibility processes of a student into special education. Many of these laws and guidelines have been passed to ensure that the students receive a Free and Appropriate Education (FAPE) that meets each student's individual needs, based upon the student's disability and learning difficulties. To be made eligible for special education services, a student must show a significant impairment in learning. A disability or medical condition in itself cannot automatically make a child eligible for special education services. The condition must show that it impedes or negatively affects the student's performance in school. For example, just because a child has Attention Deficit-Hyperactivity Disorder (ADHD), it does not mean that the child is eligible for special education services. If the child with ADHD is able to perform at grade level, he or she is not eligible for special education. This is because the disorder is not affecting the student's performance in school. On the other hand, accommodations and modifications may be used, if necessary, such as extra testing time, or extra breaks during testing (Jacob & Hartshorne, 2007).

The main piece of legislation used to identify and place students into special education is the Individuals with Disabilities Act (IDEA) of 2004. This act provides strict guidelines that are to be followed by school districts. Students can be provided individually tailored services and assistance to help them with their special needs. There are thirteen categories that are used in the eligibility process. The categories are as follows:

1) Autism/Developmental Disability (such as a speech delay or communication disorder)
2) Deaf-Blindness (when both conditions are present)
3) Deafness
4) Emotional Disturbance/Behavior Disorder (ED/BD)
5) Hearing Impairment (not the same as deafness)
6) Mental Retardation
7) Multiple Disabilities [e.g., cerebral palsy is a neurological disability that can be categorized as an orthopedic impairment (physical), as well as result in a speech delay or communication disorder (psychological)]
8) Orthopedic Impairment
9) Other Health Impairment (e.g., ADHD)
10) Specific Learning Disability
11) Speech or Language Impairment
12) Traumatic Brain Injury (TBI)
13) Visual Impairment, Including Blindness

(Jacob & Hartshorne, 2007)

While many of the conditions are easier to identify and label, such as a hearing impairment, blindness, orthopedic impairment, or speech impairment, other labels are more difficult to assess and identify, due to the fact that they have more subjective criteria in the identification process. This has led to controversies in respect to more males being labeled with a Serious Emotional Disturbance (SED/ED/BD), Specific Learning Disability (SLD/LD), and Other Health Impairment (OHI) (Jacob & Hartshorne, 2007).

Another characteristic of children with emotional problems, who may be made eligible by school districts as emotionally disturbed, is the incidence of emotional problems being likely to be about the same among gifted children as those who are not gifted. It is said that some gifted children may have emotional problems, due to other children's jealousy, fear, or negative attitudes. It could also possibly be the absence of appropriate school instruction and programs or the lack of intellectual peers. Therefore, it is possible for even some gifted children to be classified as emotionally disturbed in school districts. Emotionally disturbed students can have potential behavioral and emotional consequences of having high intelligence (Sattler & Hoge, 2006).

How is the Eligibility of Emotional Disturbance Assessed and Evaluated by Federal Law?

According to the federal law, the definition of emotional disturbance under Individuals with Disabilities Act is as follows:

(i) The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance:

(A) An inability to learn that cannot be explained by intellectual, sensory, or health factors

(B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers.

(C) Inappropriate types of behavior or feelings under normal circumstances.

(D) A general pervasive mood of unhappiness or depression.

(E) A tendency to develop physical symptoms or fears associated with personal or school problems.

(ii) The term includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance (Individuals with Disabilities Act, 2004; Sattler & Hoge, 2006).

A team of qualified individuals, including teachers, principals, school psychologists, guidance counselors, and other members that could bring useful information to the process are involved in the eligibility process. It depends upon the child's disability or condition, in terms of who may be involved. This team is usually referred to as the Multidisciplinary Evaluation Team (Jacob & Hartshorne, 2007).

