Disproportionality in Special Education: The Impact of Poverty on Eligibility Classifications and Level of Placement

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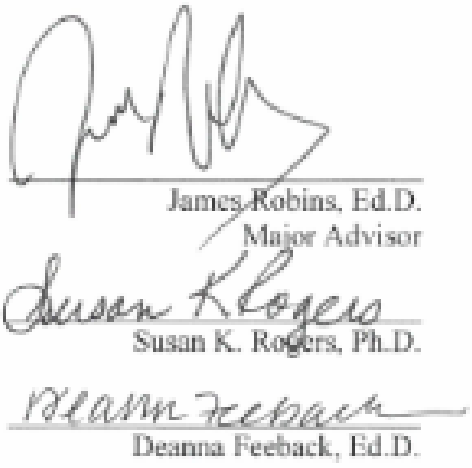

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Abstract

Students who live in poverty are more likely than their affluent peers to have academic and behavioral deficits. These deficits often lead to a referral and disability classification for special education under the Individuals with Disabilities Education Act (IDEA). Disproportionate representation of minority students is regulated by IDEA to help protect these students from discriminatory practices; however, no reporting practices or regulations exist to extend the same protections to students from disadvantaged environments. This quantitative correlational study was conducted to determine if a significant relationship exists between poverty and special education identification, as well as between poverty and the level of placement in special education. This study also focused specifically on the high-incidence categories of emotional disturbance, other health impairment, and specific learning disability. This study was conducted in District B a suburban public-school district located a few miles south of Kansas City, Missouri. Archival student-level data was used from the 685 students who were identified for special education services, with 428 being classified as having free and reduced lunch price status. The findings of this study indicated poverty might increase the likelihood of a student being identified for special education services. The results further suggest a relationship may exist between poverty and the level of placement in special education when assessing the overall special education population and subgroups of other health impairment and specific learning disability. Although not mandated by IDEA, the results of this study suggest a need for district leaders to consider their population of special education students in comparison to their free and reduced lunch population and to take appropriate action.

Dedication

This dissertation is dedicated to my family and God. Back when I first started thinking about pursuing this venture, many prayers went out as to whether this was my path to take. After continued prayer and discussions with family, I decided to go through the application process. I was not at home when the acceptance letter arrived, and my husband, Lance, in his own excitement opened the letter himself. I could hear the proud tone in his voice when he called to tell me I had been accepted, and at that moment, I knew I was meant to be on this journey.

To my husband, I would not have been able to complete this seemingly endless journey without your love and support. Thank you for gifting me time to work and for your continued patience throughout this process. I am thankful you were able to start a project of your own. Even though we were clueless about each other's undertakings, the paths came with similar struggles and successes that we were able to share in together.

To my sweet daughter, Adelyn, your love for learning and inquisitiveness is an inspiration to me. I was two months pregnant with you when I started the coursework, and it became my mission to finish this project before you were able to remember I was in school. You are now a vibrant two-and-a-half-year-old that surprises me with your kindness and love. I can hear (and see) you throwing your hands in the air saying, "You did it, Mama!" There have been so many times already and so many more to come, where I will get to do the same for you. I love you baby girl!

To my mom and dad, thank you for instilling in me a love for learning. Thank you for teaching me the importance of hard-work and perseverance, for without it I would not have been able to complete this endeavor.

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Chapter 1

Introduction

Students who are disadvantaged in life are often disadvantaged in school. Students who are eligible for free and reduced lunches, an indicator of low-income status, enter school about two years behind their non-eligible peers (Auguste, Hancock, & Laboissssiere, 2009) and are more likely to be identified for special education (Flynn, 2012; Sullivan & Bal, 2013). Students who come from low socioeconomic backgrounds could be at risk for discrimination and placement in special education (Alvarez, 2011) and may be disproportionately represented when compared to peers from financially stable households.

Currently, the Individuals with Disabilities Education Act (IDEA, 2004) regulates the disproportionate representation of minority students in special education. Disproportionality, as it relates to special education, is the, "… over- or under-representation of a given population group, often defined by racial and ethnic backgrounds" (Elementary and Middle Schools Technical Assistance Center [EMSTAC], n.d., para. 1). IDEA (2004) provides protection from discrimination for minority students and requires schools to look at current practices if overrepresentation occurs. Disproportionality of minority students has been a concern for over 50 years (Hosp & Reschly, 2004), but disproportionate representation may extend beyond race. Research on disproportionality often identifies the extent to which a range of factors indicate special education identification with poverty being one such factor (Wilson, 2008). Race and poverty are variables, which in the past have been incorrectly used as synonyms within the literature (Henderson, 2009; Hodgkinson, 1995; MacMillan & Reschly, 1998).

Sullivan and Bal (2013) found that free and reduced lunch status had a larger effect on risk for special education placement, more so than race, although both were predictive of risk.

Some areas of special education eligibility may be more susceptible to disproportionate representation. Non-judgmental categories of qualification are generally not contested, as they are easy to diagnose and often carry a medical diagnosis such as blindness or deafness (Ryan, 2012). The areas in which disproportionality occurs most are in the judgmental, or high-incidence categories of special education such as a specific learning disability (SLD), emotional disturbance (ED) (Artiles, Kozleski, Trent, Osher, Ortiz, 2010; Skiba et al., 2005) and other health impairment (OHI) (McLeskey, Landers, Williamson, & Hoppey, 2012; Schnoes et al., 2006). Judgmental categories are subject to bias as they require the use of professional judgment when determining eligibility (Artiles et al., 2010; Donovan & Cross, 2002; O'Connor & Fernandez, 2006; Sullivan, 2011).

The regulations outlined in IDEA (2004) stipulate that students should receive instruction with their same-age peers to the maximum extent possible. Most special education students spend the majority of their day with their same-age peers in the general education classroom (Schnoes et al., 2006), while others who require significant modifications to their school day or curriculum require a more restrictive placement (Taylor, 1988/2004). The level of placement or restrictiveness of placements is a continuum of support based on the amount of time students spend with their regular education peers (see Appendix A). Some researchers have investigated the extent to which students are removed from their regular education classroom into a more restrictive special education placement after being found eligible for special education

(e.g., Landrum, Katsiyannis, & Archwamety, 2004; McLeskey et al., 2012; Schnoes et al., 2006; Singer et al., 2004). McLeskey et al. (2012) reported a decrease since 1990 in the number of students placed in separate settings for the majority of the school day. According to Singer et al. (2004), most of the special education population spends the majority of their school day in the regular education classroom (58%), which is also supported by the study conducted by Schnoes et al. (2006). Landrum et al. (2004) examined the level of placements for students with ED finding a separate class placement as their most common placement (31%) and the regular education classroom placement as the second most common placement (27%).

Schools continue to explore different solutions to decrease the academic and social gap of disadvantaged students (Guerin, 2013). Students who are at risk for academic and behavior concerns are often the students referred for special education, and once referred are likely to qualify for services (Artiles & Trent, 1994; Hosp & Reschly, 2004). Students placed in special education often have lower academic expectations and less access to the general education curriculum than peers, which makes reaching grade-level expectations difficult (Alvarez, 2011). Poverty has been related to poor academic and social outcomes, especially with prolonged (Alvarez, 2011) and early exposure in a child's life (Peterson et al., 2011). These children are at risk not only for low academic performance, but also for dropping out of school, social stigmatization (Alvarez, 2011), emotional issues, and behavioral issues (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003).

Although frequently studied, the causes of disproportionality are still being explored (Skiba, Poloni-Staudinger, Simmons, Feggins-Azziz, & Chung, 2005). The

impact of poverty on disproportionality is one area that merits further exploration on special education eligibility in the areas of specific learning disability, other health impairment, and emotional disturbance (O'Connor & Fernandez, 2006; Oswald et al., 1999; Schnoes et al., 2006). Another area that warrants further exploration is the impact poverty may have on the determination of the level of placement within special education (Carson, 2015; Schnoes et al., 2006; Singer, Butler, Palfrey, & Walker, 2004). The disadvantages of poverty are widespread and include implications for school success with the potential for special education placement.

Background

This study was conducted in District B, a suburban public-school district located a few miles south of Kansas City, Missouri. During the 2016-2017 school year, the district had approximately 4,659 students enrolled in kindergarten through twelfth grade (K-12). Students attended one of the six elementary schools (grades K-6), the middle school/freshman center (grades 7-9), or the high school (grades 10-12). Four of the elementary schools housed grades K-4, one building housed grades 5-6, and the final elementary building housed grades K-6. The district employed approximately 346 teachers during the 2016-2017 school year.

In the 2016-2017 school year, 52.3% of the student population received free and reduced meal prices (FRL), which is an indicator of low socioeconomic status (SES). Across buildings in the district, the FRL percentage ranged from 45.8% to 61.3%. Table 1 shows enrollment data collected from the Missouri Comprehensive Data System (Missouri Department of Elementary and Secondary Education [DESE], 2016; DESE, 2017) for the schools in District B during the 2016-2017 school year, and the percentage

of students who have a lower socioeconomic status, as measured by free and reduced-price meal status.

Table 1

2016-2017 Socioeconomic Status for Schools in District B

School	Total Enrollment	Number of Low SES	Percent of Low SES
School A	318	198	61.3%
School B	360	222	60.7%
School C	477	249	50.6%
School D	303	162	56.6%
School E	508	243	47.9%
School F	578	350	58.0%
School G	756	401	53.8%
School H	1,359	615	45.8%
Total	4,659	2,440	52.3%

Note. Adapted from the "District Report Card: District B," retrieved on March 17, 2018, from the Missouri Comprehensive Data System (MCDS)

As outlined in IDEA (2004), each state must develop a performance plan with the purpose of evaluating the state's efforts to implement the requirements of IDEA. Each state must report annually on their progress to meet their targets. As part of the Missouri State Performance Plan (SPP), each district reports data directly to DESE. Missouri provides a detailed special education district profile with the intent to offer information to the public about the district's performance on the SPP targets and addresses other outcome measures (DESE, 2017). In the disability category, District B had higher than

state average rates in the areas of emotional disturbance, other health impairment, and specific learning disability (see Table 2).

Table 2

2016-2017 Special Education Population in District B

Disability	Total Number	District Rate	State Rate
Emotional Disturbance	55	1.19%	.75%
Other Health Impairment	136	2.93%	2.73%
Specific Learning Disability	230	4.96%	3.44%

Note. Data retrieved on March 17, 2018, from the Tyler SIS Student Information System, as part of District B's requirement to provide core data information to the Missouri Department of Education.

Special education placement data (see Table 3) show the amount of time students who receive special education services are included with their non-disabled peers. District B services most of their special education population inside the regular education classroom at least 80% of the school day, and at a higher rate than the state average. Many researchers discuss the benefits of including students with disabilities and the goal of IDEA (2004) is to include students to the maximum extent possible with their non-disabled peers (Kurth, Morningstar, & Kozliski, 2014; Rea et al., 2002; Zigmond, 2003). District B also has a higher rate of placement when servicing students in the regular education classroom less than 40% of the time.

Table 3

2016-2017 Special Education Placement Categories in District B

Level of Placement	Total Number	District Rate	State Rate
Inside Regular Class at least 80%	413	60.8%	58.1%
Inside Regular Class 40-79%	183	27.0%	27.6%
Inside Regular Class <40%	74	10.9%	8.6%

Note. Data retrieved on March 17, 2018, from the Tyler SIS Student Information System, as part of District B's requirement to provide core data information to the Missouri Department of Education.

Statement of the Problem

School district personnel have an obligation to identify students with disabilities in their districts. Often, students who are identified with a disability are from low-income or minority backgrounds (Donovan & Cross, 2002). The reauthorized IDEA (2004) mandates that states have procedures in place to monitor and prevent disproportionality in special education among minorities. IDEA (2004) requires funds to be allocated to address overrepresented race or ethnic groups to make sure discrimination does not occur. While IDEA regulates disproportionality among minority students, it does not address the overrepresentation of students who live in poverty. Research tends to focus on the relationship between race and disproportionality, as outlined in IDEA (2004). The studies that address socioeconomic status and special education eligibility report inconsistent findings. Skiba et al. (2005) found that poverty was a weak predictor of disproportionality, while Wilson (2008) and Sullivan and Bal (2013) found a relationship between low SES and high-incidence eligibility categories, which was a greater predictor than race and gender.

In addition to inconsistency in research on disproportionality, research studies on the special education placement continuum in the high-incidence categories of special education are rare. Singer et al. (2004) found consistent relationships between the level of special education placement and socioeconomic status. Limited studies on the special education placement continuum do not address socioeconomic status but do explore the level of placement for specific areas of eligibility (i.e., ED, OHI, and LD) (Landrum, Katsiyannis, Archwamety, 2004; Ryndak et al., 2014; Schnoes et al., 2006).

Purpose of the Study

The purpose of the study was to determine the extent to which students who live in poverty are identified for special education. More specifically, the purpose was to determine the extent to which students who live in poverty are identified for special education in the high-incidence eligibility classifications of other health impairment, emotional disturbance, and specific learning disability. An additional purpose was to determine the extent to which these students are being educated with their same-age, non-disabled peers.

Significance of the Study

The literature on poverty and special education eligibility and placement may be extended by this study. Results of this study may provide further insight as to potential bias and discrimination of students who live in poverty. Currently, regulations outlined in IDEA (2004) address discrimination and disproportionate representation of minority students in special education in areas of eligibility and level of placement. In the literature on disproportionality, there is significant overlap between race and poverty, often resulting in the terms being used synonymously (Henderson, 2009; Hodgkinson,

1995; MacMillan & Reschly, 1998). Since poverty is not a variable reported or measured as part of Missouri's SSP and is not a requirement outlined in IDEA, the results from this study can inform District B of potential biases impacting students who live in poverty within district boundaries. The results from this study may also support the need to establish systemic district practices to promote social justice for students from low-income backgrounds.

Delimitations

The current study is delimited in the following ways:

- The sample was a mid-sized, suburban Missouri school district.
- Data were collected only during the 2016-2017 school year.
- Data were collected on only three of 13 special education eligibility classifications (emotional disturbance, other health impairment, specific learning disability), and may not generalize to other classifications.

