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A Tale of Two Schools: A Study of Student Risk Factors and Exclusionary Suspension Incidents

by

Brandy Nicole Williamson

March 23, 2021

A Dissertation submitted to the Education Faculty of Lindenwood University in partial fulfillment of the requirements for the degree of

Doctor of Education

School of Education

A Tale of Two Schools: A Study of Student Risk Factors

and Exclusionary Suspension Incidents

by

Brandy Nicole Williamson

This Dissertation has been approved as partial fulfillment

of the requirements for the degree of

Doctor of Education

Lindenwood University, School of Education

Shelly Fransen

Dr. Shelly Fransen, Dissertation Chair — 3/23/2021 — Date

Sherry R. DeVore

Dr. Sherry DeVore, Committee Member — 3/23/2021 — Date

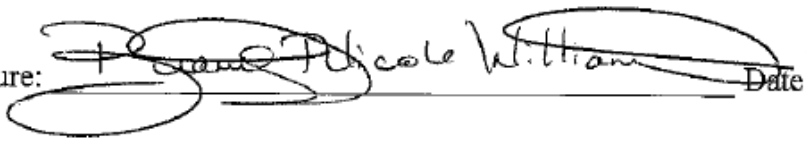
Kathy J. Grover

Dr. Kathy Grover, Committee Member — 3/23/2021 — Date

Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work at Lindenwood University and that I have not submitted it for any other college or university course or degree.

Full Legal Name: Brandy Nicole Williamson

Signature:  Date: 3/23/2021

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Abstract

Exclusionary discipline practices can widen the opportunity gap for at-risk students (Baker & Coley, 2013; Black, 2016; Crosby et al., 2018; Gibson & Gibson, 2019; Mallett, 2016; McCarter, 2017; Porter, 2015; Williams et al., 2017). The purpose of this study was to examine the relationship between student risk factors and exclusionary discipline rates. Identification of a significant relationship between exclusionary discipline and student risk factors could lead to an increased awareness of pre-certification and practicing educator professional development needs. Identification of a significant relationship between trauma-related risk factors and exclusionary discipline could lead to an awareness of exclusionary discipline alternatives more conducive to student success. The population of this study consisted of all elementary students who attended a midwestern school district, and the sample consisted of students who attended the two case study schools within the district. The literature resources gathered for this study were assayed to support the purpose and findings of the study. In order to determine a relationship between risk factors and exclusionary discipline, four research questions were presented. To further the study and demonstrate relevance of school culture and practices, an analysis of the fifth research question was presented to find the difference in exclusionary discipline outcomes between two similar schools within the same midwestern school district. Data analysis of research questions one through four indicated a significant relationship between exclusionary discipline and the risk factors of meal status, disability, and race. A significant relationship was not discovered between exclusionary discipline and gender. A significant difference was found between the discipline outcomes of the case study schools.

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Chapter One: Introduction

In 1954, during the proceedings of *Brown v. Board of Education*, Chief Justice Earl Warren stated:

> In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunities of an education. Such an opportunity, where the state has undertaken to provide it, is a right that must be made available on equal terms. (as cited in McCarter, 2017, p. 59)

To meet the needs of students and promote both academic and behavioral growth, school districts should address areas of deficiency that impede the educational process. This study included an examination of risk factors that may hinder student success, a determination of whether relationships exist between risk factors and exclusionary discipline, an exploration of a case study of two demographically similar schools within the same district, and an analysis of information about trauma-informed practices and alternatives to exclusionary discipline.

Chapter One includes the background of the study and the theoretical framework. The statement of the problem, purpose of the study, and research questions are presented. The significance of the study and the definition of key terms are detailed. Finally, the delimitations, limitations, and assumptions are described.

Background of the Study

During his presidential term, John F. Kennedy proposed a federal aid program for education that linked the issues of race and poverty with regard to educational opportunity, and his successor, President Johnson, declared war on poverty in 1965 (DuFour et al., 2018; Jennings, 2000, “The Birth of Title I” section, para. 1). Title I was

later enacted to address both the educational opportunity gap between high- and low-income students and the adequate provision of resources for low-income students (DuFour et al., 2018; Office of Education, 1969; Paul, 2016; United States Department of Education [USDOE], 2016b). Since Title I was enacted, researchers have continued to identify opportunity gaps, as well as behavior differences, between high- and low-income students (Baker & Coley, 2013; Gibson & Gibson, 2019; McCarter, 2017; Palomar-Lever & Victorio-Estrada, 2017; Porter, 2015; Sullivan et al., 2013; Williams et al., 2017). Other risk factors connected with opportunity gaps, such as race and special education status, have also been identified (Aguilar, 2019; Dill, 2015; Henderson & Guy, 2017; McCarter, 2017; Sparks, 2016; Sullivan et al., 2013).

Based upon 2016 data from the United States Census Bureau, Payne (2019) stated 19% of American children live in poverty (p. 169). According to the United States Department of Health and Human Services (2020), the poverty guideline for a family of four is an income below $26,200 (p. 1). Jensen (2019) suggested students who are under-resourced and live in poverty are exposed to traumas and stressors that impact brain development and behavior. Trauma can hinder a student's ability to self-regulate, behave in an appropriate fashion, and reach his/her potential academically (Gibson & Gibson, 2019). Changes in brain development occur due to the damaging effects of poverty and can cause behavioral development problems and lead to exclusionary discipline (Baker & Coley, 2013; Black, 2016; Crosby et al., 2018; Gibson & Gibson, 2019; Jensen, 2019; Payne, 2019). Connections have been made among exclusionary discipline, dropout rates, and the school-to-prison pipeline (Black, 2016; Crosby et al., 2018; Gibson & Gibson, 2019; Green et al., 2018; Jones, 2018; Mallett, 2016; McCarter, 2017).