Medical records from doctors and health professionals are used to provide the actual diagnosis for a given condition. On the other hand, the assessment process in evaluating the disabilities often depends upon the child's disability, condition, or learning difficulty. Teachers in the classroom refer the student to the preliminary meetings. The

school psychologist is oftentimes notified to conduct testing to identify the student's individual strengths and weaknesses, as well as learning style to implement interventions and strategies that could be useful. School psychologists obtain quantitative and qualitative data during the evaluation. Classroom observations are usually done to give the psychologist a chance to observe what behaviors may be present that could interfere with the student's ability to learn (Sattler & Hoge, 2006). Different eligibility categories require different tests and assessments to be administered based upon what the child is being referred for. ED/BD categories are usually much more difficult to assess. All other factors, such as intelligence and medical (physical) conditions must be ruled out before this placement is made. The student must possess an inability to learn on the basis of a general mood of depression or unhappiness, display odd or bizarre behaviors that are out of the ordinary for the child's age, and exhibit difficulties establishing and maintaining peer relationships. This classification has been under major criticism, because the ED/BD eligibility's criteria are vague and subjective. In many cases, emotional and behavioral disorders are viewed as the same in the placement process, but they are not. If the child is learning normally with minimal or no problems present, then the student is not eligible. Many students who are disruptive and display emotional outbursts are made eligible under ED/BD. Socially maladapted students are not considered ED/BD, unless the student has an emotional disturbance. This has also caused controversy over the label's criteria. Just because a child is disruptive, unpopular with peers, or violent, it doesn't make the child ED/BD (Jacob & Hartshorne, 2007). As part of the assessment process, behavioral assessments, such as the Behavioral Assessment Scales for Children, Second Edition (BASC-2), Conner's Rating Scales, and

others are used to evaluate these behaviors. School psychologists also use classroom observations, medical and school records, and data of academic performance to assess the eligibility of students referred as ED/BD. Projective assessments are also used to gather details of the student's perceptions of reality, as well as structured or unstructured interviews to gain insight of the student's level of mental stability (Kronenberger & Meyer, 2001).

Definition of Emotional Disturbance/Behavior Disorder in West Virginia State Law

While there are federal guidelines, states also outline how to determine the eligibility of ED/BD students, utilizing these guidelines. According to West Virginia Department of Education (2010), these are the eligibility requirements to place a child into the emotional disturbance category under the state regulations under West Virginia Public Policy 2419:

E. Emotional/Behavioral Disorder

Definition: An emotional/behavioral disorder means a condition in which a student exhibits one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a student's educational performance:

1. An inability to learn that cannot be explained by intellectual, sensory, or health factors;
2. An inability to build or maintain satisfactory interpersonal relationships with peers and teachers;
3. Inappropriate types of behavior or feelings under normal circumstances;
4. A general pervasive mood of unhappiness or depression; or

5. A tendency to develop physical symptoms or fears associated with personal or school problems; or

6. Schizophrenia.

The term **does not** include students who are socially maladjusted unless it is determined they have an emotional/behavioral disorder.

Eligibility Criteria for Emotional/Behavioral Disorder

An eligibility committee will determine that a student is eligible for special education services as a student with an emotional/behavioral disorder when **all** of the following criteria are met:

1. The student continues to exhibit an emotional/behavioral disorder consistent with the definition after interventions have been implemented.

2. The student has been observed exhibiting one or more of the characteristics listed in the definition of emotional/behavioral disorder and the characteristics have been observed and documented:

    a. For a long period of time; and

    b. By more than one knowledgeable observer trained in data gathering; and

    c. In more than one setting; and

    d. At a level of frequency, duration, and/or intensity that is significantly different from the student's peers in the same or similar circumstances.

3. The student's condition adversely affects educational performance in the area of academics, peer and/or teacher interaction, and/or participation in class/school activities.

4. The student exhibits behavior(s) that is not primarily the result of physical, sensory

or intellectual deficits.