Assumptions

The following were assumed for the current study:

- All students who are reported to have disabilities, do have disabilities.
- Disabilities are documented correctly in the district's student information system.
- All students who qualified for free and reduced price lunch status have been identified and have correct paperwork on file with the school district.

Research Questions

The following research questions were posed to explore the relationships between poverty and special education eligibility and placement:

RQ1. To what extent does living in poverty have an impact on students being identified for special education?

RQ2. To what extent does living in poverty have an impact on students being identified under the eligibility classification of emotional disturbance?

RQ3. To what extent does living in poverty have an impact on students being identified under the eligibility classification of other health impairment?

RQ4. To what extent does living in poverty have an impact on students being identified under the eligibility classification of specific learning disability?

RQ5. To what extent does living in poverty impact the level of placement in special education?

RQ6. To what extent does living in poverty impact the level of placement in special education under the classification of emotional disturbance?

RQ7. To what extent does living in poverty impact the level of placement in special education under the classification of other health impairment?

RQ8. To what extent does living in poverty impact the level of placement in special education under the classification of specific learning disability?

Definition of Terms

The following section includes a list of key terms and definitions used throughout this study.

Disproportionality. As it relates to special education, disproportionality is the

> … over- or under-representation of a given population group, often defined by racial and ethnic backgrounds, but also defined by socioeconomic status, national origin, English proficiency, gender, and sexual orientation, in a specific

population category. A child's race and ethnicity significantly influence the child's probability of being misidentified, misclassified, and inappropriately placed in special education programs. (Elementary and Middle Schools Technical Assistance Center [EMSTAC], n.d., para. 1)

Emotional disturbance (ED). According to IDEA (2004),

Emotional disturbance 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.

Emotional disturbance includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance. (§300.8(c)(4))

Free and appropriate education (FAPE). According to DESE 2015), a free appropriate public education (FAPE) is defined to include regular and special education and related services which:

1. are provided at public expense, under public supervision and direction, and without charge to the parent;

2. meet the educational standards of the State Education Agency pertaining to the education of students with disabilities;

3. includes preschool, elementary school, and secondary school education; and,

4. are provided in conformity with the individualized education program (IEP). (p. 39)

Free or reduced lunch. The National School Lunch program is the largest federal program for schools and provides students who are from low-income households breakfast and lunch at a free and reduced rate (Snyder & Musu-Gillette, 2015). Data from this program are

> …used by education researchers as a proxy for school poverty since this count is generally available at the school level, while the poverty rate is typically not available. Because the free/reduced price lunch eligibility is derived from the federal poverty level, and therefore highly related to it, the free/reduced price lunch percentage is useful to researchers from an analytic perspective. (Snyder & Musu-Gillette, 2015, para. 5)

Judgmental classifications. Also known as high-incidence categories of special education**,** judgmental classifications

> …rely heavily on professional, clinical decisions. This situation complicates the identification of students needing special education and determining whether such diagnosis is a problem. Because these disabilities often lack clear biological etiologies, their definition and operationalization (including eligibility criteria and

> the validity and reliability of measures and assessment processes) can be fraught with ambiguity, uncertainty, and bias. (Artiles, Kozleski, Trent, Osher, & Ortiz, 2010, p. 281)

Least restrictive environment. According to IDEA (2004) in Title I, the least restrictive environment (LRE) is

> In general.--To the maximum extent appropriate, children with disabilities, including children in public or private institutions or other care facilities, are educated with children who are not disabled, and special classes, separate schooling, or other removal of children with disabilities from the regular educational environment occurs only when the nature or severity of the disability of a child is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily. (§612(a)(5))

Non-judgmental categories. Categories classified as nonjudgmental are defined by O'Connor & Fernandez (2006) as defining "disabilities whose diagnoses require limited inference on the part of professionals. These categories capture children who are deaf and blind and who suffer from orthopedic impairments, severe mental retardation, or other pronounced cognitive or physiological statuses" (p. 6).

Other health impairment (OHI). According to IDEA (2004),

> other health impairment means having limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment, that--
>
> (i) Is due to chronic or acute health problems such as asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a

heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome; and

(ii) Adversely affects a child's educational performance. (§300.8(c)(9))

Poverty. According to the United Nations Educational, Scientific, and Cultural Organization (2016), poverty is defined "… in relation to the economic status of other members of the society: people are poor if they fall below prevailing standards of living in a given societal context" (para. 3).

Socioeconomic status (SES). According to the National Center for Education Statistics (NCES, 2012),

> SES can be defined broadly as one's access to financial, social, cultural, and human capital resources. Traditionally a student's SES has included, as components, parental educational attainment, parental occupational status, and household or family income, with appropriate adjustment for household or family composition. An expanded SES measure could include measures of additional household, neighborhood, and school resources. (p. 14)

Special education placement. According to the Missouri State Plan for Special Education (2017b),

> Each public agency shall ensure that a continuum of alternative placements is available to meet the needs of children ages three (3) to twenty-one (21) with disabilities for special education and related services. The continuum shall include instruction in the regular classes (general education environments), special classes, special schools, home instruction, and instruction in hospitals and institutions. Each public agency must make provision for supplementary services

> (such as resource room or itinerant instruction) to be provided in conjunction with general class placement. (p. 51)

Specific learning disability. IDEA (2004) outlines a specific learning disability as,

> (i) a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.
>
> (ii) Disorders not included. Specific learning disability does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage. (§300.8(c)(10))

Organization of the Study

This study is comprised of five chapters. Chapter 1 includes the background, problem, purpose, significance of the study, delimitations, assumptions, research questions, and a list of terms with definitions used in the study. Chapter 2 contains a review of the literature. Chapter 3 is comprised of information about the research methods utilized for the study. Chapter 4 includes a presentation of the study results and hypotheses testing. Finally, in Chapter 5 the study summary, findings related to the literature, and conclusions are included.

Chapter 2

Review of the Literature

Disproportionality is the imbalanced subgroup representation of students in special education, which occurs not only in the special education identification of students, but also in the placement level, or amount of time students spend outside the general education classroom (IDEA, 2004; Sullivan, 2011). Although disproportionality by itself is not problematic, the existence of disproportionality may indicate inequalities within a system (Artiles & Bal, 2008; Shifrer, Muller, & Callahan, 2011; Sullivan & Bal, 2013). As stated by Sullivan (2011), "…ongoing disproportionality strongly indicates systemic problems of inequity, prejudice, and marginalization within the education system" (p. 318).

The research on disproportionality focuses mostly on race (Artiles et al., 2010; Donovan & Cross, 2002; Hosp & Reschly, 2003; Morgan et al., 2015; Oswald, Coutinho, Best, & Singh, 1999; Zhang, Katsiyannis, Ju, & Roberts, 2014; Sullivan & Artiles, 2011) and local educational agencies are required by IDEA to report the number of students who are identified in special education, broken down by racial or ethnic groups and special education classification (IDEA, 2004). Also reported are the placements of special education students to ensure that students from diverse backgrounds are not placed in more restrictive settings than their peers (IDEA, 2004). Disproportionality is a complex problem in which several factors are interwoven, such as school environment, community, cultural, social, and personal biases; all of which influence the identification of students for special education services (Artiles, Kozleski, Trent, Osher, & Ortiz, 2010; Sullivan & Bal, 2013). Much of the data utilized in disproportionality research are from

individual schools or districts (Sullivan & Bal, 2013), and have focused on enrollment, student demographics, teacher demographics, dropout rates, expulsion rates, academic information, and socioeconomic information (Hibel, Farkas, & Morgan, 2010; Hosp & Reschly, 2004; Shifrer et al., 2011; Skiba et al., 2005; Sullivan, 2011; Sullivan & Bal, 2013). Other researched variables include community factors such as housing value, median income, and parent education (Oswald et al., 1999; Sullivan & Bal, 2013). Although multiple factors have been researched, no causal relationships have been identified (Sullivan & Bal, 2013). Sullivan (2011) indicated that, "predictors of disproportionality vary by the group and disabilities studied" (p. 319).

Individual schools have been found to influence the risk of special education identification. Artiles (1998) encourages schools to, "comprehend the local understandings of difference that permeate such programs and the local values, beliefs, constraints, and resources that are embedded in the school's programs and student population" (p. 35). Knowledge of the local school system is important, as a student being referred to and found eligible for special education is relative to the performance of the student's same-aged peers within the school he or she attends (Hibel et al., 2010). For example, "lower performing students in high achieving schools were more likely to be identified for special education (Sullivan & Bal, 2013, p. 477).

Remediation of disproportionality can occur through structural reform, including changing the beliefs and abilities of the school staff and administration (Artiles et al., 2011). Teacher self-efficacy and comfortableness in working with students from a diverse culture or class also impacts students' chances of being referred for special education services (Skiba et al., 2008). Teachers work to meet the needs of all their

students, including students who are economically disadvantaged. When provided with inadequate resources teachers perceive the only available resource as being special education. In these cases, teachers over-refer to special education to gain access to resources for struggling students (Skiba et al., 2008).

Within this literature review is research associated with disproportionality, poverty, and special education identification processes and placement procedures. This chapter includes four sections and provides research on the history of special education legislation, the special education process, and level of placement. Also included are research on disproportionality as it relates to race, gender, and socioeconomic status, and the interaction of poverty on education and development.

History of Discrimination Legislation in Education

In 1991, Brown determined one universal trait within societies is to categorize citizens based on status, which usually manifests as biases within gender, race/ethnicity, religious affiliation, or economic status. These biases are easily seen throughout the history of the United States, especially within the educational system. This section outlines the evolution of educational legislation impacting race, gender, class, and disabilities.

The importance of education was recognized early in the United States with compulsory education laws dating back to 1642 in the Massachusetts Bay Colony (Katz, 1976). Compulsory education laws require children to be enrolled in and attend school (public, private, homeschool, or the equivalent) until they reach a maximum age specified by the state (Bush, 2010). By 1918, all states had enacted compulsory attendance laws

(Katz, 1976); however, many disadvantaged students were still being excluded (Yell et al., 1998).

Students with disabilities were not given the same rights to education as non-disabled students. Although not specifically stated within compulsory education laws, many court rulings excluded students with disabilities if they had the potential to be disruptive and not benefit from the instruction (Yell et al., 1998; Wright & Wright, 2007). In *Beattie v. Board of Education* (1919), the Supreme Court of Wisconsin upheld the board's decision to exclude a student from school after he had attended for five years. The student's disability caused him to drool, make contorted faces, and have a speech impairment, which nauseated teachers and students. The court determined that the student's attendance was not in the best interest of the school and recommended he attend a school for the deaf (Yell et al., 1998; Russo & Osborne, 2009). Compulsory laws were also challenged with the *Board of Education of Cleveland Heights v. State ex rel. Goldman* (1934), when the board in a local community created a policy to exclude children with an IQ under 50. The Cuyahoga County Court of Appeals allowed the State Department of Education to exclude some students from an education if they could not profit from an education (Yell et al., 1998; Russo & Osborne, 2009).

Twenty years later, the civil rights movement was well underway. One of the landmark cases in education history is *Brown v. Board of Education* (1954). This case led the way for education reform for students of a different race, but also served as a platform for the right to an education of students regardless of gender, class, and disabilities. The *Brown v. Board of Education* (1954) case determined all students have

equal rights under the Fourteenth Amendment and ruled segregation in schools to be unconstitutional.

In the years following the *Brown* case, students with disabilities continued to be segregated and denied an education. In 1958, the *Department of Public Welfare v. Haas* ruling did not require the state of Illinois to provide free education to students who were feeble-minded or mentally deficient. Racial discrimination continued to make progress within legislation with the initiation of Title VI of the Civil Rights Act of 1964, which prohibited discrimination based on race and national origin from federally funded programs, including education systems (Education and Title VI, 2015).

The Elementary and Secondary Education Act of 1965 (ESEA) was signed into law by President Lyndon B. Johnson as part of the "War on Poverty." Title I in this statute provided financial support to school districts with a large population of low-income families to target students with educational needs (Thomas & Brady, 2005). One year later Title VI (1966) was added to ESEA to financially assist states in the education of children with disabilities, which later became the Education of the Handicapped Act (EHA) in 1970. EHA was the first statute written solely for children with disabilities (U.S. Department of Education, 1995).

Although many changes in the education of students with disabilities occurred during this time, discrimination and exclusion continued to be at the forefront of legislation. *Pennsylvania Association for Retarded Citizens v. Commonwealth of Pennsylvania* (PARC, 1972) and *Mills v. Board of Education* (1972) led the way for future legislation for students with disabilities. In the *PARC* (1972) class action lawsuit, parents fought for equal rights under the 14th amendment for their intellectually disabled

children. These students were excluded from public schools and did not receive appropriate training or education. The *PARC* (1972) case resulted in due process for students with intellectual impairments and entitlement to a free and appropriate education. The *Mills v. Board of Education* (1972) case extended due process and free and appropriate education to all students with disabilities and determined students could not be excluded due to a lack of resources. "By the late 1960s and early 1970s . . . most states had passed laws requiring schools to educate students with disabilities" (Yell et al., 1998, p. 220).

In 1973, President Nixon signed Section 504 of the Rehabilitation Act into law. This act was in the United States Code as a labor law to support vocational rehabilitation for disabled World War I veterans. By signing this statute, the government recognized people with disabilities required instruction in vocational skills to contribute to society (Russo & Osborne, 2009). The following year an amendment to the ESEA (1974) provided funding for disadvantaged children and students with disabilities. "The purpose of the 1974 amendments was to require that each state receiving federal special education funding establish a goal of providing full educational opportunities for all children with disabilities" (Yell et al., 1998, p. 224). One year later, Congress adapted EHA and changed the name to the Education for All Handicapped Children Act of 1975 (Public Law 94-142). Public Law 94-142 guaranteed a free appropriate public education and protected rights through due process, federal financial assistance, and ongoing monitoring of efforts.

In 1990, Public Law 94-142 was amended and renamed IDEA, which has been amended several times, with the most recent in 2004. IDEA (2004) includes federal

policies to help prevent discrimination, which mandates every student be provided the opportunity for a free appropriate public education (FAPE) in the least restrictive environment (LRE). Students with disabilities who are found eligible under IDEA are provided an individualized education program (IEP) which, "details the range of services to be provided and where a student's education is to take place, with the law expressing a heavy preference for the mainstreaming of disabled children whenever possible" (Palmaffy, 2001, p. 7). Parents are also included in the development of the IEP and have the right to dispute decisions made by the district about services outlined in the IEP through a formal complaint process (Palmaffy, 2001).

