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**MINORITY DISPROPORTIONALITY IN NEW JERSEY**

by  
Shannon N. Kemp

A Thesis

Submitted to the  
Department of Psychology  
College of Liberal Arts and Sciences  
In partial fulfillment of the requirement  
For the degree of  
Master of Arts  
at  
Rowan University  
April 20, 2011

Thesis Chair: Roberta Dihoff, Ph.D.

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## **Acknowledgements**

I would like to acknowledge the individuals, personal and academic, who have consistently supported my interest in research. Special thanks to my boyfriend and family for helping me realize my educational dreams. I would also like to thank Dr. Dihoff and Dr. Klanderman for their help in making this thesis possible.

## **Abstract**

Shannon N. Kemp  
MINORITY DISPROPORTIONALITY IN NEW JERSEY  
2010/11  
Roberta Dihoff, Ph.D.  
Master of Arts in School Psychology

This study sought to examine whether New Jersey districts exhibited minority disproportionality, or the overrepresentation of minority students in special education eligibility categories and placements. A dataset with a random sample of 200 school districts was compiled with special education data from the New Jersey Department of Education. Through analyses of four ethnicities, White, Black, Hispanic, and Asian, it was discovered that Black and Hispanic students were significantly more likely to be placed in special education as compared to their peers. Asian students were significantly less likely to be represented in special education in comparison to their non-Asian counterparts. Black and Hispanic students were also overrepresented in the more restrictive settings in special education and Asian students were underrepresented in these same placements. Other district level variables including: per pupil expenditures, number of suspensions, the percentage of students who are limited English proficient, graduation rate, dropout rate, average class size, and level of faculty credentials were also analyzed in order to determine if they were correlated with the degree of disproportionality. Based on these findings, it is clear that school districts in New Jersey should strive to avoid bias when referring and placing students in special education.

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## **Chapter 1**

### **Introduction**

#### 1.1 Need for Study

Minority disproportionality is defined as the overrepresentation of minority students in special education as compared to their White peers. This phenomenon has been a problem in education for many years and has been studied by several researchers. Legally, all students, regardless of race, ethnicity, or gender are entitled to receive an equal education. However, because ethnic minorities and male students are more likely to be placed in special education, certain students are not receiving an equitable education based solely on their gender or race. Also, certain ethnic groups and female students may be disproportionately less likely to receive special education services when they require them. The result is that certain groups are overlooked for services when they could benefit from them and others who may not need these services are over-referred for special education. Therefore, understanding the causes of this inequity and discovering solutions to this issue are still very important in education today.

#### 1.2 Purpose of Study

This study sought to discover if minority disproportionality is an issue in New Jersey schools. Because no studies to date have solely used New Jersey in its analyses, the researcher found it important to discover whether this state suffers from minority disproportionality. After concluding whether minority disproportionality exists in New Jersey, this study sought to explain why this phenomenon occurs through analyzing many

different district and school level variables. Through the analysis of these variables, this study examined what school and district factors influenced minority disproportionality.

### 1.3 Hypotheses

Many variables were analyzed in this study including: ethnicity, district wealth as indicated by District Factor group, special education placement, suspension rates, average class size, language diversity, student to faculty ratio, student administrator ratio, faculty and administrator credentials, dropout rates, and per pupil expenditures. It was hypothesized that in terms of category of placement, Black and Hispanic students would be more likely than their peers to be placed in higher incidence categories of special education. Asian students, overall, would be less likely than any of the other ethnicities to be placed in special education. Concerning where the student is physically placed in the classroom, Black and Hispanic students would be more likely to be placed outside of the general education classroom, or in a more restrictive environment, than their peers. Asian students, on the other hand, would be significantly more likely to spend most of their day with their general education peers in the least restrictive environment than non-Asian students. Additionally, it was hypothesized that minority disproportionality would worsen as school districts' wealth increased and would be less apparent in less wealthy school districts. Also, minority disproportionality would be more severe in districts that had higher suspension rates. Finally, it was hypothesized that school districts that employed higher percentages of faculty with Master's and Doctoral degrees as opposed to Bachelor's degrees would have more severe minority disproportionality.

## 1.4 History

Inequality in educational opportunities is often thought to begin on a federal level with the decision of *Plessy v. Ferguson* (1896) in which the Supreme Court of the United States decided that separate facilities based upon race were legal as long as they were equal. However, as is commonly understood, separate schools led to severe inequities in minority students' education. It was not until 1954 with the Supreme Court Case, *Brown v. Board of Education*, that minority students gained a legally binding ability to pursue an equal education alongside their White peers. This court case ruled that separate was not equal like *Plessy* posited, but that separate facilities were actually unconstitutional under the 14<sup>th</sup> Amendment, which requires equal protection under the law (Obiakor, 2004). Therefore, all students, regardless of race or gender, are entitled to an equal education.

Students with disabilities also struggled to receive the right to an equal education under federal law. In 1973, Section 504 of the Rehabilitation Act was passed. This piece of legislation essentially disallowed discrimination against people with disabilities if that agency was federally funded (Yell, Rogers & Rogers, 1998). Additionally, Public Law 93-380, which was passed in 1974, sought to establish that students with disabilities had the right to an education (Yell, Rogers & Rogers). In 1975, the Education for All Handicapped Children Act was passed, which stipulated that students with disabilities are entitled to an appropriate public education free of charge (Martin, Martin, & Terman, 1996). Eventually, the Act's name was modified to the Individuals with Disabilities Education Act. Essentially, this Act is meant to ensure that all students with disabilities are identified, evaluated before receiving special services through nonbiased testing, educated in the least restrictive environment, and to make sure they are receiving a free

and appropriate education (Martin, Martin & Terman, 1996) (Yell, Rogers & Rogers, 1998). Finally, parents must be given the opportunity to be involved in their child's referral process and that they are aware of any changes made to the IEP (Martin, Martin & Terman, 1996).

The issue of disproportionality with regard to race and gender contradicts the laws that state that all students should receive an equal education and that all students in special education should be placed there without bias. Theoretically, if a bias did not exist, students would be placed in special education in equal proportion to their representation in the school district. However, historically, through this country's discriminatory practices, equality has not been achieved in education. Furthermore, almost since the inception of special education, minorities and male students have been found to be disproportionately placed in special education.

### 1.5 Definitions

Minority disproportionality is the overrepresentation of minority students in special education, which also includes minorities' higher likelihood of being placed outside the general education classroom as compared to their White peers.

District Factor Groups (DFG) are used to group districts based on demographic characteristics, which include: percent of adults with no high school diploma, percent of adults with some college education, occupational status, unemployment rate, percent of individuals in poverty, and median family income (NJDOE District Factor Groups).

## 1.6 Assumptions

The researcher assumes that data from a random sample of New Jersey districts will be generalizable to all of New Jersey's school districts. Additionally, it is assumed that the data collected by the New Jersey Department of Education (NJDOE) was accurately obtained and presented on its website.

## 1.7 Limitations

Data is only representative of New Jersey's school districts and cannot be generalized to other states' schools. The interaction between gender and ethnicity could not be examined as the NJDOE special education data did not include eligibility and placement data by gender.