5. The student needs special education.

When comparing the standards and criteria for the Emotional Disturbance/Behavior Disorder (ED/BD) eligibility between the federal law and West Virginia Public Policy 2419 from revisions enacted in September 2009, the most significant difference is that West Virginia has an extended set of criteria that is written beyond the initial criteria set forth by the federal government in IDEA. West Virginia requires that documented data and proof are shown to determine that a student displays the characteristics of an ED/BD student. The ED/BD behaviors and characteristics must be measured in frequency, duration, and intensity in more than one setting. It is also required in West Virginia to show that behavioral interventions have been attempted to improve the behavioral problems of the student. Therefore, West Virginia requires more objective and sufficient measurement and data collection to determine that a student is eligible for ED services in special education than the federal government's definition of eligibility provides for the ED placement.

Explanations and Reasons for Gender Differences

Hypotheses and reasons vary from different experts about why males are more likely to be placed into special education programs. Many researchers declare that males are more susceptible to sex-linked chromosomal disorders, such as Fragile X syndrome, Klinefelter's syndrome, Hurler's syndrome (Type II), that are associated with mental retardation (Hagerman, 1997; Menolascino & Egger, 1978). Also, males are more likely to be diagnosed with child psychiatric conditions, such as attention-deficit/hyperactivity disorder, Tourette's syndrome, and autism. Males are also more likely to be diagnosed

with conduct and oppositional defiant disorder (American Psychiatry Association, 2000; Kronenberger & Meyer, 2001).

On the other hand, research has been found to infer that girls are also discriminated against in terms of special education eligibility and in the referral process. Girls are usually referred and placed earlier than boys. Girls are also more likely to have more severe disabilities, as well as lower intelligence test scores (Jans & Stoddard, 1999). Girls are more likely to be diagnosed with internalizing disorders, mainly in adolescence (Nolen-Hoeksema & Girgus, 1994). Therefore, girls can often be overlooked for services more easily than boys.

Teacher bias may also be a factor. Some studies have also found that teachers are more biased in the referral of male students in comparison to females (McIntyre, 1990; Ritter, 1989). Males are more likely to display behaviors that are overt and disruptive, while females are more likely to be passive and internalize feelings and emotions. Therefore, males bring more attention to themselves. It is believed that teachers have the tendency to refer and have males made eligible who disrupt the instruction of the classroom and impede the progress of the class as a whole. It is also suggested that the plethora of female teachers, as opposed to male ones, in general education may contribute to the gender discrepancy in the placement process (Caseau, Luckasson, & Kroth, 1994).

In a study designed to examine differences in teacher referrals for special education, it was found that teacher gender was a significant variable regarding how students were referred for special education. In this study, 52 regular education teachers at the elementary school level (Grades K-5) were asked to complete a survey. Of the teachers, 48 of the teachers were female; 4 teachers were male. All the teachers were

from a Midwestern suburban school district. A chi-squared analysis affirmed that female teachers may be more likely to refer students for emotional or behavioral issues than male teachers. The researcher also did claim that the sample may be inaccurate, due to 92% of the teachers being female in the study. On the other hand, it was found to be equally likely for the teachers to refer students who have externalizing problems as it was to refer those who have internalizing problems (Demarcho & Deretich, 2006). Therefore, this is another study where teachers found male behavior to be more troublesome. Female teachers were also more likely to refer for ED/BD eligibility than male teachers were. Most elementary school teachers are female.

Ritter (1989) evaluated behavioral ratings of regular classroom and special education teachers to compare their perceptions and level of agreement. The teachers were rating students identified as ED/BD, based upon their problem behaviors. The results showed that female teachers were more likely to rate problem behavior more negatively than male teachers. In another study, McIntyre (1990) asked 64 teachers to evaluate students with problem behavior for special education referral. The results found that female teachers were twice as likely to make a decision to refer in comparison to the male teachers in the study. Male teachers also made fewer referrals than the female teachers overall.

Biological etiology alone does not explain the gender differences in special education placements. While it is true that boys are more likely to be diagnosed with many child psychiatric disorders, it does not explain why over half of the boys are still made eligible in special education. Using longitudinal data in Connecticut, no significant gender differences were found regarding the prevalence of reading disabilities using the

ability-achievement discrepancy criteria. On the other hand, school identification records showed that boys were 2-4 times more likely to have been referred and identified for special education (Shaywitz, Shaywitz, Fletcher, & Escobar, 1996). In other research, it was found that boys with ADHD are more likely to have reading difficulties in school. More boys are identified with ADHD than girls. The ADHD diagnosis and reading difficulties may make it easier to place boys into special education. Boys with ADHD are also more likely to act more aggressively (Maccoby & Jacklin, 1978).