Special Education Processes

IDEA (2004) provides provisions and funding to make free and appropriate education available for all students and to ensure students with disabilities are receiving educational benefits. The requirements under IDEA outline special education eligibility criteria and provide processes and timelines. They also serve as the blueprint for states and districts regarding their responsibilities to find and educate students with special needs and provide guidelines to ensure parents are participants in the educational decision-making process (IDEA, 2004). This section outlines the process of special education referral, eligibility determinations, and the placement of a student in special education.

Special education referral processes. States are required to have policies in place to identify, locate, and evaluate students who may have a disability as part of the Child Find requirement (IDEA, 2004). A special education referral can be made by the child's parent, school personnel, state agencies, and may be recommended by medical

professionals. In response to the Child Find requirement, school teams have put in place measures, such as prereferral teams, to intervene with students who are struggling and to identify potential students who may require special education services (Salend, Duhaney, & Montgomery, 2002). These teams help provide academic and behavioral interventions and can decrease disproportionate representations of students from diverse backgrounds (Hoover, 2010; Salend et al., 2002). Salend et al. (2002) discussed the benefits of prereferral teams in reducing the number of students referred for special education, they also discussed, the "inequitable funding of schools limits access to [these] high quality prereferral and ancillary services" (p. 290). Hibel et al. (2010) stated

> the special education resources of a low-performing school may be more severely strained by a larger number of referrals. The school's limited resources may result in referral only being initiated for those students displaying extremely low academic achievement or much more frequent problem behavior, again relative to those students attending the low-performing school. (p. 315)

In the past, the process to identify students included referral, an evaluation, and placement, and was often deemed the "wait to fail" model (Hoover, 2010; Jaeger, 2016; Shores & Bender, 2007), which delayed needed interventions (Raines, Dever, Kamphaus, Roach, 2012).

Teacher self-efficacy of handling difficult student behavior determines whether a teacher makes a referral for special education (Raines et al., 2012; Skiba et al., 2008). Raines et al. (2012) purported, "The current teacher referral process that initiates special education classification and placement is idiosyncratic and fraught with inaccuracy" (p. 285). Teacher perception of academic or behavioral disabilities influenced the likelihood

of a referral as did the teacher's self-efficacy in working with students who were from diverse backgrounds (Raines et al., 2012; Skiba et al., 2008). According to Skiba et al. (2008), students who live in poverty demonstrate, "academic or behavioral problems at a higher rate that make them more likely to be considered by teachers as an appropriate candidate for special education services" (p. 281). Referrals to special education also occur when teachers perceive special education as the only available resource for struggling students (Finch, 2012; Skiba et al., 2008). This perception may lead to the incorrect identification of students, as a referral is a strong predictor of special education eligibility (Hosp & Reschly, 2004).

In the literature, referral teams are often identified as Response to Intervention (RtI) or Multi-Tiered System of Supports (MTSS). These teams have the potential to provide immediate, targeted interventions to struggling students while having the potential to reduce the number of overall special education referrals (Decker, Englund, & Albritton, 2012; Hoover, 2010; Skiba et al., 2008). The variation in RtI models between schools makes generalizing results difficult, with some studies indicating a reduction in special education eligibility and some indicating no effect (Decker et al., 2012; Fuchs & Fuchs, 2017).

In the research, RtI often represents the academic system of supports, and School-Wide Positive Behavior Supports (SWPBIS) often represents the behavioral system of supports (Freeman, Miller, & Newcomer, 2015). MTSS encompasses both academic (RtI) and behavior (SWPBIS) components into one cohesive, coherent framework (Freeman et al., 2015). The integration of multiple systems helps school teams with a cohesive process and structure that unifies both academic and behavioral systems (Averill

& Rinaldi, 2011). The success of MTSS depends on the implementation of "a continuum of systematic, coordinated, evidence based practices targeted to being responsive to the varying intensity of needs students have related to their academic and social emotional/behavioral [*sic*] development" (Harn, Basaraba, Chard, & Fritz, 2015, p. 3), which helps address the needs of struggling students by intervening with research-based and high-impact interventions (Averill & Rinaldi, 2011).

The varying intensity of students' needs are addressed within this model. The first-tier, or Tier I, includes universal screening and focuses on a solid core curriculum for all students (Averill & Rinaldi, 2011; Fuchs & Fuchs, 2017; Pierce, Lambert, & Alamer, 2016). Universal screenings for all students and ongoing progress monitoring in both academics and behavior allows teams to identify students who are at-risk for school failure and who need support (Averill & Rinaldi, 2011; Harn et al., 2015; Pierce et al., 2016). Early identification of at-risk students allows schools to target interventions for students whose behaviors are interfering with the school environment and leads to positive school outcomes (Blair & Diamond, 2008; Pierce et al., 2016; Raines et al., 2012; Walker et al., 1996).

Intervention specifically focused on improving executive functioning, and self-regulation skills for at-risk students also improve students' success in schools (Blair & Diamond, 2008). Raines et al. (2008) advocated for universal screenings as they may, "serve as a method for ensuring that all children have equal opportunity to have their academic, social, and behavioral needs met without relying on teacher referral alone" (p. 290). Full implementation of a strong foundational Tier I structure takes five to seven years and should reach at least 80% of the student population (Finch, 2012). If the

student population in a given school does not reach the 80% benchmark, the instruction and curriculum need to be addressed before questioning an individual child's lack of progress (Finch, 2012).

When Tier I is fully executed, and individual students are not responding to the supports embedded in Tier I, Tier II interventions are implemented. Approximately 10-15% of the student population will require Tier II interventions (Basham, Isreal, Graden, Poth, & Winston, 2010; Harn et al., 2015). The purpose of this tier is to enhance academic and behavioral performance that will support success in Tier I (Fuchs & Fuchs, 2017). Students at this level receive targeted evidence-based instruction in small groups with other students with similar needs, in addition to their Tier I instruction (Fuchs & Fuchs, 2017). Data are collected during this instruction, and the student continues to be progress monitored using a universal screening tool. This data allows the problem-solving team to analyze data and determine if interventions are effective for each student or if alternate options should be initiated (Fuchs & Fuchs, 2017). If students do not respond appropriately to Tier II interventions, the student can receive Tier III interventions.

The intensity and frequency of the interventions at Tier III are increased, and students may be placed in smaller groups of students. Approximately 5 to 10% of students require Tier III interventions (Basham et al., 2010; Harn et al., 2015). Ongoing monitoring and data collection are also present at this level to determine if the student is responding to the provided interventions, and similarly to Tier II, school teams assess the effectiveness of targeted interventions (Fuchs & Fuchs, 2017). According to Basham et al. (2010), "when data indicate that students need the most intensive level of support to

accelerate progress, a referral may be initiated to determine eligibility to receive specific services such as special education or gifted education" (p. 250).

When students continue to show lack of progress academically or behaviorally, a request for consideration for a special education evaluation can be made. This referral can be made at any time, regardless of intervention status (Whitten, Esteves, & Woodrow, 2009). If there is reason enough to suspect a disability, a comprehensive evaluation is conducted, and the multi-disciplinary team (i.e., classroom teacher, special education teacher, administrator, parent, counselor, school psychological examiner, and other relevant school personnel) determine special education eligibility (DESE, 2017a).

Eligibility determinations in the areas of ED, OHI, and SLD. IDEA outlines disability areas where students who are found eligible can access special education and related services. These areas include mental retardation, a hearing impairment, a speech or language impairment, a visual impairment, an emotional disturbance, an orthopedic impairment, autism, a traumatic brain injury, an other health impairment, a specific learning disability, deaf-blindness, multiple disabilities, or young child with a developmental delay (§300.8, 2004). To be found eligible, students must also meet the criteria outlined by the state in which they attend school. The three classification areas focused on in this study are the areas of OHI, ED, and SLD. In Missouri, students who qualify for services under the classification of OHI must have a medical diagnosis by a qualified professional, and that diagnosis must adversely affect the progress the student makes within regular education. To qualify under the category of OHI, there must be documentation which

> indicates that the health impairment results in limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli…It also refers to a student's emotional stamina…includes the ability to manage/maintain [*sic*] attention and awareness including the ability to sustain focus. It also includes heightened alertness including being overly observant, watchful or "on guard." (DESE, 2017b, §1300)

The range of students under this classification contains a wide range of medical diagnoses, including mental health disorders within the constraints of the OHI definition. Attention Deficit Hyperactivity Disorder (ADHD) is a medical diagnosis that has an impact on a student's ability to maintain attention and may significantly limit a student's ability to progress behaviorally and academically within the general education setting without support (Schnoes, Reid, Wagner, & Marder, 2006). When dissecting the definitions outlined in IDEA (2004), not all students with a diagnosis of ADHD are eligible or require services (Skiba et al., 2008).

To meet the criteria in the state of Missouri for an Emotional Disturbance a student must demonstrate at least one of the following

- Inability to learn that cannot be explained by intellectual, sensory, or health factors.
- Inability to building or maintain satisfactory interpersonal relationships with peers and teachers.
- Inappropriate types of behavior or feelings under normal circumstances.
- General pervasive mood of unhappiness or depression.

- Tendency to develop physical symptoms or fears associated with personal or social problems. (DESE, 2017b, §800)

An emotional disturbance must be present over time, behaviors cannot be due to an isolated event, and does not include students who are socially maladjusted (DESE, 2017b). Similar to meeting eligibility in the area of other health impairment, not every student who exhibits behavioral difficulties in the school environment will meet eligibility criteria for an emotional disturbance (Skiba et al., 2008).

Students who are having difficulty meeting grade level standards, even when provided instruction and learning experiences, may meet the eligibility criteria for specific learning disability in one or more of the following areas: basic reading skills, reading comprehension, reading fluency skills, written expression, mathematics calculation, listening comprehension, and oral expression (DESE, 2017b, §1400.10). There are two avenues for identification in the area of SLD. The first method of identification is through the use of the discrepancy model. Students are identified as disabled under the classification of SLD if they meet the exclusionary criteria outlined in the definition and have a minimum of a 1.5 standard deviation between their cognitive ability and academic achievement and have an established pattern of strengths and weaknesses (DESE, 2017b, §1400.20). The second method of eligibility is using the response to intervention method, where the child is not making sufficient gains toward meeting grade-level standards even with the implementation of research-based interventions (DESE, 2017b, §1400.20). Both methods of identification require an observation of the student in their learning environment to perceive the student's academic and behavioral difficulties. When determining a student eligible under the

classification of SLD the team must ensure the learning difficulties are not primarily the result of vision, hearing or motor deficits; cognitive deficits; emotional disturbance; culture; or environmental or economic disadvantage (DESE, 2017b, §1400.60).

Once found eligible under one of the classifications outlined in IDEA (2004), the special education team and parent determine which services the child requires to make progress in the child's identified areas of deficit (DESE, 2017a). Discussions in these meetings include a conversation about the student's least restrictive environment. The team must determine how much time the student requires inside and outside of the regular education classroom to receive the maximum educational benefit (DESE, 2017a).

Special education placement in the least restrictive environment. Federal legislation that addressed the rights of students with disabilities began to include the concept of least restrictive environment as early as the 1960s, in connection with due process and equal protection (Taylor, 1988/2004). These legislative discussions started by focusing on providing students with disabilities access to free and appropriate education and transitioned to providing students with the maximum educational benefit possible (Sumbera, Pazey, & Lashley, 2014). During the creation of the IEP, the least restrictive environment (LRE) and level of special education placement are required discussions for students who receive special education services. According to the DESE (2017a), "The public agency must reach the placement decision from the assumption that a student with a disability should be educated with peers who do not have a disability" (p. 52). IDEA (2004) mandates that students participate in regular education to the maximum extent possible unless the student requires substantial modifications that would significantly alter the curriculum and have an adverse effect on the learning of other

students. According to McLeskey, Hoppey, Williamson, and Rentz (2004), "these mandates thus resulted in a strong presumption in favor of educating students with disabilities in the general education classroom settings, especially students with LD, most of whom are provided an education based on the general education curriculum" (p. 109).

According to Rea, McLaughlin, and Walther-Thomas (2002), proponents of the inclusion movement believe in a special education student's legal right to receive instruction with typical, age-appropriate peers. This belief stems from opportunities within the classroom for peer models, higher expectations for students with disabilities, and more opportunities to generalize skills (Rea, McLaughlin, Walther-Thomas, 2002). During IEP meetings, teams and parents discuss and determine the amount and percentage of time students will spend with their regular education peers, based on what is appropriate and necessary for the student (Taylor, 1988/2004). This percentage of regular education participation falls on the special education placement continuum. According to Taylor (1988/2004),

> A common way of representing the LRE continuum is a straight line running from the most to the least restrictive alternative or alternatively a hierarchical cascade of placement options…most restrictive placement options are also the most segregated and offer the most intensive services; least restrictive placements are the most integrated and independent and offer the least intensive services. (p. 220)

According to Ryndak et al. (2014), although meant to be a more inclusive practice, "the LRE principle in the law codifies and sanctions segregated educational placements through its regulatory support of a continuum of alternative placements that are then institutionalized by states and districts" (p. 66). Ryndak et al. (2014), further

stated, “The LRE principle infers that placement decisions are made based on objective data and sound professional judgment; however, … the disproportionate segregation of students of color marginalized by both their race and disability indicate otherwise” (p. 67).