## 1.8 Summary

In Chapter 2, the researcher will review literature on the topic of minority and gender disproportionality. Chapter 3 will include the methodology of the study. Chapter 4 will consist of the results of the study. Finally, the researcher will conclude with an explanation of the study's findings and future implications of the results.

## **Chapter 2**

### **Literature Review**

Chapter 2, the literature review, identifies issues in the differential treatment of students in special education based on their minority status and gender. First, minority disproportionality is defined and the different categories of special education are examined in terms of their degree of disproportionality. The potential reasons for the existence of minority disproportionality are also discussed, which include bias in referrals through misunderstandings of cultural differences and attempts to segregate minorities from the general education classroom. Additionally, teachers may exhibit bias in the ways they rate their minority students' behavior as compared to their White peers. Further, punishment is explored as yet another area where minority students' culture is potentially misunderstood through their disproportionate rates of punishment. Gender disproportionality is then described in terms of female students' underrepresentation in special education and these students' poorer outcomes upon leaving special education in comparison to their male counterparts. Finally, demographic factors related to disproportionality in special education are discussed.

#### **2.1 Minority Disproportionality in the Judgmental Categories of Special Education**

Minority disproportionality has been a problem for almost four decades. Disproportionality becomes a problem "when students' representation in special education programs or specific education categories exceeds their proportional enrollment in a school's general population" (Blanchett, 2006, p. 24). In other words, if minority disproportionality did not exist, minority students would represent the same

percentage of the special education population as the percentage they are represented in the school district. The issue of minority disproportionality, though, is found in the judgmental categories of special education rather than the nonjudgmental categories. Judgmental categories, such as learning disabilities, mild mental retardation, and behavioral and emotional disabilities, are those that require professional expertise and, thus, allow for bias. On the other hand, nonjudgmental categories are biologically determined, such as blindness, deafness, severe and profound mental retardation and are obviously identifiable. In the nonjudgmental categories, there is no discrimination against minority students (MacMillan & Reschly, 1998). However, it is in the judgmental categories that minority students are overrepresented in special education. In fact, it was found that disproportionality became more pronounced as the disability category required more professional expertise and was, thus, more judgmental (Skiba, et al., 2006a).

Indeed, in one study including data from districts across the United States, it was found that African American students were represented the most out of all racial categories studied in the learning disabled category, the mental retardation category, and in the emotional and behavior disorder category. Asian and Pacific Islander students and Hispanic students were underrepresented in these disability categories (Zhang & Katsiyannis, 2002). Another study indicated that African American students were about 2.5 times more likely to be placed in the mild mental retardation category of special education and about 1.5 times more likely to be in the severe emotional disturbance category as compared to their non-African American counterparts (Oswald, et al., 1999). Also, African American and Hispanic students are more likely to be referred to special education as compared to their Caucasian peers, (Hosp & Reschly, 2003). Because



referral is the beginning of the special education identification process, it is important to note that an ethnic bias begins at this first stage. When multiple disabilities are taken into account, research has shown that African American students are given more disability labels as compared to their White peers (De Valenzuela, et al., 2006). Thus, it is clear that African American students are more likely to be identified as requiring special education than their White peers, more likely to be referred to special education than their White peers, and are also given significantly more disability labels than their peers.

While minority students are overrepresented in the negative categories of special education, they are underrepresented in gifted programs. McBee (2006) found that minorities and students from low socioeconomic statuses are disproportionately less likely to be placed in gifted programs. In fact, students who were not a part of the free-lunch program were more than three times as likely to be referred for gifted services as those who received free lunches (McBee, 2006). De Valenzuela, et al. (2006) also found that African American, Hispanic, Native American, and English Language Learners were more likely to be given a negative disability label and less likely to be identified with a positive label, such as gifted.

Another problem associated with disproportionality is the tendency to place African American students outside the general education classroom at greater rates than their White peers. African American, Hispanic, Native American, and English Language Learners were found to be more likely to be placed in more restrictive educational environments than their peers (De Valenzuela, et al., 2006). Indeed, African American students were more likely to be placed in separate classrooms than others in the same disability category (Skiba, et al., 2006a). Thus, African American students were found to

be underrepresented in the general education classroom and overrepresented in more restrictive settings. More specifically, African Americans who were seen to have difficulty with anger control spent less time in the general education classroom than their Caucasian peers (Hosp & Reschly, 2002).

## 2.2 Potential Reasons for Minority Disproportionality

There is most likely not one particular reason for minority disproportionality, but some researchers have pointed to many different ideas for why this phenomenon occurs. For example, minority disproportionality can be seen as a problem arising from economic disadvantages, teacher bias, and also institutional biases (Skiba, et al., 2008). Another viewpoint is that labeling minority students as requiring special education services serves to replace a more acceptable form of discrimination (i.e. disability) in place of the unacceptable form of discrimination (i.e. racism) (Beratan, 2008). In this view, disproportionality arises from society's need to discriminate against minority students, but in a way that is more acceptable as overt racism is no longer considered socially acceptable.

In one study, school psychologists were surveyed regarding their views on disproportionality in special education. They indicated that cultural disadvantage and parental involvement deficits were the main factors involved in disproportionality in special education. Interestingly, they denied that biased referrals from teachers were a factor in disproportionality. Some even stated that African American children inherited their parents' lower intelligence (Kearns, Ford & Linney, 2005). Counterintuitively, by indicating that they believed African Americans naturally had lower intelligence, these

school psychologists demonstrated that they are biased and, thus, that there could definitively be a bias at some point in the special education process. However, this is an explanation that some still believe to be a reason behind minority disproportionality and indicates that some believe that perhaps minorities are placed in special education at higher rates simply because they require the special services at greater rates than White students. While the school psychologists in the previous study did not believe teachers to be biased, one study found that teachers spoke more positively to their European American students than to their African American students. Additionally, teachers had more positive expectations and made more positive referrals for European American children than for Hispanic and African American students (Tenenbaum & Ruck, 2007). In other words, teachers viewed their European American students more positively as compared to their African American students. Therefore, while the school psychologists did not believe teacher bias to be a problem, teachers have been found to be relatively biased in their interactions with students.

It is important, also, not to forget the historical implications surrounding minority disproportionality. For example, *Brown v. Board of Education* was decided so that students would not be excluded inequitably from the educational system. Unfortunately, while *Brown* states that “separate but not equal” is not acceptable, this phenomenon is still occurring in special education (Obiakor & Utley, 2004). This position is supported by research stated earlier that indicates that African American students are placed in more restrictive environments at higher rates than their peers (De Valenzuela et al., 2006). Thus, it seems as though *Brown* has not succeeded in assuring that students are educated in the same and equal environment. Additionally, Ferri & Connor (2005) state that

tracking in general education and the overrepresentation of minority students in special education is one way of resisting integration of schools based on race. In other words, in order to make sure that schools are segregated, African American students are overrepresented in special education and are also placed in lower tracks in general education. In fact, Southworth & Mickelson (2007) found that Black males were less likely to be in the college-prep track as compared to their White male peers. Thus, while tracking exists in general education, it proves that inequities throughout the education system are apparent. Overall, then, it is clear that historical struggles involving African Americans could potentially have an impact on the tracking and special education status of these students.