In many studies, there is no significant data that support intelligence as a factor in more males being made eligible into special education. In a California study of nominated students to pre-referral interventions, 150 children were administered a battery of assessments. The study consisted of students (grades 2-4), in which 60% of the students were male and 40% of the students were female. No significant difference by gender was found on intelligence or achievement tests from the sample. On the other hand, teachers rated the females as having higher academic competence. Males were rated to show more problem behaviors and lower scores in social skills than females on one scale. It was also found that males tested for higher scores measuring conduct problems, hyperactivity, and inattentiveness on the other assessment (MacMillan, Gresham, Lopez, & Bocian, 1996).

Because genetics alone can not explain the male overrepresentation of ED/BD placements in schools, environmental factors such as teacher bias against males displaying externalizing behaviors could provide further explanation, especially when looking at female teachers who are more prone to refer for ED/BD. What other factors contribute to higher placement rates for males in ED/BD needs to be examined. West

Virginia has a very high ratio for males being made eligible. West Virginia has smaller school districts than many states. This led me to question the impact of whether it is community or school district size which impacts the eligibility of males in special education. No studies were found in the literature that explored the impact of community or school district size for the SED category.

Characteristics of West Virginia Demographics and Education

The characteristics of Appalachia create unique situations for students in West Virginia. West Virginia is in the midst of the Appalachian Mountains, carrying many Appalachian customs in its social and cultural history. Many of the counties in West Virginia are also very small in population. The urban cities of West Virginia, such as Charleston, Beckley, Huntington, Parkersburg, and others are also surrounded by rural counties, as well as areas within their own counties. Many of West Virginia's counties are impoverished and consist of blue collar workers, indicating an emphasis to meet the financial needs of families, rather than to strive for higher education (Payne & Hand, 2008). Many of West Virginia's counties face many financial problems that result in less funding for schools. Due to a landmark court ruling in 1982, West Virginia has passed laws to restructure the funding formula to give students equal opportunities, regardless of the school districts' property wealth. As of July 2001, school technology also became an essential part of legislation to provide students in special education with disabilities the same access to technology as other students (White, 2001). In West Virginia, 22% of the children live in poverty, compared to the national average of children of 19% living in poverty. The federal government classifies families in poverty as those who make less than $22,050 a year. When comparing West Virginia's percentage of children classified

as living in low-income families to the national percentage, 46% of children in West Virginia live in low-income families in comparison to the national average of 41%. The federal government classifies families as low-income as those who make less than $44,100 a year (National Center of Children Poverty, 2009). In a study examining rural schools, West Virginia was found to have the lowest rural income per capita in the United States with the average family making only $15,177 a year. It also found that West Virginia is ranked third highest in the nation for the percentage of children in poverty (Beeson & Strange, 2003).

Statement of the Problem

In order to better understand the high placement rate of males, this study will compare placement rates of males to females to determine if rural, specifically Appalachian communities, correlate with increased male to female ratios in urban counties of West Virginia.

Hypotheses

1). There is a significant difference in the number of ED students identified in special education between West Virginia's least and most populated counties.

2). There is a significant difference in the male-to-female ratio in special education identification between West Virginia's least and most populated counties.

Chapter 2

Methods

Subjects

Archival data from 12 West Virginia counties was examined. The number and male-to-female ratios of the five least and most populated counties was examined to

determine whether a significant difference exists between the number of students placed as ED, as well as the male-to-female ratios between the urban and rural environments. The total student enrollment of each county was used to determine the least and most populated counties. The September 2009 eligibility regulations of WV Policy 2419 were in place when the data was collected. The archival data was retrieved from the West Virginia District Special Education Data Reports: 2008-2009 (West Virginia Department of Education, 2009). In some of the least populated counties, the number of students (male or female) was not listed, due to confidentiality reasons. Therefore, data from counties where five or less ED students were identified could not be attained. The data from the next least populated county was then used in substitution.