More students than in the past are receiving their maximum educational benefit with their regular education peers, as numbers in the placement continuum are increasing at the lowest level of support and decreasing in the more restrictive settings (Singer, Butler, Palfrey, & Walker, 1986). Since 1990, the number of students serviced in the least restrictive placement of 80% or more of their time increased from 33% to 62% in 2014 (NCES, 2017). The percentage of students in the placement category of 40-79% of the time in regular education decreased from 36% to 19%. In addition, the percentage of students in the placement category of less than 40% declined from 25% to 14% (NCES, 2017). According to the NCES (2017),

> In fall 2014, the percentage of students served under IDEA who spent most of the school day in general classes was highest for students with speech or language impairments (87 percent). Approximately two-thirds of students with specific learning disabilities (69 percent), visual impairments (66 percent), other health impairments (65 percent), and developmental delays (64 percent) spent most of the school day in general classes. In contrast, 16 percent of students with intellectual disabilities and 13 percent of students with multiple disabilities spent most of the school day in general classes. (p. 112)

The majority of special education students spend most of their day with their peers in the general education classrooms (Schnoes et al., 2006). The LRE principle is a conceptual framework to depict the level of support students require to make gains (Taylor, 1988/2004). The discussions of LRE and placement considerations will continue to occur, as certain placement options require intensive and specific instructional practices for students to meet their individual goals (Zigmond, 2003). As Zigmond (2003) argued, "the question of where students with disabilities should be educated is misguided. That question is antithetical to the kind of individualized planning that is the hallmark of special education for students with disabilities" (p. 194). Placement decisions should be made in the best interest of each individual student's needs in the least restrictive environment.

The origins of LRE began in the constitutional privileges of due process and equal protection (Taylor,1988/2004). Counterintuitive to the purpose of the least restrictive environment, the principle of LRE may lead to inequalities in diverse populations of students, including race and class (Carson, 2015). The decisions on the level of placement required to address student needs are determined by a team of professionals who works with the student. Placement decisions are subjective and may be entrenched with implicit biases or teachers' perceptions of their ability to provide appropriate educational experiences within the classroom (Taylor, 1988/2004). Limited resources in lower achieving schools may also impact the level of support offered to poor, minority youth; and can lead to more restrictive placements overall (Carson, 2015). Minorities have been more likely to receive special education services in more restrictive environments, such as separate classrooms or separate schools than their White peers

(Fierros & Conroy, 2002; Raines et al., 2012). More specifically, minority students are more likely to be identified under the classification of emotional disturbance, which leads to more restrictive placements (Carson, 2015; Raines et al., 2012). Singer et al. (1986) found consistent relationships between socioeconomic status and level of special education placement; hypothesizing more affluent and educated parents fought for more inclusive settings.

Implications of special education placement. Hibel et al. (2010) discussed that early identification for special education services might result in a lack of opportunities for students, resulting in the assignment to lower ability groupings with lower levels of academic achievement. Students in special education are more susceptible to negative outcomes. Students often have reduced time with their non-disabled peers, which can lead to stigmatizations (Raines et al., 2012; Sullivan & Bal, 2013; Shinn, 2007). Students in less restrictive placements were more likely to be accepted by peers and had fewer teacher reported behaviors than students in more restrictive placements (Wiener & Tardif, 2004). Also, students in special education are exposed to low expectations, and a less rigorous curriculum focused on rote tasks (Raines et al., 2012; Rea et al., 2002; Sullivan & Bal, 2013). Students who are in more restrictive placements may suffer from social isolation, lower self-esteem, and negative student attitudes (Raines et al., 2012; Rea et al., 2002; Wiener & Tardif, 2004). According to Gottlieb, et al. (1994),

> [a] consequence of the well-intentioned classification practices is that they may actually result in harm to low-achieving children who, although not learning disabled, are placed in special classes from which few ever emerge, which do not

> produce meaningful gains in children's reading performance, and from which dropouts during adolescence are overly abundant. (p. 459)

Drop-out rates for students in special education are over 30%, approximately 30 to 40% are arrested, and at least half of special education students are unemployed (Hibel et al., 2010). Only 20% of students in the category of emotional disturbance pursue postsecondary education (Raines et al., 2012).

Some research shows more positive trends for students when they are included within their regular education classrooms and increased school and post-school outcomes (Kurth et al., 2014; Rea et al., 2002; Zigmond, 2003). While the results of some studies have shown no difference in school achievement between inclusive and non-inclusive practices (Fore, Hagan-Burke, Boon, & Smith, 2008; Manset & Semmel, 1997) and even the lack of achievement from inclusive practices (Zigmond, 2003). Studies are inconclusive on the impact that inclusive and non-inclusive settings have on the progress of special education students (Fore et al.,1997; Wiener & Tardif, 2004). Zigmond (2003) concluded,

> No intervention in the research literature eliminated the impact of having a disability. That is, regardless of the place of intervention, students with disabilities did not achieve even at the level of low-achieving nondisabled peers, and no model was effective for *all* students with disabilities. (p. 195)

Special education team discussions on the least-restrictive environment permit determinations specific to each student and his or her individual needs (Fore et al., 2008; Zigmond, 2003).

Disproportionality

IDEA (2004) requires states to have policies in place to prevent the disproportionate identification of students from various racial or ethnic backgrounds as a measure to prevent discrimination. Due to IDEA (2004) only regulating the disproportionality of different racial and ethnic subgroups, the majority of research centers around the correlation between race and disproportionality. There is additional research that addresses the relationship between the over-representation of students in special education from lower socioeconomic status (Gottlieb, Alter, Gottlieb, & Wishner, 1994; O'Connor & Fernandez, 2006; Oswald et al, 1999; Shifrer et al., 2011; Skiba et al., 2005; Sullivan & Bal, 2013; Zhang et al., 2014), as well as the relationship between gender and special education eligibility (Coutinho & Oswald, 2005; Hibel et al., 2010; Shifrer et al., 2011; Sullivan & Bal, 2013; Wehmeyer & Schwartz, 2001). This section outlines current research on disproportionality.

Racial and ethnic disproportionality. When civil rights legislation was creating equal access to schools for minority students, Dunn (1968) recognized the civil rights inequities facing the field of special education by the overrepresentation of students from ethnic and language minority backgrounds. Many studies cite Dunn (1968) as initially identifying the problem of under- or over-identification, also known as disproportionality, in the field of special education (Bollmer, Bethel, Garrison-Mogren, & Brauen, 2007; Skiba et al., 2005; Skiba et al., 2008; Sullivan, 2011; Waitoller, Artiles, & Cheney, 2010). Dunn (1968) found the disproportionate representation of minority students from low-income backgrounds within self-contained classes for mild mental retardation to be approximately 60% to 80%. The research on the disproportionality of African-American

students in special education and within a self-contained setting continue to parallel segregation, and "is problematic in part because the assumptions about difference that underlie this debate reify long-standing oppressive perceptions and practices that affect these students" (Artiles & Bal, 2008, p. 5). The reauthorization of IDEA (2004) addresses these discriminatory practices by requiring states to report out and identify significant disparities in the over- or under-representation of minorities (IDEA, 2004). If significant disproportionality exists between racial subgroups, as determined by each states' criteria (Skiba et al., 2008), the district is required to fund systemic changes and interventions by allotting 15% of IDEA funds toward the corrective actions (IDEA, 2004).

Some areas of special education eligibility are non-judgmental and are generally not contested, as they are easy to diagnose and often carry a medical diagnosis such as blindness or deafness (Ryan, 2012). The areas in which disproportionality occurs most are in the judgmental or high-incidence categories of special education (i.e., SLD and ED), which are more subjective and require the use of professional judgment when determining eligibility (Artiles, Kozleski, Trent, Osher, Ortiz, 2010; Donovan & Cross, 2002; O'Connor & Fernandez, 2006; Sullivan, 2011). OHI is another category of concern in the area of disproportionality (Linton, 2015), especially since the category became accessible to students with ADHD, accounting for 68% of new students identified under this classification (Schnoes, Reid, Wagner, & Marder., 2006). Students with ADHD are most likely to be identified under OHI (65.8%), SLD (20.2%), or ED (57.9%) (Schnoes, et al., 2006), which in of itself creates overlap and subjective team-decisions between eligibility categories (Mattison, 2015).

Special education eligibility classifications are classified either non-judgmental categories or judgmental categories within the literature (Artiles, Kozleski, Trent, Osher, Ortiz, 2010; Donovan & Cross, 2002; O'Connor & Fernandez, 2006; Sullivan, 2011). Students with non-judgmental classifications typically demonstrate a physical need such as blindness or deafness (Ryan, 2012). Special education disproportionality occurs the most within high-incidence categories or judgmental categories which include intellectual disability, specific learning disability, and emotional disturbance. These categories rely on professional judgment for special education eligibility (Artiles, Kozleski, Trent, Osher, Ortiz, 2010; Donovan & Cross, 2002; O'Connor & Fernandez, 2006; Sullivan, 2011) and have a higher identification rate among African-American students (Bollmer et al., 2007). High-incidence categories are difficult to assess, and special education eligibility is subjective to the interpretation of the assessments. "Disproportionately raises concerns about the validity and reliability of the label learning disabled and/or [*sic*] suggest that placement in special education may function as a tool of discrimination" (Shifrer et al., 2011, p. 246). According to Hibel et al. (2010), "…teacher judgments of acceptable student achievement or behavior are necessarily based on the performance of the teacher's particular referent group, which naturally consists of the other students in the school…[which] provide the normative standard for special education" (p. 315).

The criteria for high-incidence areas of eligibility differ among states making eligibility determinations contradictory across the country (Sullivan, 2011). Disproportionality research is inconsistent, as "predictors of disproportionality vary by the group and the disabilities studied" (Sullivan, 2011, p. 319). African-American students continue to be overrepresented under the classifications of intellectual disability

and emotional disturbance (Hosp & Reschly, 2004; Oswald et al., 1999; Office of Special Education Programs [OSEP], 2016); in addition, African-American students who attended wealthier schools had a greater likelihood of being identified with an emotional disturbance than African-American students in a poorer school (Oswald et al., 1999). Students who are American Indian or Alaska Natives and Hispanic students were more likely to be overrepresented under the classification of specific learning disabilities (OSEP, 2016); while students who are Asian or Pacific Islander are underrepresented among all categories (Hosp & Reschly, 2004; OSEP, 2016; Sullivan, 2011). According to Sullivan (2011), English Language Learners (ELL) are overrepresented in special education in each of the high-incidence categories, except the emotional disturbance (ED) category in which they were underrepresented. During the 2014 school year, the percentage of students receiving services under IDEA were unequalled with the highest racial/ethnic groups being "American Indian/Alaska Native [*sic*] (17 percent), followed by Black (15 percent), White and of Two or more races (both at 13 percent), Hispanic and Pacific Islander (both at 12 percent), and Asian (7 percent)" (NCES, 2017, p. 111).

Gender Disproportionality. Research, although limited, has shown that males are more likely to be identified for special education services than females (Hibel, Farkas, & Moran, 2010), especially in the areas of specific learning disabilities and emotional disturbance (Coutinho & Oswald, 2005; Shifrer et al., 2011; Sullivan & Bal, 2013; Wehmeyer & Schwartz, 2001). Boys are more likely than girls to be identified under the classification of mental retardation, twice as likely under the classification of specific learning disability, and over three times as likely to be found eligible in the area of emotional disturbance (Coutinho & Oswald, 2005). In 1992, two-thirds of secondary

students in special education were males, with the most disproportionate areas being in the categories of specific learning disabilities and emotional disturbance (Shifrer et al., 2011; Wehmeyer & Schwartz, 2001). Recent data collected from NCES (2016) during the 2014-2015 school year showed a difference in gender based on the area of qualification, with students receiving services under the classification of specific learning disabilities being higher among females (44%) than males (36%). Data from NCES (2016) also showed more male students (11%) receiving services under the classification of autism than female students (4%).

Gender disproportionality in special education is problematic for both males and females. The under-representation of female students in special education raises concerns about whether all female students who have disabilities have been identified and are provided an equitable education (Coutinho & Oswald, 2005). Problem behaviors in girls are often internalized and are not as overt as their male peers, which may account for fewer referrals to special education services (Wehmeyer & Schwartz, 2001). Once identified for services, females often have more restrictive placements than their male counterparts, even when their behavior was not as big of a concern (Wehmeyer & Schwartz, 2001).

Research lists hypothesized behavioral, biological factors, and bias in the identification process as potential causes for male overrepresentation in special education (U. S. Department of Education, 1998). Males are referred more often to special education than females for behavioral concerns (Piechura-Couture, Heins, & Tichenor, 2011). According to Wehmeyer and Schwartz (2001), “boys exhibit behavior patterns that are more likely to result in their referral to special education” (p. 28). Males are also

more at risk for chromosomal abnormalities (Wehmeyer & Schwartz, 2001) and have a higher prevalence of diagnosed psychiatric conditions (i.e., autism, stuttering, and attention-deficit hyperactivity disorder, Tourette's syndrome, and conduct disorders) (Coutinho & Oswald, 2005). Male overrepresentation in special education "may also be due to influences of gender bias on the referral, classification, and placement process where bias refers to an inclination toward taking a position or reaching conclusions about a person based on their sex or gender" (Wehmeyer & Schwartz, 2001, p. 29).

Poverty and disproportionality. According to the 2016 Income and Poverty in the United States report, the official poverty rate was 12.7%, with the poverty rate of 18% for children under the age of 18 (Semega, Fontenot, & Kollar, 2017). Concerning race, 11% of Whites, 22% of Blacks, 10.1% of Asians, and 19.4% of Hispanics lived in poverty (Semega et al., 2017). With a higher percentage of minorities living in poverty, some disproportionality literature discusses race as a proxy for poverty (Hodgkinson, 1995; MacMillan & Reschly, 1998). Shifrer et al. (2011) found through a multivariate analysis that, "disproportionate identification is actually being driven by differences in SES, a correlate of race in the United States" (p. 7). The overlap between race and poverty is one of the principal justifications for special education disproportionality, along with referral processes and teacher bias (Skiba et al., 2005).

Although the interaction between the race and poverty occurs, other researchers have found that race and poverty are not exclusively interchangeable (Hosp & Reschly, 2004), and the complexity of these justifications makes using individual poverty rates as the reason for racial disproportionality insufficient (Skiba et al., 2005). Poverty, as it relates to explaining racial disproportionality, was a weak and inconsistent predictor

(Skiba et al., 2005). "Perhaps the most accurate summary of these data might be that in those cases where poverty makes any contribution to explaining disproportionality, its effect is primarily to magnify already existing racial disparities" (Skiba et al., 2005, p. 141). Other researchers have found that poverty is a predictor in the high-incidence categories (Sullivan and Bal, 2013).