### 2.3 Behavior and Punishment

Behavior plays a very important role in minority disproportionality. As stated earlier, African Americans are disproportionately placed in the emotional and behavioral disability categories of special education (Zhang & Katsiyannis, 2002). Additionally, because this category is one of the judgmental categories of special education, bias can play a role in which students are labeled as having an emotional and behavioral disability. In one study, the researchers interviewed teachers about their views on disproportionality and diversity. One teacher indicated that she felt that African American children were louder, more active, and sometimes teachers did not want to have to work with them (Skiba et al., 2006b). A special education director indicated that she thought behaviors were the reasons behind many of the referrals (Skiba et al., 2006b). Thus, it is important to look at the differential treatment of minority students in terms of their behavior

because problem behaviors could lead to these students being referred for special education.

There is some evidence that perhaps African Americans and Caucasians have different behavioral styles. In particular, the African American Behavioral Style (AABS) involves a preference of working with other students rather than working alone, a preference for participating in projects rather than simply learning about them, and a preference for speaking without raising their hands (Hosp & Hosp, 2001). These differences are not necessarily problematic. However, in school, these behaviors may be misunderstood if the teacher does not understand this behavioral and cultural difference (Hosp & Hosp, 2001). Additionally, Townsend (2000) states that some African American students may respond to the teacher out loud in the classroom in a way that indicates that they are paying attention, but the teacher may misinterpret that behavior as disrespectful. Thus, there could be a difference between the teachers' and students' cultural background, which could lead to a misunderstanding of the behaviors exhibited as being problem behaviors. Indeed, a study found that teachers rated African American students as exhibiting more problem behaviors and also displaying fewer competencies as compared to their White peers (Sbarra & Pianta, 2001). Another study examined whether teachers rated children differently based on race using the Conners Teacher Rating Scale, which is used to assess Attention Deficit/Hyperactivity Disorder (ADHD). They found that teachers rated Black children as having more externalizing behaviors than White children (Epstein, March, Conners & Jackson, 1998). However, they could not conclude from the study whether or not these behavior differences were real or biased.

One study examined whether teachers perceived students' aggressiveness, achievement ability, and whether the child required special education services differently if the student was walking with a stereotypically African American movement style of walking. The style of walking in question is what they call a stroll (Neal, McCray, Webb-Johnson & Bridgest, 2003). They found that teachers assumed that African American and European American students who walked in a standard movement style were higher in achievement than those of both ethnicities who walked with a stroll. Also, when students walked with a stroll, they were seen to be more aggressive than those who walked in a standard movement style. Finally, they found that those who walked with the stroll were seen to require special education more than those who did not walk with the stroll. The authors point to this fact as an indication that since African American males have historically been seen as aggressive and of lower intelligence, that exhibiting the African American movement style of a stroll would cause teachers to expect them to be underachievers (Neal, McCray, Webb-Johnson & Bridgest, 2003). Thus, this study indicates that there is a bias on the part of teachers against African American ways of moving, which leads to the assumption that they could be aggressive and even that they may need special education more than other students. It follows, then, that teachers may be more inclined to refer students for special education if they act in a way that is associated with the African American culture.

On the other hand, one study suggests that teachers are not biased in rating minority students' behavior. When teachers were asked to use ADHD rating scales to rate the behavior of their students, the researchers found that the ratings for minority students were more similar to actual observation as compared to Caucasian students (Hosterman,

DuPaul & Jitendra, 2008). Thus, teachers were more accurate when rating minority students' behavior than when they were rating Caucasian students' behavior. One reason for this is that teachers, who are generally Caucasian, are accustomed to the way in which their own culture exhibits problem behaviors and, thus, are more attuned to minority students' problem behaviors simply because these behaviors are not a part of their own culture's behavior repertoire (Hosterman, DuPaul & Jitendra, 2008). They also posit that since teachers were correct about minority students' behavior and that there was no bias, perhaps disproportionality arises from underrepresentation of Caucasian students in special education. This would make sense considering teachers may be more tolerant of poor behaviors from students from a similar culture. This coincides with a hypothesis posed by Landrum (2000) who theorizes that perhaps there is an underidentification of White children instead of an overidentification of children of color. Thus, while they found no bias against ethnic minorities, at least in this study, there is a bias toward Caucasian students. In another example of a cultural misunderstanding, when teachers were asked to recommend interventions for minority students and Caucasian students, they were less likely to recommend family support interventions for minority students (Wood, et al., 2009). Most of their supports recommended for minority students, in fact, were based more in the classroom rather than outside supports (Wood, et al., 2009). This demonstrates that teachers recommended supports in different and perhaps educationally detrimental ways based on the child's ethnicity.

Differential treatment of behavior between African American students and Caucasian students could be related to more disciplinary actions against African American students. One particular study found that Black students were more likely than

White students to receive disciplinary referrals (Bradshaw, Mitchell, O'Brennan & Leaf, 2010). The authors suggest that this is evidence of a bias against Black students. Eitle & Eitle (2004) also found that Black students were more likely to be suspended than White students. They found that schools that had more experienced and higher educated teachers had higher discrepancy between Black and White students' suspensions. They posit that this could be because of racial and ethnic differences between the teachers and their students (Eitle & Eitle, 2004). Therefore, the differential treatment of Black students through more suspensions as compared to White students could be due to a cultural disconnect between teachers and students. Another study found that throughout three school years of data, African American students were targets of discipline the most often out of all racial groups studied (Zhang, Katsiyannis & Herbst, 2004). Additionally, those in the special education category of emotional disturbance were disciplined more often than any of the other disability categories. Rausch & Skiba (2006) also state that students who are considered to have an emotional disability have a higher chance of being disciplined than those in other disability categories. Further, they found that Black students who have disabilities are at an increased risk of being expelled or suspended as compared to their non-disabled peers (Rausch & Skiba, 2006). Krezmien, Leone & Achilles (2006) also discovered that African American students with disabilities were at the highest risk of being suspended. The researchers found this problematic not only because of the differential treatment by race, but also because they felt that particularly in emotional disturbance, these behaviors should be managed better by schools as they are simply symptoms of the disability (Krezmien, Leone & Achilles, 2006). Through differential punishment between ethnicities and disability status, there is clearly a bias



against those who are minorities and those with disabilities. Patton (1998) states that perhaps the disproportionality in special education arises from the majority of teachers and professionals viewing minority students' behaviors from an outsider point of view with their own assumptions and beliefs. Thus, because of the difference in culture between teachers and students, there is a biased misunderstanding of minority students' behavior.

#### 2.4 Gender and Disproportionality

Gender is also an important area where disproportionality in special education exists. In general, boys are more likely than girls to be identified as having a disability (Oswald, et. al. 2003; Coutinho & Oswald, 2005). In a study of U.S. special education data from 1976 to 1997, boys were found to be two times as likely as girls to be placed in the learning disabled category, three and a half times more likely than girls to be placed in the emotionally disturbed category, and 1.4 times more likely than girls to be identified as having mental retardation (Oswald, et. al., 2003). Another study of special education data throughout the U.S. also found that boys were more likely to be placed in special education as compared to their female peers (Coutinho & Oswald, 2005). Boys were 1.33 times more likely to be identified as having mental retardation, 2.04 times more likely than girls to be identified as having a learning disability, and 3.43 times more likely than girls to be labeled as severely emotionally disturbed (Coutinho & Oswald, 2005).