Chapter 3

Results

The ED/BD student data for both the most and least populated counties of West Virginia was analyzed using the chi-square statistic. The chi-square allows data to be analyzed in the form of proportions. First, a chi-square was run on the data from the total number of students who are placed as ED/BD students in the least and most populated counties of West Virginia to determine if there is a significant difference between the numbers of students identified as ED/BD in each subgroup, in relation to the total student enrollment. Results of the chi-square test showed a significant difference when comparing the total number of urban and rural ED/BD students, in relation to the total enrollment size at $p < 0.05$. The urban counties had a significantly higher number of ED students in comparison to the rural counties, in respect to total enrollment size. The

relationship between these variables was significant, x^2= (1, N=10) = 8.53, p < .05 (See Table 1).

As comparison groups, the total number of male and female students for the six least populated WV counties (counties that data could be attained) and most populated counties were used in the data. The chi-square test was used to analyze the male-to-female ratios across the least and most populated counties. Results showed that no significant differences exist between the total number of male and female ED/BD students in West Virginia's six least and most populated counties, x^2 (1, N=10) = 2.54, p < .05 (See Table 2). These tables are provided to better explain the results of the study:

Table of Results:

Table 1: Cross-tabulation of Total Number of ED/BD Students and Community Size

	Total ED/BD Students	Enrollment Size	x^2	df
Urban	480	83,998	8.53*	1
Rural	15	5,574		1

*p<.05

Table 2: Cross-tabulation of Gender and Community Size

Community Size	Gender			
	Male	Female	x^2	df
Urban	390	90	2.54*	1
Rural	13	2		1

* p<.05

Given that a significant difference was found using the chi-square test to evaluate the dependency of the total number of BD students in WV's six least and most populated counties in relation to the total enrollment size of the least and most populated counties, the first null hypothesis is upheld. Therefore, the number of BD students is significantly higher in West Virginia's urban counties in comparison to its rural counties. However, because no significant difference was found when using the chi-square test to determine the dependency between the total number of male and female ED/BD students in West Virginia's six least and most populated counties, the second null hypothesis is rejected. Gender does not appear to have an effect upon the number of BD students made eligible into special education across urban and rural counties.

The West Virginia Department of Education would not release the exact figures of the number of students who were ED/BD, if there were five or less, but not zero, ED/BD students in a given county. Therefore, the next corresponding counties were used in ranking order, by the total student enrollment size, of each county. In Table A2, the counties were all listed in order by total student enrollment. R3 and R4 counties, which are ranked 3rd and 4th respectively, were omitted from the study, because data could not be released from the state department. Given that there are no more than five BD/ED students for each county, this researcher chose to do another chi-squared test to determine if a significant difference exists between the five least and most populated counties, even substituting the maximum number of five students for each of these counties. A post-hoc chi-squared test determined that a significant difference still exists between the number of BD/ED students placed between the actual five least and most populated counties in WV,

x^2 (1,N=10) = 4.96, p <.05 (See Table 3). This difference is still significant, even when potentially overestimating the number of ED/BD students.

Table 3: Post-Hoc Cross-tabulation of Total Number of ED/BD Students and Community Size

	Total ED/BD Students	Enrollment Size	x^2	df
Urban	480	83,998	4.96*	1
Rural	18	5,574		1

*p<.05

Chapter 4

Discussion

The purpose of this study was to evaluate the number of placements of ED/BD students across urban and rural counties in West Virginia, as well as determine whether the male-to-female ratios vary from urban to rural counties among ED/BD students. Research has suggested that West Virginia has the highest male-to-female ED/BD placement ratio of 5.95:1 in the United States, indicating that 85.6% of ED/BD students are male. The national male-to-female ED/BD ratio found that males outnumber females with a ratio of 3.5:1, indicating that 77.8% of ED/BD students are male in the United States overall (Coutinho & Oswald, 2005). The eligibility criteria for the Behavior Disorder/Emotional Disturbance category of Special Education also has been criticized in research for being too subjective (Jacob & Hartshorne, 2007). Further research has also suggested that males are more likely to be referred for behavior problems in school than females, indicating that the ED label may be applied to boys more often in cases where some males in question may not qualify under other categories, such as SLD and OHI.