Previous studies have shown socio-demographic factors to be related to special education identification, but differed and were contingent upon the groups studied, even leading to contradictory results between studies (Sullivan & Artiles, 2011). Skiba et al. (2005) found that racial inequities are embedded in all poverty levels. Within the category of SLD, special education rates of service decreased as poverty increased; however, an increase was seen in the category of Speech and Language as poverty increased (Skiba et al., 2005). Oswald et al. (1999) conducted research that showed an increase in the classification of Mild Mental Retardation (MMR) for African-American students as poverty increased. Also, Oswald et al. (1999) found a decrease in the classification of ED for African-American students as poverty increased, with an increase in the classification as poverty decreased. According to Zhang et al. (2014), fewer students were identified for special educations in states with higher poverty rates which may be attributed, in part, to the amount of funding for resources among states with higher poverty. Inequities were found among races with the same socioeconomic background, with Asian students 54% less likely than White students to be identified for special education and African-American students were 28% less likely than a White student to be identified (Shifrer et al., 2011), while in other studies poor-White students and poor-Black students had similar risks of identification (Sullivan & Bal, 2013).

Students who qualified for free and reduced lunch prices, a school measure of poverty level, were more likely in the high-incidence areas to be identified for special education and were significantly more likely to qualify under the classifications of specific learning disability, emotional disturbance, and cognitive impairments (Coutinho, Oswald, & Best, 2002; Sullivan & Bal, 2013).

"In articulating the relationship between poverty and disproportionality, researchers conceive of poverty as constituting a high-risk environment that shifts to the left the normal curve of achievement," (O'Connor and Fernandez, 2006, p. 7). Socioeconomic disadvantage has been linked more to academic deficits than race, which leads to more referrals to special education for minority students (MacMillan & Reschly, 1998), although both have been shown to relate to academic achievement (Gottlieb et al., 1994). Shifrer et al. (2011) suggested low socioeconomic status as the reason for the overrepresentation of African-American and Hispanic students in the classification of SLD. Some researchers state the causes of disproportionality for poor minorities to be school factors, normative school culture, or school referral processes (Gottlieb et al., 1994; O'Connor & Fernandez, 2006; Oswald et al., 1999). O'Connor and Fernandez (2006) discussed schools as the reason minorities are disproportionally placed in special education, not poverty. Gottlieb et al. (1994) also take the viewpoint that systems within a school lead to disproportionate placement, due to the lack of intensive resources within poor schools to support struggling students. Environmental variables, including housing, income, poverty, at risk, dropout, and ELL were significantly related to being placed in special education under the classification of ED or Intellectual Disability, without accounting for race (Oswald et al., 1999). When considering special education eligibility,

Oswald et al. (1999) found that while poverty increased the risk of eligibility in the areas of ED and Intellectual Disability, controlling for both race and environmental variables together greater increased the likelihood of identification. Henderson (2009) found that both socioeconomic status and race contributed to disproportionate numbers in special education. Students who perform atypically from the norm are often referred for special education services (O'Connor & Fernandez, 2006; Ryan 2012).

Some researchers question the identification of minority disproportionality in special education when disproportionality is not monitored in other programs such as Title I or other programs serving underserved populations (Artiles et al., 2011; MacMillan & Reschly, 1998; Shifrer et al., 2011). Efforts of these programs focus on equity in education (Havard, 2009) and closing the achievement gap (Moffitt, 2016) by providing direct educational resources to students living in poverty (Reed, 2016). According to Jennings (2000), the purpose of Title I is to support students who are economically and educationally disadvantaged. MacMillan and Reschly (1998) identified overrepresentation of African-Americans in programs such as Head Start, Chapter I, and Follow Through, similar to the overrepresentation found in special education. MacMillan and Reschly (1998) hypothesized perceptions and stigmatization surrounding special education led to litigation, which ultimately led to the disproportionality reporting requirement. According to Skiba et al. (2008), "Poverty-associated risk factors have been shown to predict academic and behavioral gaps that might be expected to lead to special education referral, suggesting that economic disadvantage makes some contribution to minority disproportionality in special education" (p. 273). Shifrer et al. (2011) discussed the importance of identifying and

addressing factors that contribute to disproportionality, such as poverty. The academic and behavioral gaps exhibited by students, due to poverty, make them likely candidates for special education referral and placement for services (Skiba et al., 2008), even with federal programs providing resources and services to students who are disadvantaged.

Impact of Poverty on Development and Education

Children who live in poverty enter school about two years behind peers from higher income homes (Auguste et al., 2009). Poor students perform worse on school achievement tests, are more likely to repeat a grade, have more discipline problems that result in expulsion or suspension, and have a higher drop-out rate than non-poor children (Brady-Smith, Fauth, & Brooks-Gunn, 1997). In return, students from low-income households are more likely to be referred and be found eligible for special education (Gottlieb et al., 1994; Flynn, 2012; Sullivan & Bal, 2013). According to Skiba et al. (2005), the "factors associated with living in poverty leave children less developmentally ready for schooling and ultimately yield negative academic and behavioral outcomes" (p. 131). These negative academic and behavioral outcomes increase the likelihood of referral and eligibility for special education services (Skiba et al., 2005).

Pagani et al. (1999) define poverty as, "not having enough money to meet the basic needs of food, shelter, and clothing" (p. 1210). Although poverty has been found to be more significantly related to the achievement gap than race (Finch, 2012), poverty has never been addressed or monitored as the reason for special education disproportionality (Alvarez, 2011).

Ryan (2012) discussed how brain injuries and lead poisoning are bases for special education, while poverty is not, but the consequences of poverty lead to learning

problems. A larger achievement gap exists between children living in poverty and those from affluent homes than the racial gap between White children and African-American children (Walsh & Theodorakakis, 2017). According to the Center for Disease Control and Prevention's National Health Survey (CDC), children in poor (10.3%) or near-poor (9.4%) families were more likely than children in non-poor families (7.5%) to have received early intervention or special education services (2016, Table C-12a). In 2016, the poverty rate was 12.7%, with 43.1 million Americans living in poverty (Semega et al., 2017). The poverty rate for children under age 18 in 2016 was at 18.0% (Semega et al., 2017).

Fujiura and Yamaki (2000) documented the assumption that a correlation exists between the increase in the number of students living in poverty and those in special education. Children who live in poverty are more susceptible to conditions such as chronic illness, low birthweight, and trauma that may result in a future disability classification (Eamon, 2001; Fujiura & Yamaki, 2000). Skiba et al. (2005) found poverty to be a weak predictor of disproportionality, with increased poverty predicting disproportionality in the area of mild mental retardation, but not in the area of emotional disturbance. According to Artiles, Harry, Reschly, & Chinn (2002), "we know little about the potential mediating effects of the duration, timing, context, and various definitions of poverty on special education placement" (p. 8).

Poverty can be defined as a family's total income being less than the threshold set by the U.S. Census Bureau. The thresholds are based on the amount of money needed to purchase necessities (i.e., food, housing, clothing, etc.) and are updated yearly for inflation (Park, Turnbull, & Turnbull III, 2002; Walsh & Theodorakakis, 2017). The

poverty threshold for a family of four in 2018 was $25,100 (U.S. Department of Health and Human Services [ASPE], 2018). Federal programs, such as the National School Lunch Program, use the poverty thresholds to determine eligibility for providing students with free and reduced-price lunches (ASPE, 2018). Data from the National School Lunch program is often used in the literature as a proxy for poverty due to its availability (Snyder & Musu-Gillette, 2015).

Family. The way adult caregivers react to poverty status and lack of resources impacts the effect poverty has on children (Garrett, Ng'andu, & Ferron, 1994; Longo, Lombardi, & Dearing, 2017). How parents react to stressful situations (i.e., job loss, financial strain, social isolation, etc.) is crucial to the future outcomes for children (Garrett et al., 1994). Parents who respond to stress by being unavailable or punitive in interactions may have children who develop emotional problems or somatic symptoms (Garrett et al., 1994). Academic and emotional deficits can be attributed to the effects of parental response to financial disadvantage and inconsistent parenting, which places students at risk for compromised emotional development (Eamon, 2001; McLoyd, 1990; Longo et al., 2017; Pagani et al., 1999). According to Park et al. (2002), "Poverty limits parents' capacity for positive interaction…[as] parents showed less sensitivity and satisfaction with parenting and more frequent use of aversive, coercive discipline methods" (p. 158). Poverty is also associated with maternal stress and poor nutrition, leading to a high incidence of early birth and low birth weight (Garrett et al., 1994). Poverty may also exacerbate other difficulties such as marital conflict, depression, and social withdrawal (Brooks-Gunn & Duncan, 1997; Garrett et al., 1994; Duncan, Magnuson, & Votruba-Drzal, 2016). Poor mental health, irritability, and depressive

symptoms in parents lead to inadequate parent-child interactions, fewer positive learning opportunities for children in the home, social-emotional deficits, and decreased academic achievement (Brooks-Gunn & Duncan, 1997; Morrissey & Vinopal, 2018; Sharkins, Leger, & Earnest, 2016).

Young mothers and mothers with intellectual disabilities are less likely to provide appropriate stimulation and consistent parenting methods to children (Garrett et al., 1994; Logo et al., 2017). Single and teen mothers often have difficulty finding employment, require welfare support, and live in poverty (Bennett, 2008; Brooks-Gunn & Duncan, 1997; Garrett et al., 1994). Higher educational attainment levels of parents are associated with stimulating home environments which are attributed to scholastic success (Brooks-Gunn & Duncan, 1997; Garrett et al., 1994).

Children are also impacted by where they live. According to Schmitz, Wagner, & Menke (1995), students who have a more permanent residence were more likely to have a stronger sense of self and stronger social competence than students who moved frequently or were classified as homeless. Also, students who changed homes frequently or were frequently homeless demonstrated more at-risk behaviors (Schmitz, Wagner, & Menke, 1995). The economics within neighborhoods where children grow up have been shown to impact students' academic success. Moreover, students from poor neighborhoods enter school almost a year behind students living in more affluent neighborhoods (Morrissey & Vinopal, 2018). Student's social and emotional skills are impacted by where they live. Students residing in poorer neighborhoods are more likely to observe violence and crime (Duncan et al., 2016). The academic and emotional deficits transfer into adulthood, with children who live in poor neighborhoods having

decreased wages (Morrissey & Vinopal, 2018), a higher likelihood of being arrested, and a higher likelihood of having a child before the age of 21 (Duncan et al., 2016).

Health factors. Children who are poor have a greater likelihood of adverse health and developmental difficulties than non-poor children (Brooks-Gunn & Duncan, 1997). According to Park et al. (2002), "Poverty affects all family members' health because of the family's inability to afford: (a) health services from doctors, dentists, or psychologist, or (b) health supplies, such as prescription drugs or first aid materials" (p. 155). According to the CDC (2016), approximately 46% of children in poor families were in excellent health, when compared to about 65% of non-poor children.

Financial difficulties decrease access to prenatal care, leading to a higher risk for infant mortality or low birth weight (McLoyd,1998; Pagani et al., 1999) and the adequacy of postnatal care after birth (Artiles, Harry, Reschly, & Chinn, 2002). Children in impoverished environments have a greater likelihood of being exposed to lead (Brooks-Gunn & Duncan, 1997). Low birth weight and lead poisoning are related to increased rates of learning problems (McLoyd, 1998; Brooks-Gunn & Duncan, 1997). The health disadvantage (low birth weight, higher lead levels, anemia, and chronic ear infections) that exists between poor and non-poor students may account for a 13-20% difference in cognitive scores (Brooks-Gunn & Duncan, 1997).

Low birth weight increases the risk for infant mortality, as well as the likelihood of future health, cognitive, and emotional problems (Artiles et al., 2002). Low birth weight is prevalent among individuals living in poverty, as well as unmarried women, mothers with low education levels, and black mothers (Brooks-Gunn & Duncan, 1997). Lead exposure, including exposure before birth, is linked to decreased intelligence,

stunted growth, hearing loss, and kidney failure (Artiles et al., 2002; Brooks-Gunn & Duncan, 1997). Children from low-income environments also have difficulty accessing a nutritional diet which negatively impacts their health and the health of their family (Artiles et al., 2002; Park et al., 2002). Children who are not well-fed are more likely to suffer from such health problems such as fatigue, headaches, irritability, difficulty concentrating, and frequent colds (Park et al., 2002).

School factors. According to Brooks-Gunn & Duncan (1997), "Children living below the poverty threshold are 1.3 times as likely as non-poor children to experience learning disabilities and developmental delays" (p. 60). According to the National Health Interview Survey (2016), 13.5% of parents in poor households had been told their child had a learning disability, and 13.3% were told their child had ADHD, when compared to 5.5% of non-poor families being informed of a learning disability and 8.4% were informed that their child had ADHD. Family income status is most impactful during the early childhood years (birth to age 5) regarding how many years of school a child completes (Brooks-Gunn & Duncan, 1997). Academic failure has been significantly predicted by poverty status (McLoyd, 1998; Pagani et al., 1999), and is both directly and indirectly related to being at risk for school failure and low academic achievement, increasing the risk for special education placement (Artiles, Harry, Reschly, & Chinn, 2002; Sharkins et al., 2016). Evidence from many disciplines, including neuroscience, epidemiology, developmental psychology, and economics, suggests an impact of poverty on future academic and emotional growth (Longo et al., 2017). Longo et al. (2017) purported that childhood poverty was a "predictor of later underachievement and social-emotional problems, perhaps as a result of the harmful effects of deprivation and stress

on early brain growth" (p. 2273). Pagani et al. (1999) found that family poverty was a predictor of academic school failure at age 16. Low-income families do not always have access to stimulating resources, such as quality childcare, books, stimulating toys, school supplies or enriching extracurricular activities (Park et al., 2002). Access to stimulating experiences is associated with early cognitive development (Park et al., 2002).

Schools have a responsibility to educate all children regardless of background (Artiles et al., 2002). Peterson et al. (2011) noted a need to focus on school services starting at the early childhood level through high school, as a higher proportion of poor students receive services. In early childhood, students who live in poverty are more likely to receive special education services than non-poor students, with around a quarter of families receiving welfare and around half having financial difficulties (Peterson et al., 2011; Scarborough et al., 2004).

Brooks-Gunn & Duncan (1997) found inconsistent correlations between poverty and emotional and behavioral outcomes. Students who grow up poor are at risk for poor self-esteem, lack of achievement, and emotional problems (Eamon, 2001; Pagani et al., 1999). They demonstrate more frequent emotional and behavioral problems than their non-poor peers (Brooks-Gunn & Duncan, 1997), with boys being more impacted than girls (Eamon, 2001).