Another issue with regard to gender disproportionality is the fact that male students spend more time in more restrictive settings than female students do (Hosp & Reschly, 2002).

Overall, it has become clear that boys are significantly more likely to be placed in special

education as compared to their female counterparts especially in the emotionally disturbed category.

Wehmeyer & Schwartz (2001) additionally found that boys were twice as likely as girls to be identified as requiring special education services. Interestingly, they found that female students in special education reported lower IQ scores than boys in special education. As compared to males, females were disproportionately more likely to be served in more restrictive placements, such as self-contained classrooms (Wehmeyer & Schwartz, 2001). During the study, teachers were asked to rate the behaviors of their students through subjective and objective means. When using subjective means, teachers were more likely to accentuate the problematic behaviors males exhibited. However, when asked to use more objective ways of indicating reasons for referral to special education, there were no longer any significant differences between the genders. The authors point to this finding as suggesting that there could be biases in what teachers expect to find in terms of behavior problems. They also posit that while researchers tend to believe that the overrepresentation of males in special education is a problem, they believe that it could be female students who are not receiving the academic services they require because they may not show the problem behaviors that catch teachers' attention. Therefore, because female students are underrepresented in special education, they may not be receiving the quality of education they could be and when they are placed in special education, they are often placed in more restrictive settings.

When female students are identified as having emotional and behavioral disabilities (EBD), those who work with these students consider them to act in different ways as compared to boys with the same disability. Rice, Merves and Srsic (2008)

conducted a study in which teachers and counselors who worked with students with EBD were interviewed about their experiences with these students. They mentioned a few differences between boys and girls with this disability. First, girls were considered to have hidden problems instead of the obvious behaviors that boys exhibit (Rice, Merves & Srsic, 2008). This confirms what the previous study stated in that girls' behaviors may not be as obvious as boys'. Some who participated in the study stated that they actually preferred to work with boys with EBD rather than girls with EBD. Those who were interviewed also frequently used gender stereotypes to describe the girls with whom they worked. In fact, when girls exhibited more gender appropriate behavior, they were considered to be not as difficult to work with as those who exhibited gender inappropriate behavior (Rice, Merves & Srsic, 2008). Ultimately, it is clear that these practitioners held many gender stereotypical beliefs about the ways in which female students should act and when they did not act in expected ways, were perceived as more difficult.

While female students are less likely to be identified as needing special education services, when they do receive them, they experience poorer outcomes when leaving special education than male students. In fact, male students with disabilities were more likely to be employed for longer periods of time, earned more, were more likely to hold a high school diploma, and less likely to have biological children than female students with disabilities (Coutinho, Oswald & Best, 2006). Only on one variable were women's outcomes more positive; men were more likely to be arrested than women (Coutinho, Oswald & Best, 2006). The authors point to the need to help female students transition easier into the adult world so as to avoid these negative outcomes. Overall, the problems

of underrepresentation of female students in special education and also poorer outcomes after leaving special education are pervasive issues in gender disproportionality.

## 2.5 Demographic Characteristics and Disproportionality

Minority disproportionality as it exists in special education is affected by many demographic characteristics. One study found that disproportionality of African Americans in emotionally handicapped classes decreased as the percentage of African Americans in the school increased in population (Serwatka, Deering & Grant, 1995). They hypothesize that this could result from the fact that if there are more African Americans represented in the school district, then perhaps more of the behaviors found in African American culture will be shown, thus professionals and teachers may see these behaviors as normal and not deviant (Serwatka, Deering & Grant, 1995). Therefore, if behaviors usually found in African American culture become normalized, it is more difficult for teachers to be biased against these students. They also hypothesize that these results could come from the finding that when there are higher percentages of African American students, African American teachers are also highly represented. And indeed, they found that disproportionality lessened when there were more African American teachers (Serwatka, Deering & Grant, 1995). This once again supports the hypothesis that disproportionality results from differences in culture between teachers and students. If teachers are from the same culture as the students, then they will understand their behavior better. Another study confirmed the result that an increase in minority students that were enrolled in the district was related to a decrease in the disproportionality of Black students in educable mentally handicapped programs (Eitle, 2002).

A few studies looked at poverty and its effect on the rate of classification in special education. Coutinho, Oswald & Best (2002) found that higher levels of poverty are associated with higher rates of learning disabilities in Black, Hispanic, and male Asian students. However, for White and American Indian students, with higher levels of poverty, their representation in the learning disability category of special education decreases (Coutinho, Oswald & Best, 2002). Another study done by Zhang & Katsiyannis (2002) also looked at poverty and its effects on classification rates. This study found that in poorer states, fewer American Indian, Asian, African American, and White students were found to have emotional and behavior disorders (Zhang & Katsiyannis, 2002).

Oswald, Coutinho, Best & Singh (1999) also studied poverty and special education identification in the mild mental retardation (MMR) and serious emotional disturbance (SED) categories. They examined data from 4,455 districts and their demographic characteristics such as: housing, income, poverty, percentage of children seen as at risk, dropout rate and the percentage of children who are Limited English Proficient. They found what has already been confirmed earlier; African American students were disproportionately represented in the MMR category and the SED category of special education. Additionally, they found that all students' MMR rates increased as poverty increased. When there were low dropout rates in the district, African Americans were twice as likely to be identified for SED as compared to other ethnicities. Disproportionality for African Americans in the MMR category increased as the dropout rate increased. In wealthy areas, as measured by housing values, no ethnicities other than African Americans were identified as having MMR. In areas with lower housing values,

African American students were disproportionately represented in the MMR category and this disproportionality lessened as wealth increased. African American disproportionality in the SED category worsened as wealth increased. However, regardless of housing values, African Americans were disproportionately represented in the SED category. When there were few African American students in the school district, African American students were more likely to be classified as having SED. When there were more than 33% African American students in a district, as poverty increased, SED identification decreased. The theory behind why disproportionate representation was worse in wealthier districts could be that wealthier areas may not tolerate differences in behavior that African Americans may exhibit. Overall, disproportionality for African Americans was proven by this study and is also correlated with demographic characteristics.

Another study also looked at disproportionality in mental retardation (MR) and demographic variables. White males were 1.36 times more likely to be classified as MR, and Black females were 2.02 times more likely to be classified as MR as compared to White females. Black males were far more disproportionate as they were 3.26 times more likely to be identified as having MR as compared to White females. As poverty increased, African Americans, American Indian males and females, and African American females were less likely to be identified as having MR (Oswald, Coutinho, Best, & Nguyen, 2001). In an area with low poverty, the rates for MR identification increased for Blacks and Native Americans. When poverty was high in the area, MR identification rates were more similar across ethnicities and genders. Black students' odds of being identified for MR increased when they lived in a predominantly White community. Districts that had higher per pupil expenditures had less MR disproportionality for African American

students, but more disproportionality for Hispanic students (Oswald, Coutinho, Best & Nguyen, 2001). The fact that disproportionality was worse in predominantly White districts and in wealthier districts once again provides support for the hypothesis that these communities may not understand the cultural differences that arise when working with African American students when they are the distinct minority. Because African Americans are not highly represented in these districts, perhaps professionals and teachers may not understand how to work with these students in a culturally appropriate manner.