No research has been found that evaluates demographical data to compare rates between urban and rural environments to further examine trends in ED/BD placements. The findings in this study suggests that a significant difference does exist between the number of ED/BD students who are from the five least and most populated counties in West Virginia, in relation to total student enrollment. The urban counties had a significantly higher percentage of ED/BD students than the rural counties, indicating that students are more likely to be made eligible for the ED/BD category in West Virginia's urban counties than in its rural counties. However, no significant difference was found when comparing male-to-female ratios of ED/BD students in West Virginia's five least and most populated counties.

One possible reason for the findings that determine a significant difference exists between the number of BD/ED students in the least and most populated counties are that the rural counties usually do not have the resources to fund a self-contained ED/BD unit. Most urban schools have more money from tax levies and local taxes from property to fund their schools, and more money can be allocated toward special education to better serve BD/ED students. Therefore, funding is often unequal, and many rural counties cannot afford to hire ED/BD teachers to serve ED/BD students in a self-contained unit or classroom (Hughes, 1992). In another study, it was found that the most prevalent factors contributing to deficits in West Virginia counties were changes in the school aid formula, lack of excess levies to fund schools, sparsity of population, transportation expenses, and required program costs (Margolin, 1996). Many schools from the rural counties used in the data are from impoverished areas without a plethora of local businesses or factories funding local education, and they rely more upon state and federal funding to meet the

needs of their students. A study conducted in 1998 found that coal companies and corporations in rural counties have paid minimal taxes to supplement school funding (Spence, 1998). Further research would be useful in determining how many of the urban districts received more tax levies and tax revenue from local corporations and businesses, as well as how much, in comparison to the rural counties. When discussed with Marshall University School Psychology Professor, Fred Krieg, who is also a School Psychologist in Wirt County, West Virginia, said that school districts with a smaller community size tend to "take care of their own", because many of the people in smaller communities know each other and their families on a more personal level. Therefore, the school district can avoid labeling children as ED/BD in their schools (F.J. Krieg, personal communication, March 29, 2010).

Another possible reason for the findings that determine a significant difference exists between the number of ED/BD students in the least and most populated counties in West Virginia may be due to smaller student-to-teacher ratios in rural school districts. The West Virginia student-to-teacher ration in rural schools was found to be 13.9:1 in 2003 (Beeson & Strange, 2003). Records from the National Center for Educational Statistics reported the average urban school in the United States as having a student-to-teacher ratio of 19.1:1 (National Center for Educational Statistics, 1996). With fewer students in a classroom, teachers can possibly better monitor and cope with disruptions in the classroom that are characteristic of BD/ED students. Teachers in these types of classroom environments also are able to give more one-on-one attention to students with emotional and behavioral problems. With higher student-to-teacher ratios, students with emotional problems may find it more difficult to cope with the classroom environment,

due to more distractions and less personal attention. Teachers in urban settings may also have less tolerance, due to the added stress of more students to teach at one time. This type of teacher frustration and burnout could lead to more special education referrals that involve students with emotional and behavioral problems.

A third factor that may have influenced a more significant difference between the total BD/ED students made eligible between the least and most populated counties used in the data is that some counties had to be omitted from the data used in the study, due to confidentiality and privacy issues. In the initial research design, the fourteen least and most populated counties were to be used in the study in a chi-square analysis as comparison groups. Of the fourteen rural counties, many of the counties could not be used, due to the fact that there were five or less, but not zero, ED/BD students. If a county had five or less ED/BD students, then data from that county could not be used. This is because the exact number of ED/BD students, male or female, would be impossible to determine. That is why only the five least populated counties were compared to the five most populated counties in West Virginia. If the initial fourteen least and most populated counties were used in the data, then the chi-square test may have yielded a much different result. However, the post-hoc analysis suggests that this is not the case.