According to a literature review by Brooks-Gunn and Duncan (1997), living in persistent poverty was positively related to internalizing behaviors, such as dependence, anxiety, and unhappiness. Poor children are at a higher risk of developing emotional problems, both internalizing and externalizing, and have more difficulty maintaining peer relationships and demonstrate disruptive school behavior (Duncan et al., 2016; Eamon,

2001). Children in current poverty, not persistent poverty, demonstrate more externalizing behaviors (i.e., hyperactivity and peer conflict). Children living in short-term poverty demonstrated more problematic behavior than those living in persistent poverty (Brooks-Gunn & Duncan, 1997), possibly because short-term poverty more significantly impacts families' accustomed ways of life (Eamon, 2001).

Pagani et al. (1999) discussed how "income variables are the primary predictors of cognitive and academic problems from early childhood to age 12" (p. 1211). Young students living in poverty-stricken neighborhoods have higher risk factors than students living in more affluent neighborhoods to demonstrate externalizing behaviors, such as having temper tantrums and destroying objects (Duncan, Brooks-Gunn, & Klebanov, 1994). Pagani et al. (1999) found that "family poverty predicted delinquency as well, but only more serious manifestations of adolescent antisocial behavior" (p. 1217), with risk factors being the same or greater for intermittent poverty, which is often due to major life events (Semega et al., 2017), versus persistent poverty.

Students with better social-emotional skills have higher language and cognitive abilities (Ryan, 2012; Sharkins et al., 2016). Students who have a history of early stressors, such as stress and deprivation, are more susceptible to risk-taking in adolescence, including deficits in executive functioning and difficulty with delayed gratification (Delker, Bernstein, & Laurent, 2017; Ryan, 2012). Poor children frequently experience rejection from peers and have more peer conflicts than non-poor peers (Eamon, 2001). Students who grow up in poverty may have increased difficulty with executive functioning skills, which impact their ability to follow directions, stay on task, and persevere on difficult assignments (Ryan, 2012; Walsh & Theodorakakis, 2017).

According to Delker et al. (2017), “If raised in poverty or near poverty, adolescents with disorganized attachment histories reported significantly more risk-taking behaviors than adolescents with secure attachment histories” (p. 10).

Students who live in financially disadvantaged homes attend school for an average of 2.1 fewer years than students from financially advantage homes (Park et al., 2002). They are more likely to repeat grades, be suspended or expelled from school, and drop out (Ellis et al., 2017). According to Walsh & Theodorakakis (2017), “children who grow up in poverty and do not complete high school are more likely to become teenage parents, to be unemployed, or to be incarcerated, which eventually leads to lost productivity and increased social expenditure” (p. 2). With all the societal interventions about five hundred billion dollars are expended toward poverty each year (Walsh & Theodorakakis, 2017).

Summary

Students who live in poverty are at a disadvantage academically and behaviorally and enter school behind their more affluent peers. Discussed in this chapter were the many life factors associated with poverty such as level of parental involvement, family stressors, health, longevity in poverty, parent’s mental health status, and fewer opportunities for stimulating activities impact a child’s readiness to start school; as well as their language, social skills, executive functioning skills, and overall cognitive abilities. Students who have academic and behavioral skill deficits are often referred for special education evaluation and are found eligible for special education services, with poverty factors potentially increasing a student’s potential for receiving special education services. Although IDEA regulates the disproportionality of minority students, poverty

has not been monitored through the mandatory reporting practices.

The purpose of chapter two was to provide a brief history of special education, disproportionality in special education as it relates to race, gender, and socioeconomic status, and the special education process. Also included was the impact poverty has on the developing brain. Chapter three includes the research design, selection of participants, measurement, data collection procedures, data analysis and hypothesis testing, and limitations of the current study.

Chapter 3

Methods

This study was conducted to determine the extent to which students who live in poverty are identified for special education and the extent to which these students are being educated with their same-age, non-disabled peers. This chapter includes research design, selection of participants, and measurement of data. Also, included within this chapter were the data collection procedures, data analysis and hypotheses testing, and limitations.

Research Design

The research design of this study was quantitative. Specifically, a correlational research method was utilized to assess the relationships among several quantitative variables. Correlational research method is often used in a variety of studies not only to determine relationships but also to assess consistency and predictions (Lunenburg & Irby, 2008). The independent variable in all the research questions was poverty, as assessed by free and reduced lunch eligibility. The dependent variables were special education identification (emotional disturbance, other health impairment, and specific learning disability) and the intensity of services as identified by the level of placement. All variables used in this study were nominal.

Selection of Participants

Archival student-level data were used in this quantitative study. Purposive sampling was used to identify every student enrolled in District B, kindergarten through twelfth grade, who received special education services for a school-age classification under IDEA (2004) during the 2016-17 school year (n = 685). This sample aligned with

the purpose of this study to determine the extent to which disproportionality existed between poverty and special education identification.

Measurement

Data was collected using archival data from the Tyler SIS Student Information System (SIS) and the Missouri Comprehensive Data System (MCDS). SIS is a data collection system that aggregates student information based on state reporting requirements. MCDS is Missouri's Department of Education's public access data system that houses education-related records. Poverty, the independent variable, was measured by students' free and reduced lunch status, which was recorded within SIS based upon student eligibility. To claim free and reduced lunch status, parents or guardians complete the federal application form and eligibility is determined based on income. The dependent variable of special education classification and the level of special education placement were reported in both the SIS and the MCDS and were the results of determinations made by a special education team and parent. The nominal variable of special education classification included the three categories of emotional disturbance, other health impairment, and specific learning disabilities. For this study, the nominal variable of special education placement included three placement categories of 80% or more of the day, 40-79% of the day, and <40% of the day. The nominal variable of poverty included two categories based on eligibility for free and reduced lunch status, standard or free and reduced-price lunch.

Data Collection Procedures

An Institutional Review Board (IRB) application was submitted to Baker University to gain approval to pursue hypothesis testing for this study. In addition to the

IRB, a request was sent to the Superintendent of District B, to utilize district data as a part of this study (see Appendix B). Once approval was obtained (see Appendix C), data were aggregated from two sources of secondary archived data, the MCDS and SIS. Upon, aggregating the data, the information was kept on a password-protected computer only accessible by the researcher. The data collected were initially attached to student names. As soon as the students were identified in SIS and information was gathered, the students' names were no longer attached to the data. The students' names were only accessed in the district's information system and will not otherwise used as a reference.

Data Analysis and Hypothesis Testing

Archived data from the Tyler SIS Student Information System were utilized in this study to test the eight research questions described in chapter one. The data were compiled and organized into a Microsoft Excel worksheet and imported into the latest version of the IBM® SPSS® Statistics 24 for analysis. The eight hypotheses were tested for statistically significant differences between poverty and special education identification and the level of placement in special education services.

RQ1. To what extent does living in poverty have an impact on students being identified for special education?

***H1*.** Living in poverty does have an impact on students being identified for special education.

A goodness-of-fit chi-square test was conducted to address RQ1. The observed frequencies were compared to District B's free and reduced-price lunch eligibility rate, with 52.3% of students eligible and 47.7% of students non-eligible (MCDS, 2016), and were used to determine if there is a significant relationship between two nominal

variables of poverty and students being identified for special education. The level of significance was set at .05.

RQ2. To what extent does living in poverty have an impact on students being identified under the eligibility classification of emotional disturbance?

***H2*.** Living in poverty does have an impact on students being identified under the eligibility classification of emotional disturbance.

A goodness-of-fit chi-square test was conducted to address RQ2. The observed frequencies were compared to District B's free and reduced-price lunch eligibility rate, with 52.3% of students eligible and 47.7% of students non-eligible (MCDS, 2016), and were used to determine if there is a significant relationship between two nominal variables of poverty and students being identified under the eligibility classification of emotional disturbance. The level of significance was set at .05.

RQ3. To what extent does living in poverty have an impact on students being identified under the eligibility classification of other health impairment?

***H3*.** Living in poverty does have an impact on students being identified under the eligibility classification of other health impairment.

A goodness-of-fit chi-square test was conducted to address RQ3. The observed frequencies were compared to District B's free and reduced-price lunch eligibility rate, with 52.3% of students eligible and 47.7% of students non-eligible (MCDS, 2016), and were used to determine if there is a significant relationship between two nominal variables of poverty and students being identified under the eligibility classification of other health impairment. The level of significance was set at .05.

RQ4. To what extent does living in poverty have an impact on students being identified under the eligibility classification of specific learning disability?

***H4*.** Living in poverty does have an impact on students being identified under the eligibility classification of specific learning disability.

A goodness-of-fit chi-square test was conducted to address RQ4. The observed frequencies were compared to District B's free and reduced-price lunch eligibility rate, with 52.3% of students eligible and 47.7% of students non-eligible (MCDS, 2016), and were used to determine if there is a significant relationship between two nominal variables of poverty and students being identified under the eligibility classification of specific learning disability. The level of significance was set at .05.

RQ5. To what extent does living in poverty impact the level of placement in special education?

***H5*.** Living in poverty does have an impact on the level of placement in special education.

A chi-square test of independence was conducted to address RQ5. The observed frequencies were compared to those expected by chance and were used to determine if there is a significant relationship between the two nominal variables of poverty and level of placement. The level of significance was set at .05.

RQ6. To what extent does living in poverty impact the level of placement in special education under the classification of emotional disturbance?

***H6*.** Living in poverty does have an impact on the level of placement in special education under the eligibility classification of emotional disturbance.

A chi-square test of independence was conducted to address RQ6. The observed frequencies were compared to those expected by chance and were used to determine if there is a significant relationship between the two nominal variables of poverty and level of placement in special education under the classification of emotional disturbance. The level of significance was set at .05.

RQ7. To what extent does living in poverty impact the level of placement in special education under the classification of other health impairment?

***H7*.** Living in poverty does have an impact on the level of placement in special education under the eligibility classification of other health impairment.

A chi-square test of independence was conducted to address RQ7. The observed frequencies were compared to those expected by chance and were used to determine if there is a significant relationship between the two nominal variables of poverty and level of placement in special education under the classification of other health impairment. The level of significance was set at .05.

RQ8. To what extent does living in poverty impact the level of placement in special education under the classification of specific learning disability?

***H8*.** Living in poverty does have an impact on the level of placement in special education under the eligibility classification of specific learning disability.

A chi-square test of independence was conducted to address RQ8. The observed frequencies were compared to those expected by chance and were used to determine if there is a significant relationship between the two nominal variables of poverty and level of placement in special education under the classification of specific learning disability. The level of significance was set at .05.

Limitations

Limitations are factors that are not under the researcher's control and have the potential to impact the interpretation of the results of the study (Lunenburg & Irby, 2008). The limitations of this study included:

1) The sample in this study was transient, with students enrolling in and exiting from the school district, which might have some impact on the results for the date and time the sample was taken.
2) The dataset used in this study only accounts for students determined eligible for special education services and does not include students who have not yet been identified as students with disabilities.
3) The current demographics and socioeconomic status of the district studied may have an impact on the results of the study. It should be cautious to generalize the results to a larger population.
4) The results of this study will only show correlation, not causation, between poverty, special education eligibility, and the level of placement required to service students in special education.
5) The dataset used in this study only accounts for students determined eligible for free and reduced lunch. To be found eligible, families must enroll in the free and reduced-lunch price program. The sample does not include potentially eligible students who have not completed the necessary application process.
6) Local interpretation of state guidelines includes human factors (teacher bias, comfort level with referral process, subjectivity in data interpretation, use of

professional judgment, and level of parental involvement) which may impact the classification of students in special education and the level of placement for services once identified for special education.

Summary

This chapter examined the research design, selection of participants, measurement, and data collection procedures. Also, included in this chapter were data analysis, hypotheses testing, and the limitations of this study. In chapter four, the results of the hypotheses testing are discussed.

Chapter 4

Results

The purpose of the study was to determine the extent to which students who live in poverty are identified for special education and the extent to which these students are being educated with their same-age, non-disabled peers. In this study, three areas of classifications (emotional disturbance, other health impairment, and specific learning disability) and three levels of placement (80% or more of the school day, 40-79% of the school day, and <40% of the school day) were assessed through categorical data. The descriptive statistics and results of hypothesis testing will be discussed in this chapter.

Descriptive Statistics

The sample for this study was every student enrolled in District B kindergarten through twelfth grade who received special education services for a school-age classification under IDEA (2004) during the 2016-17 school year (n = 685). Of the 685 students eligible for special education, 428 were eligible for free and reduced lunches while 257 were not eligible for free and reduced lunches. Of the students eligible under the category of emotional disturbance (n= 55), 40 received free and reduced lunch prices, while 15 did not. There were 136 students identified as students with other health impairment, with 91 of those students receiving free and reduced lunch prices and 45 receiving the standard lunch prices. There were 158 students under the classification of specific learning disability who received free and reduced lunch prices, with 73 receiving the standard prices for a total of 231 students in this category. Of the 685 students eligible for special education, 676 students fell into one of three placement categories, 80% or more of the school day (n= 416), 40-79% of the school day (n= 185), and <40%

of the school day (*n*= 75). The remaining nine students were removed from this dataset with more restrictive special education placements not being addressed within this study (e.g., hospital, homebound, private school, or separate day school placements).

Hypothesis Testing

This section includes the eight research questions for this study. The research questions are followed by a description of the statistical analysis used and results of each hypothesis assessed. The summary of each research question and hypothesis describes whether each hypothesis was supported or not supported by the data analysis.

RQ1. To what extent does living in poverty have an impact on students being identified for special education?

***H1*.** Living in poverty does have an impact on students being identified for special education.

A goodness-of-fit chi-square test was conducted to address RQ1. The observed frequencies were compared to District B's free and reduced-price lunch eligibility rate, with 52.3% of students eligible and 47.7% of students non-eligible. The results of the goodness-of-fit chi-square test indicated a statistically significant difference between the observed and expected values, $\chi^2 = 28.47$, $df = 1$, $p < .001$. The observed frequency (n = 428) was higher than the expected frequency (n = 358.3) for students in special education with free and reduced lunch status. The observed frequency (n = 257) was lower than the expected frequency (n = 326.7) for students eligible for special education with standard lunch status. See Table 4 for the observed and expected frequencies. That is to say, for the group of students with free and reduced lunch status, more of them were identified for special education than what should be expected based on District B's free and reduced-

price lunch eligibility rate. For the group of students with standard lunch status, fewer of them were identified for special education than what should be expected based on the same eligibility rate.