Finally, Skiba, et al. (2005) also looked at demographic factors and their effect on disproportionality. As poverty increased, learning disability (LD) and speech and language (SL) became less disproportionate. As suspension and expulsion rates increased, so did disproportionality in emotional disturbance (ED), moderate mental retardation (MoMR), mild mental retardation (MMR), and LD. As found in previous studies, Skiba, et al. (2005) discovered disproportionality. African American students were over 3 times as likely to be classified as MMR, 2 times as likely to be classified as MoMR and over 2 times as likely to be classified as ED as compared to other students. Students in high-poverty areas were two times as likely to be classified as MMR, twice as likely to be classified as MoMR, and two times as likely to be classified as ED as compared to students in wealthier areas. When poverty was held constant, race was still a significant factor in whether students were identified as requiring special education services or not. Black students were 2.5 times as likely to be classified as MMR, 1.5 times as likely to be classified as MoMR, and 1.5 times as likely to be classified as ED when compared with other students. In sum, “race is more predictive of special education

identification than low income across all disability categories” (Skiba et al., 2005, p. 139). Indeed, African Americans were overrepresented in all disability categories at all economic levels. Surprisingly, when race and poverty were analyzed at the same time, race was a better predictor of whether students would be identified for special education than poverty status. The researchers also found that the rate of suspension and expulsion were the best predictor of whether the district had disproportionate numbers of minorities in special education. They hypothesize that this could be due to schools being unable to accept differences in culture. Or, they suggest that schools that suffer from poverty may not be as equipped as wealthier districts to deal with learning and behavior problems. Overall, because race was a significant predictor of special education identification, the researchers believe that there exists a bias in special education (Skiba et al., 2005).

## 2.6 Conclusion

Research indicates that minority disproportionality, the overrepresentation of minority students and the underrepresentation of female students in special education are pervasive problems in schools throughout the United States. This could be due to either real differences between the ethnic groups or a bias in referral and identification. Studies have shown teachers exhibiting a bias either toward Caucasian students or against minority students, which supports the hypothesis that teachers and schools are biased. Also, behavior plays an important role in whether students are referred to special education or not and African Americans, yet again, minority students are disproportionately punished as compared to their Caucasian peers. Hypothetically, this differential treatment of behavior could be due to teachers and schools misunderstanding



cultures that are different from their own. Indeed, studies have indicated that districts that are wealthier have higher rates of disproportionality, which suggests that these schools may be out of touch with their minority students. Additionally, female students are underrepresented in special education and thus are not being identified for services when they could benefit from them. When female students are placed in special education, they face poorer outcomes when they leave special education as compared to male students in special education. Ultimately, certain groups are differentially treated and placed in special education, which indicates that special education is not a fair and equitable institution operating without bias.

## **Chapter 3**

### **Methods**

#### 3.1 Introduction

This section, Chapter 3, will explore the methods used in analyzing data regarding disproportionality in special education. Data was compiled from the New Jersey Department of Education (NJDOE) website, which includes data from all school years (NJDOE Data and Reports). For the purposes of this study, only the 2007-2008 school year data was studied. Data was analyzed to examine whether districts in the study had disproportionate rates of minorities in special education. Finally, there were many variables analyzed in order to explore whether they had an effect on the degree of disproportionality in a given district.

#### 3.2 Sample

In order to compile data for this study, 200 districts were randomly sampled from the nearly 600 operating school districts in New Jersey. There were five ethnicities in total: Black, White, Hispanic, Asian, and Native American. Only data related to Black, White, Hispanic, and Asian students was utilized in this study as Native Americans were not represented in large enough numbers for their results to be meaningful.

#### 3.3 Design

Whether minority disproportionality was an issue for these districts was analyzed first based on the four different ethnicities. Disproportionality was then analyzed as it related to multiple variables. These variables included: district wealth, special education

placement, suspension and expulsion rates, average class size, language diversity, student to faculty ratio, faculty and administrator credentials, dropout rates, graduation rates, and per pupil expenditures. District wealth was quantified as District Factor Group with districts receiving a letter anywhere from A to J, with a total of 8 different District Factor Groups. A district in the District Factor Group A indicated the district had the lowest socioeconomic status and districts in the District Factor Group J had the highest socioeconomic status. As far as disability categories, there were 13 total categories, which included: speech only, autism, deaf blindness, emotional disturbance, hearing impairments, language impairments, multiple disabilities, mental retardation, other health impairments, orthopedic impairments, specific learning disabilities, traumatic brain injured, and visual impairments. For the purposes of this study, only emotional disturbance and specific learning disability were studied. In terms of placement categories there were nine possible placements: general education for more than 80% of the day, general education between 40 and 80% of the day, general education for less than 40% of the day, public separate school, private day school, private residential school, home instruction, public residential, and correctional facilities. In this study, only 80% of the school day, 40% to 79% of the school day, and less than 40% of the school day were analyzed. The remainder of the variables existed on a continuum and did not have separate levels.

### 3.4 Procedures

As indicated previously, data for this study was collected from the NJDOE website and, thus, was archival in nature. The researcher then compiled all of the data

into a dataset in Microsoft Excel. All variables listed above were included in the dataset. Data was analyzed using SPSS. In order to determine whether disproportionality existed in each district, a risk ratio was used in the same way it was computed by Oswald et al. (1999). Risk ratios can be understood as comparing one ethnicity's risk for being in a specific special education category to all other ethnicities' risk. A risk ratio above one indicates that students of that ethnicity are disproportionately more likely as compared to all other students to be placed in a certain category or placement. A risk ratio below one indicates that students who represent that particular ethnicity are disproportionately less likely to be in a certain eligibility category or placement as compared to all other ethnicities. Once the risk ratio for each ethnicity in each category and placement was computed, the risk ratio was analyzed as it related to each of the other variables. The risk ratio was correlated with each variable in order to determine whether disproportionality was influenced by any of the aforementioned district level factors.

### 3.5 Summary

Overall, data was compiled from the NJDOE website in order to explain whether the districts in the sample had minority disproportionality in their special education programs. Upon determining whether minority disproportionality existed in the districts, multiple variables were analyzed through correlations to determine whether or not they were associated with the degree of disproportionality in the district.

## Chapter 4

### Results

The sample analyzed in this study consisted of 200 school districts in New Jersey. In the sample as a whole, White students made up 57.26% of the sample (n=288,744), Black students were 15.99% of the sample (n=80,621), Hispanic students consisted of 20.00% of the sample (n=100,901), and Asian students were 6.75% of the sample (n=34,040). Representation in special education was also analyzed in the overall sample as represented in Figure 1. In the emotionally disturbed category, 51.69% were White (n=2003), 30.37% were Black (n=1177), 16.88% were Hispanic, and 1.06% were Asian (n=41). In the specific learning disabled category, 56.28% were White (n=18,509), 20.09% were Black (n=6608), 21.97% were Hispanic (n=7227), and 1.65% were Asian (n=544).