This study could also lead to more in-depth research being replicated in other states with populated metropolitan cities with rural areas. Unfortunately, West Virginia's most urban cities are not huge metropolitan ones, such as New York City, Los Angeles, or Chicago. It would be very interesting to see this study replicated in states with huge cities and widespread rural areas, such as California, Illinois, New York, Ohio, Pennsylvania, and others to compare with the findings in this study.

Gender Differences in Placement

When examining explanations for results pertaining to the gender comparison of ED/BD students in WV's most and least populated counties, not all of the least populated counties had reportable data when determining the chi-square statistic for male-to-female ratios in respect to West Virginia's least and most populated counties. Six of the counties of the fourteen counties from the initial research design could not be used in the data, due to confidentiality and privacy issues. Because the total number of ED/BD could not be determined, the gender-based data was also unavailable. Therefore, it was impossible to determine how many ED/BD male and female students were in each county. Likewise, if all of the initial fourteen least and most populated counties were used in the data, and then the results may have been different. Only one county could be determined through deductive reasoning. Because county R1 had all of the 49 females accounted for in the archival data under a category/placement of special education, only males could be included the data as the three remaining students not accounted for in the data. Three categories indicated that at least one student was ED/BD, because all of the males were accounted for out of the other categories. The remaining categories were Autism, Behavior Disorder, and Blind or Partially Sighted. Because no females were in each of the categories left being accounted for, one male had to be counted in each category to account for each individual student. In the archival data, 89 of the 92 males had been accounted for in a category of special education. If there are a total of zero students in a category, male and female, then the cell was marked with a zero, instead of an asterisk. Therefore, it could be reasoned that there was one male ED/BD student in R1 County, as well as there only being one ED/BD student in the entire county (see Table A4). The

male-to-female ratios of the other counties could be not determined using this approach, because not all the females were accounted for in different categories to conclude an exact figure.

Another factor that may have influenced the results of this study involves the weaknesses of the statistic used to analyze the data. The chi-square is not as powerful as parametric statistics. The chi-square lacks power and could potentially underestimate small differences. As well, the research design does not account for the variance of each individual county used in the data. Intra-individual subgroup differences were not evaluated within the urban or rural counties from county to county Only the total sums of each subgroup were used in evaluating the Chi-Squared statistic numbers (See Tables A1, A2, A3, & A4). For example, U4 and U5 counties had far fewer ED/BD students than U1, U2, and U3 counties (see Table A1). As well, R5 and R6 counties had far more ED/BD students than R1, R2, and R8 counties (see Table A2).

Even though a significant relationship did not exist between male-to-female ratios when comparing the five least and most rural counties in WV, it still does not explain why the state of West Virginia has such a significantly higher, male-to-female ratio of BD/ED students in special education, as well as the highest male-to-female ratio in the United States. In the five least populated counties in the data of this study, 83% of the BD/ED students were male. In the five most populated counties in this study, 86.7% of the BD/ED students were male. Compared to previous research, Coutinho & Oswald (2005) reported that West Virginia had the highest male-to-female ratio of ED/BD students with a ratio of 5.95:1 or 85.6%. Based upon the findings in the research, both the rural and urban counties both showed very close percentages of male ED/BD students

in special education, confirming that these findings are within the same range as the previous research. Thus size of school districts could not be shown to have an impact on the percentage of students made eligible.

Possible explanations for the higher male-to-female ratios in WV may be due to WV having different eligibility standards from other states with lower ratios. Males may be identified more easily when having a psychological diagnosis of mood disorders, schizophrenia, as well as other psychological disorders. Research shows that boys are more likely to show aggressive, externalized behaviors in school, where girls are more likely to internalize emotional problems (Caseau, Luckasson, & Kroth, 1994). If West Virginia had a higher male-to-female ratio of diagnosed psychological disorders, then it may explain why males are more likely to be placed into special education as ED/BD students.