Table 4

Observed and Expected Frequencies: Research Question 1

	Observed	Expected
Free/reduced lunch	428	358.3
Standard lunch	257	326.7
Total	685	

RQ2. To what extent does living in poverty have an impact on students being identified under the eligibility classification of emotional disturbance?

***H2*.** Living in poverty does have an impact on students being identified under the eligibility classification of emotional disturbance.

A goodness-of-fit chi-square test was conducted to address RQ2. The observed frequencies were compared to District B's free and reduced-price lunch eligibility rate, with 52.3% of students eligible and 47.7% of students non-eligible. The results of the goodness-of-fit chi-square test indicated a statistically significant difference between the observed and expected values, $\chi^2 = 9.20$, $df = 1$, $p = .002$. The observed frequency (n = 40) was higher than the expected frequency (n = 28.8) for students identified under the eligibility classification of emotional disturbance with free and reduced lunch status. The observed frequency (n = 15) was lower than the expected frequency (n = 26.2) for students identified under the eligibility classification of emotional disturbance with standard lunch status. See Table 5 for the observed and expected frequencies. That is to

say, for the group of students with free and reduced lunch status more students were identified for special education under the classification of emotional disturbance than what should be expected based on District B's free and reduced-price lunch eligibility rate. For the group of students with standard lunch status, fewer students were identified for special education under the eligibility classification of emotional disturbance than what should be expected based on the same eligibility rate.

Table 5

Observed and Expected Frequencies: Research Question 2

	Observed	Expected
Free/reduced lunch	40	28.8
Standard lunch	15	26.2
Total	55	

RQ3. To what extent does living in poverty have an impact on students being identified under the eligibility classification of other health impairment?

***H3*.** Living in poverty does have an impact on students being identified under the eligibility classification of other health impairment.

A goodness-of-fit chi-square test was conducted to address RQ3. The observed frequencies were compared to District B's free and reduced-price lunch eligibility rate, with 52.3% of students eligible and 47.7% of students non-eligible. The results of the goodness-of-fit chi-square test indicated a statistically significant difference between the observed and expected values, $\chi^2 = 11.64$, $df = 1$, $p = .001$. The observed frequency ($n = 91$) was higher than the expected frequency ($n = 71.1$) for students identified under the eligibility classification of other health impairment with free and reduced lunch status.

The observed frequency (n = 45) was lower than the expected frequency (n = 64.9) for students identified under the eligibility classification of other health impairment with standard lunch status. See Table 6 for the observed and expected frequencies. That is to say, for the group of students with free and reduced lunch status more students were identified for special education under the classification of other health impairment than what should be expected based on District B's free and reduced-price lunch eligibility rate. For the group of students with standard lunch status, fewer students were identified for special education under the eligibility classification of other health impairment than what should be expected based on the same eligibility rate.

Table 6

Observed and Expected Frequencies: Research Question 3

	Observed	Expected
Free/reduced lunch	91	71.1
Standard lunch	45	64.9
Total	136	

RQ4. To what extent does living in poverty have an impact on students being identified under the eligibility classification of specific learning disability?

H4. Living in poverty does have an impact on students being identified under the eligibility classification of specific learning disability.

A goodness-of-fit chi-square test was conducted to address RQ4. The observed frequencies were compared to District B's free and reduced-price lunch eligibility rate, with 52.3% of students eligible and 47.7% of students non-eligible. The results of the goodness-of-fit chi-square test indicated a statistically significant difference between the

observed and expected values, $\chi^2 = 24.00$, $df = 1$, $p < .001$. The observed frequency (n = 158) was higher than the expected frequency (n = 120.8) for students identified under the eligibility classification of specific learning disability with free and reduced lunch status. The observed frequency (n = 73) was lower than the expected frequency (n = 110.2) for students identified under the eligibility classification of specific learning disability with standard lunch status. See Table 7 for the observed and expected frequencies. That is to say, for the group of students with free and reduced lunch status more students were identified for special education under the classification of specific learning disability than what should be expected based on District B's free and reduced-price lunch eligibility rate. For the group of students with standard lunch status, fewer students were identified for special education under the eligibility classification of specific learning disability than what should be expected based on the same eligibility rate.

Table 7

Observed and Expected Frequencies: Research Question 4

	Observed	Expected
Free/reduced lunch	158	120.8
Standard lunch	73	110.2
Total	231	

RQ5. To what extent does living in poverty impact the level of placement in special education?

***H5*.** Living in poverty does have an impact on the level of placement in special education.

A chi-square test of independence was conducted to address RQ5. The results of the chi-square test of independence indicated a statistically significant difference between the observed and expected values, $\chi^2 = 6.40$, $df = 2$, $p = .041$. See Table 8 for the observed and expected frequencies. For the students with free and reduced lunch status, the observed frequency ($n = 245$) was lower than the expected frequency ($n = 260.3$) in the placement category of 80% or more of the day. In both the 40-79% and <40% placement categories, the observed frequencies (respectively, $n = 128, 50$) were higher than the expected frequencies (respectively, $n = 115.8, 46.9$). For the students with standard lunch status, the observed frequency ($n = 171$) was higher than the expected frequency ($n = 155.7$) in the placement category of 80% or more of the day. In both the 40-79% and <40% placement categories, the observed frequencies (respectively, $n = 57, 25$) were lower than the expected frequencies (respectively, $n = 69.2, 28.1$). Within the placement category of 80% or more of the day, there are fewer students with free and reduced lunch status observed in the sample than what was expected by chance, and there are more students with standard lunch status observed than what was expected by chance. Conversely, within the placement categories of 40-79% of the day and less than 40% of the day, there are more students with free and reduced lunch status observed than what was expected by chance, and there are fewer students with standard lunch status observed than what was expected by chance. The results of the chi-square test supported the hypothesis that living in poverty may have an impact on the level of placement in special education with the magnitude of effect size being small (Cramer's V = .097). The results may suggest a relationship between living in poverty and the level of placement in special education.

Table 8

Observed and Expected Frequencies: Research Question 5

Placement Category		80% or more of the day	40-79% of the day	Less than 40% of the day
Free/reduced lunch	Observed	245.0	128.0	50.0
	Expected	260.3	115.8	46.9
Standard lunch	Observed	171.0	57.0	25.0
	Expected	155.7	69.2	28.1

RQ6. To what extent does living in poverty impact the level of placement in special education under the classification of emotional disturbance?

***H6*.** Living in poverty does have an impact on the level of placement in special education under the eligibility classification of emotional disturbance.

A chi-square test of independence was conducted to address RQ6. The results of the chi-square test of independence indicated that there was not a statistically significant difference between the observed and expected values, $\chi^2 = 1.87$, $df = 2$, $p = .394$. The results suggest living in poverty did not have a relationship with the level of placement in special education when identified under the classification of emotional disturbance.

RQ7. To what extent does living in poverty impact the level of placement in special education under the classification of other health impairment?

***H7*.** Living in poverty does have an impact on the level of placement in special education under the eligibility classification of other health impairment.

A chi-square test of independence was conducted to address RQ7. The results of the chi-square test of independence indicated a statistically significant difference between

the observed and expected values, $\chi^2 = 9.77$, $df = 2$, $p = .008$. See Table 9 for the observed and expected frequencies. For the students with free and reduced lunch status who were classified with other health impairment, the observed frequency ($n = 35$) was lower than the expected frequency ($n = 43$) in the placement category of 80% or more of the day. In both the 40-79% and <40% placement categories, the observed frequencies (respectively, $n = 44, 11$) were higher than the expected frequencies (respectively, $n = 39, 8.1$). For the students with standard lunch status who were classified with other health impairment, the observed frequency ($n = 29$) was higher than the expected frequency ($n = 21$) in the placement category of 80% or more of the day. In both the 40-79% and <40% placement categories, the observed frequencies (respectively, $n = 14, 1$) were lower than the expected frequencies (respectively, $n = 19, 3.9$). Among students classified with other health impairment, within the placement category of 80% or more of the day, there are fewer students with free and reduced lunch status observed than what was expected by chance, and there are more students with standard lunch status observed than what was expected by chance. Conversely, within the placement categories of 40-79% of the day and less than 40% of the day, there are more students with free and reduced lunch status observed than what was expected by chance, and there are fewer students with standard lunch status observed than what was expected by chance. The results of the chi-square test supported the hypothesis that living in poverty may have an impact on the level of placement in special education within the classification of other health impairment with the magnitude of effect size being medium (Cramer's V = .270). The results may suggest a relationship between living in poverty and the level of placement in special education within the classification of other health impairment.

Table 9

Observed and Expected Frequencies: Research Question 7

Placement Category		80% or more of the day	40-79% of the day	Less than 40% of the day
Free/reduced lunch	Observed	35	44	11.0
	Expected	43	39	8.1
Standard lunch	Observed	29	14	1.0
	Expected	21	19	3.9

RQ8. To what extent does living in poverty impact the level of placement in special education under the classification of specific learning disability?

***H8*.** Living in poverty does have an impact on the level of placement in special education under the eligibility classification of specific learning disability.

A chi-square test of independence was conducted to address RQ8. The results of the chi-square test of independence indicated a statistically significant difference between the observed and expected values, $\chi^2 = 6.20$, $df = 1$, $p = .013$. See Table 10 for the observed and expected frequencies. For the students with free and reduced lunch status who were classified with a specific learning disability, the observed frequency ($n = 121$) was lower than the expected frequency ($n = 127.9$) in the placement category of 80% or more of the day. In the 40-79% category, the observed frequency ($n = 37$) was higher than the expected frequency ($n = 30.1$). For the students with standard lunch status who were classified with a specific learning disability, the observed frequency ($n = 66$) was higher than the expected frequency ($n = 59.1$) in the placement category of 80% or more of the day. In the 40-79% placement category, the observed frequency ($n = 7$) was lower

than the expected frequency (n = 13.9). Within the data set, no students with a specific learning disability were classified into the placement category of <40% of the school day. Among students classified with a specific learning disability, within the placement category of 80% or more of the day, there are fewer students with free and reduced lunch status observed than what was expected by chance, and there are more students with standard lunch status observed than what was expected by chance. Conversely, among students classified with a specific learning disability, within the placement category of 40-79% of the day, there are more students with free and reduced lunch status observed than what was expected by chance, and there are fewer students with standard lunch status observed than what was expected by chance. The results of the chi-square test supported the hypothesis that living in poverty may have an impact on the level of placement in special education within the classification of specific learning disability with the magnitude of effect size being small (Phi = -.164). The results may suggest a relationship between living in poverty and the level of placement in special education within the classification of specific learning disability.

Table 10

Observed and Expected Frequencies: Research Question 8

Placement Category		80% or more of the day	40-79% of the day
Free/reduced lunch	Observed	121.0	37.0
	Expected	127.9	30.1
Standard lunch	Observed	66.0	7.0
	Expected	59.1	13.9

Summary

Chapter four included analysis of the data for each research question and hypothesis to conclude if expected differences matched the observed difference between poverty and special education identification, as well as poverty and level of placement in special education. Hypotheses one through four were tested and found to be statistically significant. There were more students identified for special education with free and reduced-lunch status than students identified for special education with standard lunch status than what should be expected based on District B's free and reduced-price lunch eligibility rate. The findings were consistent for District B's total special education population and District B's subgroup classifications of emotional disturbance, other health impairment, and specific learning disability. Hypotheses five through eight were tested. The results may suggest a relationship, with a small to medium effect size, between living in poverty and the level of placement within District B's total special education population and within the subgroup classifications of other health impairment and specific learning disability. The results suggest living in poverty did not have a relationship with the level of placement in special education when identified under the classification of emotional disturbance. Chapter five includes a summary of the study, findings related to the literature, implications, and recommendations for future research.

Chapter 5

Interpretation and Recommendations

This study was conducted to determine the extent to which students who live in poverty are identified for special education and the extent to which these students are being educated with their same-age, non-disabled peers. Chapter five is comprised of many sections. The first section, study summary, includes an overview of the problem, purpose statement and research questions, review of the methodology, and the major findings. The second section contains the findings related to the literature. The final section is the conclusion which includes the implications for action, recommendations for future research, and concluding remarks.

Study Summary

This section includes an overview of the study on disproportionality in special education as it relates to poverty and level of placement within special education. The overview of the problem, the purpose of this study, and the research questions are included in this summary. This section concludes with a review of the methodology and the major findings of the study.

Overview of the problem. Students who meet eligibility criteria for special education are often from low-income or minority backgrounds (Donovan & Cross, 2002). Current regulations outlined in IDEA (2004) mandate monitoring and prevention efforts to avoid disproportionality in special education among minorities. These mandates are in place to ensure minorities are not unjustly identified for special education. IDEA (2004) does not address disproportionality as it relates to students who live in poverty.

Research addressing poverty and special education eligibility have yielded inconsistent results. Skiba et al. (2005) found a weak result of disproportionality as it relates to poverty, while both Sullivan and Bal (2013) and Wilson (2008) found a relationship between poverty and special education eligibility in the high-incidence categories. Limited studies exist on the continuum of special education placement (Landrum, Katsiyannis, Archwamety, 2004; Ryndak et al., 2014; Schnoes et al., 2006), with even fewer addressing special education placement as it relates to poverty. One study conducted by Singer et al. (1986) found consistent relationships between the level of special education placement and socioeconomic status. Inconsistent results reported by and between these studies makes generalizing findings difficult.

Purpose statement and research questions. The purpose of the study was to determine the extent to which students who live in poverty are identified for special education, more specifically in the high-incidence eligibility classifications of other health impairment, emotional disturbance, and specific learning disability. An additional purpose was to determine the extent to which these students are being educated with their same-age, non-disabled peers. The study included eight research questions and eight hypotheses to address the purposes of this study.