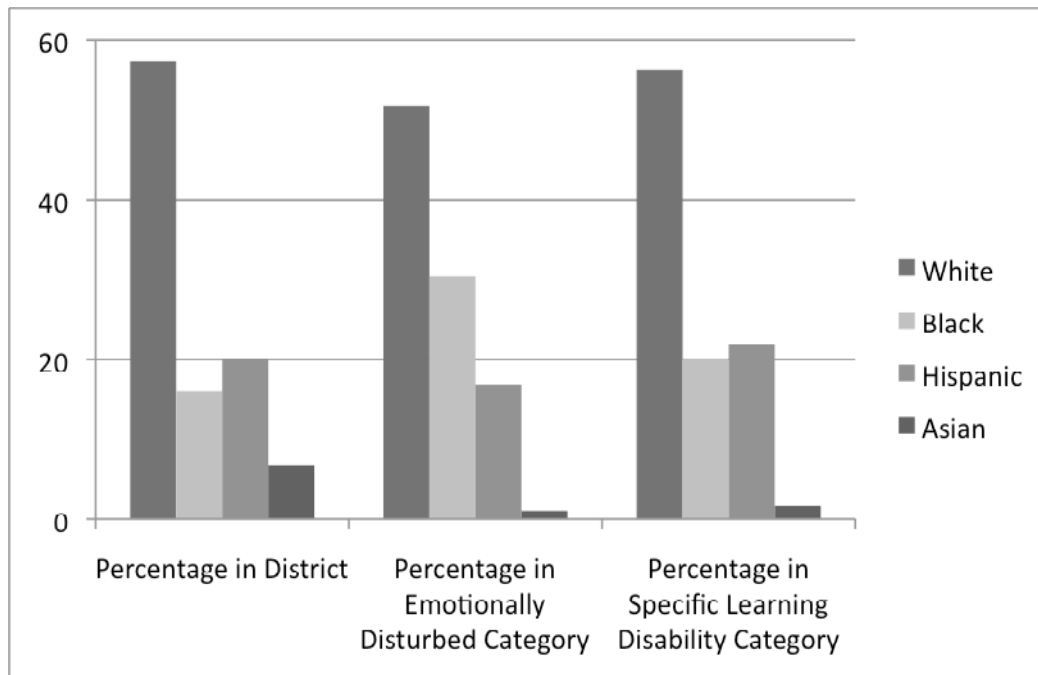


Figure 1. Comparison of Ethnicities Based on Eligibility Category

In terms of placement category, as represented in Figure 2, of the students in special education who were placed in general education for more than 80% of the day, 66.37% of the students were White (n=23,325), 13.60% were Black (n=4781), 16.73% were Hispanic (n=5881), and 3.30% were Asian (n=1159). Of the students who were placed in general education between 40 and 79% of the day, 55.07% were White (n=12,604), 22.06% were Black (n=5048), 20.69% were Hispanic (n=4735), and 2.18% were Asian (n=499). Finally, of the students placed in general education less than 40% of the day, 40.98% were White (n=5073), 27.50% were Black (n=3404), 28.76% were Hispanic (n=3561), and 2.76% were Asian (n=342).

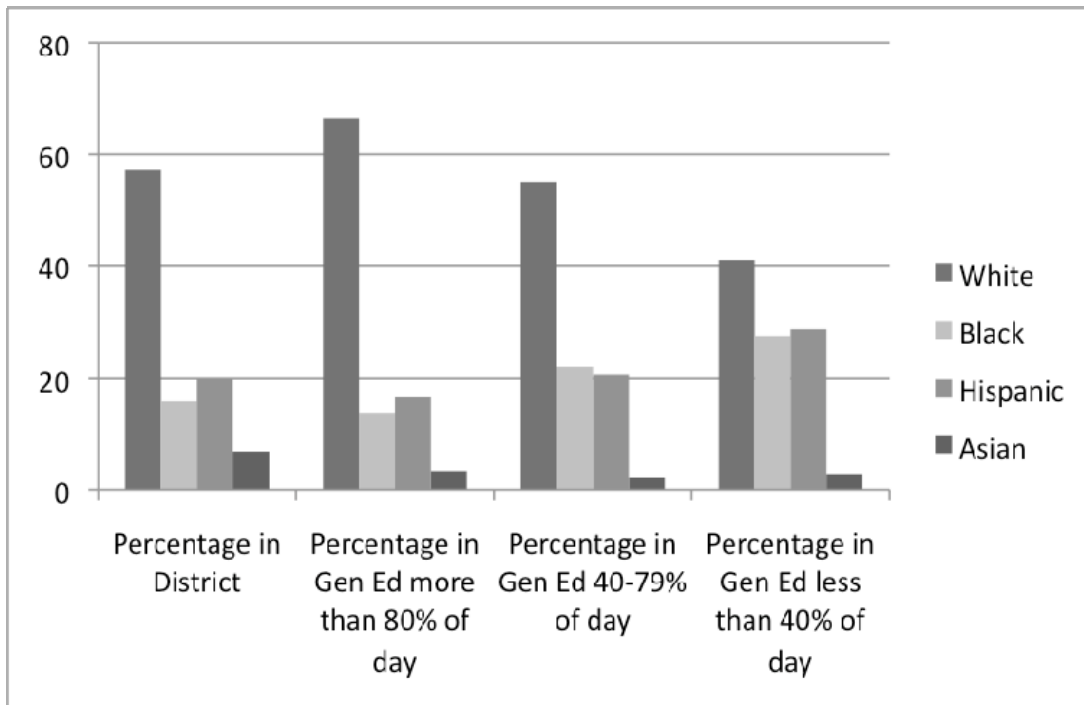


Figure 2. Comparison of Ethnicities Based on Placement Category

During the analysis of risk ratios in order to examine whether minority disproportionality was an issue in these districts, districts that had less than five students

in each category were eliminated. After retaining districts with a significant number of students for each category, the risk ratios were calculated for each ethnicity in each special education category and placement category. The means and standard deviations for the risk ratios are listed in Table 1.

Table 1. Means and Standard Deviations for Risk Ratios in Special Education Category by Ethnicity

Ethnicity	Emotionally Disturbed	Specific Learning Disability	80% in General Education	40-79% in General Education	40% in General Education
White	1.26 (0.94)	1.26 (0.94)	1.61 (0.98)	1.03 (0.75)	0.87 (0.63)
Black	2.89 (1.67)	1.62 (0.59)	1.17 (0.51)	2.10 (1.23)	2.43 (1.91)
Hispanic	2.16 (4.73)	1.59 (1.00)	1.04 (0.46)	1.83 (1.51)	1.46 (0.72)
Asian	*	0.27 (0.13)	0.59 (0.33)	0.52 (0.50)	0.74 (0.61)

Note: Standard deviations found in parentheses.

\* Less than five students in the category.