Also, if male students begin as regular education students and are suspended for behavior problems on multiple occasions, their academic performance/grades will eventually lower, even though they may still have average to gifted intelligence and achievement scores. In that case, the student could not be made eligible with a Specific Learning Disability. With the student being at-risk of being retained for failing grades, the student may be placed into the Behavior Disorder/Emotional Disturbance label. Many acts of legislation and trends in education have also discouraged the suspensions of students in special education. Depending upon state policies of this nature, the ED/BD criteria may be more likely applied to males than females, due to males displaying more externalized behaviors in school. Because a medical or psychological diagnosis is also not necessary to make a student eligible for the ED/BD identification, reoccurring

disciplinary issues can used be used as evidence to meet the criteria in WV. According to WV Policy 2419, students who show behavioral problems with a significantly higher frequency, duration, or intensity than others in the same or similar educational circumstances meet one of the required criteria for ED/BD placement. The ED/BD label also does not account for other confounding variables that can relate to the eligibility criteria, such as life events or social circumstances that could lead to a substantial period of depression, anxiety, or anger that can result in the likelihood of more frequent externalized behaviors.

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LIST OF APPENDIX TABLES

Table A1: Data of Total Number of Urban ED/BD Students and Enrollment Size

Urban Counties	Total Number of ED/BD Students	Total Enrollment Size	Percentage of BD Students
U1	158	28,465	0.0055%
U2	147	17,214	0.0085%
U3	133	13,418	0.0099%
U4	30	12,522	0.0024%
U5	12	12,316	0.00097%
Sum of Urban Counties	480	83,998	0.0057%

Note: Urban counties are listed in descending order, based upon total enrollment size.

The data was retrieved for Tables A1, A2, A3, & A4 from the West Virginia Department of Education (2009). *West Virginia Special Education Data Reports: 2008-2009 at* http://wvde.state.wv.us/osp/datareports.html.

Table A2: Data of Total Number of Rural ED/BD Students and Enrollment Size

Rural County	Total Number of ED/BD Students	Total Enrollment Size	Percentage of BD Students
R1	1	941	0.0011%
R2	0	954	0.0000%
R3	* (non-applicable)	1,101 (not used)	* (non-applicable)
R4	* (non-applicable)	1,126 (not used)	* (non-applicable)
R5	7	1,127	0.0062%
R6	7	1,206	0.0058%
R7	* (non-applicable)	1,209 (not used)	* (non-applicable)
R8	0	1,346	0.0000%
Sum of Rural Counties	15	5,574	0.0027%

Note: Rural counties are listed in ascending order, based upon total enrollment size.

Note: An asterisk (*) indicates that five or less, but not zero, total BD students were identified in the given county.

Table A3: Data of Male/Female BD Students in Urban Counties

Note: Urban counties are listed in descending order, based upon total enrollment size.

Urban County	Male ED/BD Students	Female ED/BD Students	Percentage of Male BD Students	Percentage of Female BD Students
U1	126	32	79.7%	20.3%
U2	119	28	81.0%	19.0%
U3	108	25	81.2%	18.8%
U4	26	4	86.7%	13.3%
U5	11	1	91.7%	8.3%
Sum of Urban Counties	390	90	81.3%	18.7%

Table A4: Data of Male/Female Students in WV's Rural Counties

Rural County	Male ED/BD Students	Female ED/BD Students	Percentage of Male BD Students	Percentage of Female BD Students
R1	1	0	100%	0%
R2	0	0	0%	0%
R3	* (non-applicable)	* (non-applicable)	N/A	N/A
R4	* (non-applicable)	* (non-applicable)	N/A	N/A
R5	6	1	85.7%	14.3%
R6	* (non-applicable)	* (non-applicable)	N/A	N/A
R7	0	0	0%	0%
R8	6	1	85.7%	14.3%
Sum of Rural Counties	13	2	86.7%	13.3%

Note: Rural counties are listed in ascending order, based upon total enrollment size.

Note: An asterisk (*) indicates that five or less, but not zero, total BD students were identified in the given county.