Review of the methodology. A quantitative correlational research method was used in this study. Archival data was used for all students enrolled in District B, kindergarten through twelfth grade, who received special education services during the 2016-17 school year. Four goodness-of-fit chi-square tests were conducted to compare observed frequencies between District B's free and reduced-price lunch eligibility rate and special education eligibility for the district as a whole, and for the classifications of

emotional disturbance, other health impairment, and specific learning disability. Four chi-square tests of independence were conducted to compare observed frequencies to those expected by chance to determine if significant relationships exist between the nominal variables of poverty and level of placement for the district, and for the classifications of emotional disturbance, other health impairment, and specific learning disability.

Major findings. The first major finding was related to the first four research questions regarding poverty and students being identified for special education. The results from this study indicated more students being identified for special education with free and reduced-lunch status than students identified for special education with standard lunch status than what should be expected based on District B's free and reduced-price lunch eligibility rate. This finding was true for District B's total special education population, as well as the subgroup classifications of emotional disturbance, other health impairment, and specific learning disability.

The second major finding was related to the last four research questions regarding living in poverty and the impact on the level of placement in special education. The results from this study may suggest a relationship between living in poverty and the level of placement for District B's total special education population and within the subgroups of other health impairment and specific learning disability, with a small to medium effect size. Also worth noting, the results suggest living in poverty did not have a relationship with the level of placement in special education within the subgroup of emotional disturbance.

Findings Related to the Literature

In this section, the current study's findings are compared to previous research. Disproportionality has been frequently studied, but results are inconsistent (Skiba et al., 2005). Research in this area continues to focus on the relationship between race and disproportionality, as it is regulated by IDEA (2004). Studies that focus on poverty and disproportionality and poverty on the level of placement in special education are rare. Of the studies that do exist, many are contradictory in their findings. Sullivan (2011) reasons the inconsistencies in disproportionality research change depending on the sample and the disabilities that were studied. Hibel et al. (2010) also found inconsistencies within the special education eligibility process with teacher judgments and teacher's referent groups setting the standard for special education, making every study unique to its sample population.

The first four research questions assessed the extent to which living in poverty has an impact on students being identified for special education, more specifically in the areas of emotional disturbance, other health impairment, and specific learning disability. This study found more students are being identified for special education with free and reduced lunch status than those with standard lunch. Although most research focuses on race and disproportionality, Sullivan and Bal (2013) found that free and reduced lunch status had a larger effect on risk for special education eligibility than race. Wilson (2008) and Sullivan and Bal (2013) found relationships between SES and high-incidence eligibility categories to be a strong predictor of special education eligibility, more so than race and gender. Henderson (2009) also found both SES and race as contributing to disproportionality in special education. Skiba et al. (2008) presume that the academic

and behavioral gaps exhibited by students living in poverty make them likely candidates for special education referral and placement for services. Risk factors related to poverty predict both academic and behavioral deficits which may account for the larger number of students from a low SES background being identified for special education within this study.

The final four research questions addressed living in poverty and the impact on the level of placement within special education. The studies on the level of placement in special education are rare, and even more rare when discussing specific classifications of special education, such as emotional disturbance, other health impairment, and specific learning disability. The results from this study may suggest a relationship between living in poverty and the level of placement for the entirety of the district's special education population and within the subgroups of other health impairment and specific learning disability.

IDEA (2004) mandates students to participate with their same-age peers in the regular education classroom to the maximum extent possible. Singer et al. (1986) found consistent relationships between SES and the level of special education placement, with the hypothesis that more prosperous families advocated for their students to be in more inclusive environments. In this study, there were more students who received free and reduced-lunch status observed than students with standard lunch status in the areas of 80% or more of the day and 40-79% of the day. In the other health impairment classification and the overall district special education population the placement category of <40% of the school day displayed more students with free and reduced-lunch status than those with standard lunch status. Although a higher number of students are present

within each of the placement categories who have free and reduced lunch status than is expected by chance, the least restrictive placement of 80% or more of the day contained the highest total number of students. The results from this study are consistent with the findings of Singer et al. (1986), in that, more students are receiving instruction with their regular education peers, with minimal support.

In the research, the classification of emotional disturbance has led to more restrictive placements in special education (Carson, 2015; Raines et al., 2011). This study found the opposite conclusion with the results suggesting living in poverty did not have a relationship on the level of placement in special education within the subgroup of emotional disturbance. The findings of this study may be due to the similarity of identification practices between the high-incidence categories of special education and subjective team-decisions between the eligibility categories of other health impairment, specific learning disability, and emotional disturbance, especially when medical diagnoses such as ADHD are involved (Mattison, 2015).

Conclusions

This section contains conclusions drawn from this study on the impact of poverty on special education eligibility and the impact of poverty on the level of placement in special education. Implications for action and recommendations for future research are included. Finally, concluding remarks complete the study.

Implications for action. The findings of this study indicated poverty might increase the likelihood of a student being identified for special education services. Shifrer et al. (2011) discussed the importance of identifying and addressing factors that contribute to disproportionality, which should include poverty. While federal programs

provide resources and services to students who are disadvantaged, they do not address the number of these students being identified for special education. IDEA (2004) only regulates disproportionality for minority students. States are not required to report special education student level-data in conjunction to the student's free and reduced lunch status. The results of this study suggest a need to initiate a lobbying effort to include free and reduced lunch as a subgroup of data collection. By including free and reduced lunch as a subgroup, states and districts would better be able to monitor their special education population and target specific areas of disproportionality that may need to be addressed.

Districts should also explore alternate methods of special education identification or special education processes, such as MTSS, to help mediate the disproportionate number of disadvantaged students qualifying for special education. MTSS teams have the ability to provide targeted interventions to students who are struggling, with the potential effect of reducing overall special education referrals (Decker, Englund, & Albritton, 2012; Hoover, 2010; Skiba et al., 2008). The integration of MTSS has the potential to provide a consistent, evidence-based process targeted to individual student needs (Averill & Rinaldi, 2011). MTSS may also help address the likelihood of a referral due to teacher bias or inability to differentiate for struggling students, as the process outlines a plan of action aimed at closing academic and behavioral gaps.

Professional development opportunities for staff may also help decrease the number of students being referred for special education. These professional development opportunities may include lessons on the impact of poverty on student academic and behavioral growth. Learning opportunities for educators could also include support for differentiating instruction and accommodating for all students within a classroom setting.

Recommendations for future research. Below are recommendations for future research on the impact of poverty on special education identification and level of placement.

1. It is recommended that future researchers conduct a longitudinal study as a follow-up to the current study to analyze special education classifications, level of special education placement, and SES to see rates of growth over time among students for behavior and academics. This information may give insight regarding how long students with low SES require services from special education and the intensity of services required.
2. It is recommended that future researchers replicate the current study to include multiple districts for a larger sample.
3. It is recommended that future researchers replicate the current study to include districts with different rates of free and reduced-price lunch status to determine the identification rate of students from low SES across different populations.
4. It is recommended that future researchers replicate the current study in districts using different systems of special education identification (for example, the discrepancy model or MTSS/RtI). This type of study would help determine the impact of the referral and evaluation process on the identification of students from low SES backgrounds.

Concluding remarks. With current literature on disproportionality focusing mostly on race, continued research is needed to address disparities in identification practices for students from disadvantaged backgrounds. While poverty may increase risk

factors for gaps in academics and behavior, special education services should be reserved for students who truly have a disability. Since IDEA does not require reporting on SES, districts should look at their current identification and placement processes, specifically as they relate to students receiving free and reduced-lunch status and determine if a systemic change is required to address any disproportionate findings.

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Appendices

Appendix A: Special Education Placement Continuum

Special Education Placements

Early Childhood Placement Options

Early Childhood Setting

Children with disabilities who receive all of their special education and related services in educational programs designed primarily for children without disabilities. No education or related services are provided in separate special education settings.

Early Childhood Special Education Setting

Children with disabilities who receive all of their special education and related services in educational programs designed primarily for children with disabilities housed in regular school buildings or other community-based settings. No education or related services as designated by an IEP are provided in early childhood settings.

Home

Children with disabilities who receive all of their special education and related services in the principal residence of the child's family or caregivers.

Part Time EC/Part time ECSE Setting

Children with disabilities who receive all of their special education and related services in multiple settings, such that: (1) general and/or special education and related services are provided at home or in educational programs designed primarily for children without disabilities, AND (2) special education and related services are provided in programs designed primarily for children with disabilities.

Residential Facility

Children with disabilities who receive all of their special education and related services in publicly or privately operated residential schools or residential medical facilities on an inpatient basis.

Separate School

Children with disabilities who receive all of their special education and related services in educational programs in public or private day schools specifically for children with disabilities.

Itinerant Service Outside the Home

Children with disabilities who receive all of their special education and related services at a school, hospital facility on an outpatient basis, or other location for a short period of time (i.e., no more than 3 hours per week). (This does not include children receiving services at home.) These services may be provided individually or to a small group of children.

Kindergarten - Grade 12 Placement Continuum

Inside the Regular Class 80 percent or more of the day

Students with disabilities who are inside the regular classroom for 80 percent or more of the school day. (These are children who receive special education and related services outside the regular classroom for less than 21 percent of the school day.) This may apply to children with disabilities placed in:

- regular class with special education/related services provided within regular classes;
- regular class with special education/related services provided outside regular classes; or
- regular class with special education services provided in resource rooms.

Inside regular class no more than 79% of day and no less than 40% percent of the day

Students with disabilities who are inside the regular classroom between 40 and 79% of the day. (These are children who received special education and related services outside the regular classroom for at least 21 percent but no more than 60 percent of the school day.) This does not apply to children who are receiving education programs in public or private separate school or residential facilities. This may apply to children placed in:

- resource rooms with special education/related services provided within the resource room; or
- resource rooms with part-time instruction in a regular class.

Inside regular class less than 40 percent of the day

Students with disabilities who are inside the regular classroom less than 40 percent of the day. (These are children who received special education and related services outside the regular classroom for more than 60 percent of the school day.) This does not apply to children who are receiving education programs in public or private separate school or residential facilities. This category may apply to children placed in:

- self-contained special classrooms with part-time instruction in a regular class; or
- self-contained special classrooms with full-time special education instruction on a regular school campus.

Public Separate (Day) Facility

Children with disabilities who receive all of their special education and related services for greater than 50 percent of the school day in public separate facilities for children with disabilities.

Private Separate (Day) Facility

Children with disabilities who receive all of their special education and related services, at public expense, for greater than 50 percent of the school day in private separate facilities for children with disabilities.

Public Residential Facility

Children with disabilities who receive all of their special education and related services for greater than 50 percent of the school day in public residential facilities.

Private Residential Facility

Children with disabilities who receive all of their special education and related services, at public expense, for greater than 50 percent of the school day in private residential facilities.

Homebound/Hospital

Children with disabilities who receive all of their special education and related services in hospital programs or homebound programs.

Missouri Department of Elementary and Secondary Education
Office of Special Education
December 29, 2012

Appendix B: Study Approval from District B Superintendent

Research Proposal for Dissertation

Lauren Goddard <lgoddard@[redacted]>

Fri, Apr 20, 2018 at 7:58 AM

To: [redacted] <[redacted]@[redacted]>

Dr. [redacted],

I am currently completing my Ed.D degree through Baker University. About a year ago we discussed my dissertation topic when I interviewed you for one of my courses. I have continued with the same research topic, which has been approved by my university advisor, Dr. James Robins. Below is what I have chosen:

- *Disproportionality in Special Education: The Impact of Poverty on Eligibility in Classifications of Emotional Disturbance and Other Health Impairment*

I am emailing you to request approval from the district to complete my research. I am requesting to use archival data on every student enrolled kindergarten through twelfth grade who received special education services for a school-age classification under IDEA (2004) during the 2016-17 school year. If this request is accepted, data will be collected using archival data from the Tyler SIS Student Information System (SIS) and the Missouri Comprehensive Data System (MCDS). There will not be any participants in this study, only archival data will be used. There will be no requests for information in which subjects might consider to be personal or sensitive, as names do not need to be tied to the data. I also will be submitting my research proposal through the internal review board at Baker University which serves as a safeguard to [redacted] against any abuse.

Please know that I will be happy to share my findings with the district upon completion of this project. If you have any questions at all, certainly let me know. Once you grant approval, I will send you a more formal letter to sign which will also be included as part of my dissertation.

Thank you for your consideration.

[redacted] <[redacted]@[redacted]>

Fri, Apr 20, 2018 at 9:41 AM

To: Lauren Goddard <lgoddard@[redacted]>

Cc: [redacted] <[redacted]@[redacted]>, [redacted] <[redacted]@[redacted]>

[redacted] <[redacted]@[redacted]> Fri, Apr 20, 2018 at 9:41 AM

To: Lauren Goddard <lgoddard@[redacted]>
Cc: [redacted] <[redacted]@[redacted]>, [redacted] <[redacted]@[redacted]>

Mrs. Goddard,

I approve and ask no names of students be shared.

I see your plan for confidentiality, please be cognizant of these matters.

[redacted]
[Quoted text hidden]
--

Sincerely in Education,

[redacted]
Superintendent of Schools
[redacted]

CONFIDENTIALITY STATEMENT:

This e-mail and any attachments are intended only for those to which it is addressed and may contain information which is privileged, confidential and prohibited from disclosure and unauthorized use under applicable law. If you are not the intended recipient of this e-mail, you are hereby notified that any use, dissemination, or copying of this e-mail or the information contained in this e-mail is strictly prohibited by the sender. If you have received this transmission in error, please return the material received to the sender and delete all copies from your system.

Appendix C: IRB Approval Letter

Baker University Institutional Review Board

June 7th, 2018

Dear Lauren Goddard and James Robins,

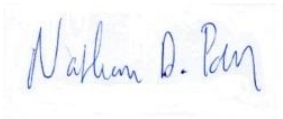
The Baker University IRB has reviewed your project application and approved this project under Exempt Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

1. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
2. Notify the IRB about any new investigators not named in original application.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
4. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
5. If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.

Please inform this Committee or myself when this project is terminated or completed. As noted above, you must also provide IRB with an annual status report and receive approval for maintaining your status. If you have any questions, please contact me at npoell@bakeru.edu or 785.594.4582.

Sincerely,



Nathan Poell, MA
Chair, Baker University IRB

Baker University IRB Committee
Scott Crenshaw
Erin Morris, PhD
Jamin Perry, PhD
Susan Rogers, PhD