Once the risk ratios were calculated, each risk ratio for each ethnicity was analyzed using correlations in order to determine whether district level variables were associated with disproportionality. First, White students were analyzed in the emotionally disturbed category. Most district level variables were not significantly correlated with the White emotionally disturbed risk ratio, but percent of faculty with Doctorate was positively correlated with the risk ratio,  $r(84) = .22, p = .046$ . Also, the percent of students who were labeled limited English proficient in the district was positively correlated with White students' emotionally disturbed risk ratio,  $r(84) = .58, p < .001$ . The risk ratio for White students in the specific learning disability category was positively

correlated with district wealth,  $r(172) = .19, p = .01$ , with percent of faculty with Master's degrees  $r(172) = .22, p < .01$ , and with percent of faculty with Doctoral degrees,  $r(172) = .18, p = .018$ . The risk ratio was negatively correlated with number of suspensions,  $r(172) = -.18, p = .016$ , and with district percent of faculty with Bachelor's degrees,  $r(172) = -.29, p < .01$ . The risk ratio for White students to be placed in general education for 80% or more of the school day was positively correlated with district wealth,  $r(177) = .24, p < .01$ , and with the percent of faculty with Doctoral degrees,  $r(177) = .16, p = .034$ . The risk ratio for White students to be placed in general education for 80% or more of the school day was negatively correlated with district number of suspensions,  $r(177) = -.22, p < .01$ . In terms of the risk ratio for White students to be placed in general education between 40 and 79% of the day, none of the district level variables were significantly correlated. The risk ratio for White students to be placed in general education less than 40% of the day was positively correlated with district per pupil expenditures,  $r(120) = .19, p = .039$ , percent of faculty with Master's degrees,  $r(120) = .23, p = .01$ , and with the percent of students in the district labeled as limited English proficient,  $r(120) = .34, p < .001$ . The risk ratio for White students to be placed in general education less than 40% of the day was negatively correlated with percent of teachers with Bachelor's degrees,  $r(120) = -.23, p = .013$ .

The risk ratios for Black students were then analyzed in relation to district level variables using correlations. In terms of the risk ratio for Black students in the emotionally disturbed category, there was no correlation with any of the district level variables. The risk ratio for Black students in the specific learning disabled category was negatively correlated with dropout rate,  $r(61) = -.32, p = .011$ , and positively correlated



with graduation rate,  $r(61) = .33, p < .01$ , and district wealth,  $r(88) = .26, p = .012$ . The risk ratio for Black students placed in general education for 80% or more of the school day was not correlated with any of the district level variables. The risk ratio for Black students to be placed in general education between 40 and 79% of the school day was negatively correlated with district dropout rate,  $r(58) = -.33, p = .01$ , number of suspensions,  $r(88) = -.28, p < .01$ , per pupil expenditures,  $r(88) = -.26, p = .015$ , and with the percentage of students labeled limited English proficient,  $r(88) = -.26, p = .015$ . This risk ratio was positively correlated with graduation rate,  $r(58) = .36, p < .01$ , and with average class size,  $r(88) = .27, p = .01$ . The risk ratio for Black students to be placed in general education less than 40% of the day was negatively correlated with the district dropout rate,  $r(41) = -.33, p = .029$ , the percentage of students labeled as limited English proficient,  $r(56) = -.27, p = .043$ , and with the student administrator ratio,  $r(56) = -.32, p = .015$ . This risk ratio was bordering on significance as being positively correlated with graduation rate,  $r(41) = .30, p = .053$ , and the percentage of faculty with Doctoral degrees,  $r(56) = .25, p = .057$ .

Risk ratios for Hispanic students were then examined as to whether they were correlated with district level variables. The risk ratio for Hispanic students to be placed in the emotionally disturbed category of special education was positively correlated with district wealth,  $r(24) = .59, p < .01$ , and with graduation rate,  $r(22) = .42, p = .041$ . The risk ratio for Hispanic students to be placed in the specific learning disability category was negatively correlated with dropout rate,  $r(85) = -.25, p = .02$ , and percentage of students in the limited English proficient category,  $r(117) = -.19, p = .042$ . The number of suspensions was bordering on significance as negatively correlated with the risk ratio of

Hispanic students in the specific learning disabled category,  $r(117) = -.18, p = .054$ . This risk ratio was positively correlated with graduation rate,  $r(85) = .33, p < .01$ , and district wealth,  $r(117) = .23, p = .011$ . The risk ratio for Hispanic students to be placed in general education for 80% or more of the school day was negatively correlated with the percentage of faculty who had a Bachelor's degree,  $r(105) = -.24, p = .012$ . This risk ratio was positively correlated with the percentage of faculty with a Master's degree,  $r(105) = .20, p = .04$ , and with district wealth,  $r(105) = .25, p = .01$ . The risk ratio for Hispanic students to be placed in general education for 40-79% of the day was negatively correlated with dropout rate,  $r(77) = -.26, p = .02$  and the percentage of students considered to be limited English proficient,  $r(108) = -.19, p = .048$ , and positively correlated with graduation rate,  $r(77) = .28, p = .014$  and district wealth,  $r(108) = .30, p < .01$ . The risk ratio for Hispanic students to be placed in general education for less than 40% of the day was negatively correlated with dropout rate,  $r(49) = -.36, p = .01$ , number of suspensions,  $r(60) = -.36, p < .01$ , per pupil expenditures,  $r(60) = -.28, p = .026$ , and percentage of students who are limited English proficient,  $r(60) = -.28, p = .026$ . This risk ratio was positively correlated with district wealth,  $r(60) = .51, p < .001$ , graduation rate,  $r(49) = .49, p < .001$ , and average class size,  $r(60) = .32, p = .011$ .

Finally, the risk ratios for Asians to be placed in certain special education categories were analyzed through correlations with district level variables. No districts had five or more students in the emotionally disturbed category for Asians. The risk ratio for Asian students to be placed in the specific learning disabilities category was positively correlated with average class size,  $r(34) = .35, p = .036$ . The risk ratio for

Asian students to be placed in general education for 80% or more of the school day was negatively correlated with the percentage of faculty with a Master's degree,  $r(55) = -.38$ ,  $p < .01$ , and bordering on significance with district wealth,  $r(55) = -.26$ ,  $p = .051$ . This risk ratio was positively correlated with the percentage of faculty holding a Bachelor's degree,  $r(55) = .38$ ,  $p < .01$ . The risk ratio for Asian students to be placed in general education for 40-79% of the school day was negatively correlated with the percentage of students who were limited English proficient,  $r(33) = -.37$ ,  $p = .03$ . The risk ratio for Asian students to be placed in general education less than 40% of the day was not correlated with any district level variables.

## **Chapter 5**

### **Discussion**

#### 5.1 Summary

The purpose of this study was to examine whether minority disproportionality exists in New Jersey. Based on prior research, it was hypothesized that Black and Hispanic students would be overrepresented in special education and Asian students would be underrepresented. In terms of the special education placement category, it was predicted that Black and Hispanic students would be placed in more restrictive educational settings. However, Asian and White students would be placed in least restrictive placements. Once these hypotheses were analyzed, another set of hypotheses were tested. These included the prediction that as the number of suspensions increased, the degree of disproportionality would worsen. Additionally, wealthier districts and those that employed teachers with higher educational degrees would also experience more severe disproportionality. Beyond that, other district level variables were analyzed in order to determine whether they would be associated with the severity of minority disproportionality.

Based on the risk ratios described earlier in Table 1, it became clear that minority disproportionality existed in this sample of New Jersey districts. Black students were 2.89 times more likely than other students to be placed in the emotionally disturbed category, which coincided with earlier studies (Oswald, et al., 1999; Hosp & Reschly, 2003). Hispanic students were also disproportionately more likely to be in the emotionally disturbed category as compared to other students. Asian students, while making up 6.75% of the sample, were not represented at all in the emotionally disturbed category. Thus,

they were disproportionately less likely to be labeled as emotionally disturbed. In the specific learning disability category, Black students and Hispanic students were about 1.6 times more likely to be placed in this category as compared to other students. Once again, Asian students were disproportionately less likely to be categorized as having a specific learning disability. This underrepresentation of Asians and overrepresentation of Black and Hispanic students has been consistently found in prior research (Skiba et al., 2005).

Minority disproportionality was also found in the placement categories of special education. The least restrictive environment in this study was defined as spending 80% or more of the school day in general education. In this placement category, White students were 1.6 times more likely as compared to other students to be placed in the least restrictive environment. Asians were disproportionately less likely to be placed in this placement category, which could be due to the fact that they are less likely to be placed in special education overall. The next more restrictive environment was considered to involve spending 40-79% of the school day in general education. Black students were disproportionately more likely to be placed in this category at 2.10 times the rate other students were. Hispanic students were also disproportionately more likely to be placed in a setting that involved interactions with general education peers for 40-79% of the school day. Asian students again were disproportionately less likely to be placed in this setting. Disproportionality worsened as the setting became more restrictive. The most restrictive setting examined in this study involved students spending less than 40% of the school day in general education. Black students were 2.43 times more likely to be placed in general education for less than 40% of the day, which was at a higher rate than they were placed in the 40-79% category. White and Asian students were disproportionately less likely to

be placed in this category. Therefore, as the setting became more and more restrictive, disproportionality worsened. This coincided with earlier research suggesting that Black students are more likely to be placed in more restrictive settings as compared to their peers (De Valenzuela, et al., 2006; Skiba, et al., 2006a).

In terms of the correlations with other district level variables, many of the findings were nonsignificant. However, there were some district level variables that were significant and were either more or less likely to affect disproportionality depending on the students' ethnicity. Contrary to prior research, when the number of suspensions was significantly correlated with risk ratios, as the number of suspensions increased, the risk for Black, White, and Hispanic students to be placed in special education decreased (Skiba, et al., 2005). However, for Asian students, the number of suspensions was never significantly associated with their risk of being placed in special education. One reason for the decrease in risk with the higher rate of suspension could be that the school districts are framing the students' problems as disciplinary in nature and are not referring these students to special education simply because the professionals believe the issues could be resolved through disciplinary actions rather than through special education. However, this could be an issue if students who are suspended are not referred to special education when they could benefit from these special services.

When faculty education was significantly associated with the risk ratios, the results showed that as more teachers held higher degrees such as Master's and Doctoral degrees, the risk for White and Hispanic students to be identified for special education increased, but the risk for Asian students decreased. When more faculty members held Bachelor's degrees, the risk for White and Hispanic students to be identified for special

education decreased, but the risk for Asian students increased. However, for Black students, faculty education was not associated with their risk for being placed in special education for any of the variables except for a slight trend toward a higher risk when faculty had a Doctorate degree. It is interesting to note, as well, that White students' risk increased when faculty credentials increased. Additionally, it seems that Asian students benefit from more highly educated teachers in that they are less likely to be identified for special education. However, for White and Hispanic students, having higher credentialed teachers increases their chances of being placed in special education.

District wealth was also hypothesized to be a factor in minority disproportionality. In agreement with prior research, when district wealth was significantly associated with risk, Black students were more likely to be placed in special education as district wealth increased (Oswald, Coutinho, Best, & Nguyen, 2001; Oswald, Coutinho, Best & Singh, 1999; Coutinho, Oswald & Best, 2002; Zhang & Katsiyannis, 2002). This could be due to the hypothesis that when districts are wealthier, they may be less tolerant of behavior differences that may be exhibited by African Americans (Oswald, Coutinho, Best & Singh, 1999). White students and Hispanic students were also at higher risk for being in special education as district wealth increased. Interestingly, for Asian students, the risk for being placed in special education decreased as wealth increased. Perhaps, similar to benefiting from higher educated teachers, Asian students are protected when the district is wealthier. However, for White, Black, and Hispanic students, their risk is lower when the district is not as wealthy.

When average class size was significantly associated with risk ratios, which was often not the case, the risk for minority students increased as average class size increased,

but there was no relationship for White students. This could be because teachers who have large class sizes do not have the resources or time available to assist students who may require extra help. Instead, they may refer these students to special education. Why this relationship is not true for White students or why it is not often significantly associated with risk ratios would have to be investigated and explained in future studies.

When the percentage of limited English proficient students was significant in relation to risk ratios, as the percentage of such students increased, the risk for minorities including Asian, Hispanic, and Black students decreased, but the risk for White students increased. Potentially, this could be because minority students may be identified as being limited English proficient and instead of being placed in special education as they may have needed, they are instead put in the category of having difficulty with the English language. Why White students are at higher risk when more students are limited English proficient could be the opposite effect in which White students may be more likely to be placed in special education when other minority students are considered to be limited English proficient instead of being placed in special education. While there are no quotas for special education, White students may be more visible to their teachers since they do not have a language difference and teachers may be more likely to refer them to special education when more of the population speaks a first language other than English.

Dropout rate and graduation rate were consistently significant when examining risk ratios for Black and Hispanic students. As dropout rate increased and graduation rate decreased, risk for Black and Hispanic students decreased. It is not readily apparent why this phenomenon exists. This could be due to the fact that in districts where there is a high dropout rate, perhaps the care is not taken in educating students and helping them



remain in school. Therefore, if students are not the focus of these districts, Black and Hispanic students may be passed over for special education. Also, perhaps these students who would have benefited from special education are more likely to drop out, which would also decrease their risk of being in special education as they would have left the district.

Per pupil expenditures, or the amount of money a district spent per pupil, was not often significant in analyses involving associations with risk ratios. When it was significant, as per pupil expenditures increased, the risk for Black and Hispanic students decreased and the risk for White students increased. This coincided with prior research that found that when districts had higher per pupil expenditures, African American students were less likely to be disproportionately placed in special education (Oswald, Coutinho, Best & Nguyen, 2001). However, this same study found that disproportionality increased for Hispanic students as per pupil expenditures increased, which was not supported by this study

## 5.2 Future Implications

While this study included multiple variables, there were certain limitations to the study. Gender was not a part of the NJDOE special education dataset and, thus, could not be analyzed in conjunction with ethnicity. The interaction of gender and ethnicity should be looked at in the future and should be analyzed in relation to these and other variables. Additionally, only two disability categories and three placement categories were examined and future studies could investigate whether different disability categories exhibit more severe minority disproportionality. Also, because the data only included

New Jersey school districts, future studies could analyze other states' data and examine whether disproportionality is different across different states.

Overall, this study found that disproportionality did indeed exist in New Jersey not only in placement categories, but also in eligibility categories and these findings were supported by prior research. Certain district level variables were significantly associated with the degree of disproportionality such as: district wealth, dropout rate, graduation rate, average class size, number of suspensions, per pupil expenditures, language diversity, and teacher credentials. These findings indicated that certain districts may be more likely to suffer from disproportionality based on certain circumstances. In terms of alleviating minority disproportionality, these variables could be important in determining which districts would be at risk for placing a disproportionate number of students in special education and resources could be focused on these at-risk districts. Since average class size was a significant factor in minority disproportionality for some of the analyses, it is important for districts to ensure that their class sizes are small. This way, students will receive enough attention from their general education teacher and may not then require special education. Also, because minority disproportionality could be attributed to a bias in the referral process, as Hosp & Reschly (2003) indicated, it is important for teachers and other professionals to recognize that they may be biased and should act in ways that are in the best interests of the student.

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