Repeated suspensions and exclusion from school can result in negative academic outcomes and the tendency for students to participate in behaviors that could potentially result in jail time (Black, 2016). Exclusionary discipline, such as in-school or out-of-school suspension, has been a common practice in school districts since the late 1980s to early 1990s when zero tolerance policies were implemented as a response to an increase in school violence (Jones, 2018; Mallett, 2016; McCarter, 2017). Exclusionary discipline replaced historically common school discipline practices such as corporal punishment and shaming (Middleton, 2008; Stearns & Stearns, 2017). Corporal punishment was eventually perceived as detrimental to education because it was considered a type of public humiliation, created resentment, and encouraged a dislike of teachers (Middleton, 2008). Shaming strategies, variations of which can still be found in some current classroom management strategies, were considered demeaning and unfavorable to human dignity (Stearns & Stearns, 2017).

The United States Senate passed *The Safe Schools Act* in 1994, which supported district efforts to promote disciplined environments conducive to learning and free from drugs and violence (GovTrack, 2020, p. 1), while leading to mandatory reporting in some states for disruptive or illicit behavior (McCarter, 2017). *The Safe Schools Act* and zero tolerance policies, while sharing the common goal of maintaining an environment of safety for students, have had a disproportionate impact on male students, minority students (e.g., Hispanic and African American), students who live in poverty, and students with disabilities (Green et al., 2018; Henderson & Guy, 2017; Mallett, 2016; McCarter, 2017; Public Counsel, 2020; Sullivan et al., 2013). Exclusionary discipline practices have the potential to increase the likelihood a student will later become

involved with the juvenile or adult justice system, which has been referred to as the school-to-prison pipeline (Crosby et al., 2018; Henderson & Guy, 2017; Mallett, 2016; McCarter, 2017; Public Counsel, 2020).

To effectively help students who reside in poverty and are under-resourced, teachers need to be made aware of the potential impact of poverty and trauma on a student's development and education, as well as the potential triggers that lead to trauma-based maladaptive neuroplasticity (Gibson & Gibson, 2019; McTighe & Willis, 2019; Souers & Hall, 2016). Just as trauma can negatively impact brain development, positive and supportive interactions and strategies can reverse and erase the damaging effects of poverty over the span of a few years (Gibson & Gibson, 2019; Jensen, 2019).

According to Jensen (2019), when it comes to educating a child, one of the most relevant properties in a student's brain is neuroplasticity, which allows the brain to develop networks, remap itself, and make connections. In this sense, effective educators can make a significant difference in the brain development, mindset, and eventual success of students who live in poverty by being informed about the effects of trauma (Craig, 2016; Gibson & Gibson, 2019; Jensen, 2019; Souers & Hall, 2016). Researchers have identified trauma-informed strategies that can be utilized to promote student achievement (Crosby et al., 2018; Dill, 2015; Gray, 2017; Minahan, 2019).

Theoretical Framework

As a framework for this study, Bronfenbrenner's (1977) ecological systems theory was utilized to provide information about the ways an individual's environment can affect his or her qualities and development. Bronfenbrenner (1977) stated the bulk of contemporary developmental psychology can be explained as "the science of the strange

behavior of children in strange situations with strange adults for the briefest possible periods of time" (p. 513). According to Bronfenbrenner (1977), human development can be further understood by examining multi-person interactions in multiple settings while taking into consideration other dimensions of each environment outside of an immediate situation (Elliott & Davis, 2018; Ettekal & Mahoney, 2017; Hertler et al., 2018). Bronfenbrenner (1977) explained an individual and his or her environment have interdependencies and inertia, and a true understanding of the relationship between an individual and his or her environment is made apparent when an attempt is made to change an aspect of one or the other, which disturbs the previous balance or reciprocity (Burns et al., 2015; Okilwa, 2016).

An ecological environment can be viewed as a nested arrangement, with each level contained in the next level, of relations or structures that directly influence an individual's socialization, development, learning, and achievement (Bronfenbrenner, 1977; Ettekal & Mahoney, 2017; Okilwa, 2016). The nested arrangement, or varying levels, of an individual's environment, begins with the most important environment, the microsystem, which is closest to the individual and is where proximal processes occur (Bronfenbrenner, 1977, Ettekal & Mahoney, 2017; Okilwa, 2016; Tudge et al., 2017). Proximal processes include daily reciprocal interactions and activities important to development (Burns et al., 2015; Tudge et al., 2017). The nested arrangement continues with the mesosystem, the exosystem, and the macrosystem (Bronfenbrenner, 1977, Ettekal & Mahoney, 2017; Okilwa, 2016; Tudge et al., 2017).

Bronfenbrenner's (1977) theory includes information about each ecological environment and the external factors that may influence development (Burns et al., 2015;

Elliott & Davis, 2018; Ettekal & Mahoney, 2017). The microsystem, the level closest to the individual, is the most influential because it includes the set of relationships between the individual and his or her family, friends, colleagues, school, or religious setting (Bronfenbrenner, 1977; Ettekal & Mahoney, 2017). In the microsystem, an individual has direct contact and bidirectional influence with other individuals (Crosby, 2015; Johnson, 2008). In the next level, the mesosystem, an individual can be indirectly influenced by the dynamics of aspects of the microsystem, such as the relationship between parents and a teacher (Bronfenbrenner, 1977; Crosby, 2015; Johnson, 2008). The exosystem is a formal or informal system, such as school policies or state regulations, that affects an individual even though the individual is not directly involved with that system (Bronfenbrenner, 1977; Crosby, 2015; Johnson, 2008). Finally, the macrosystem is the overarching cultural environment, including foundational beliefs and ideologies (Bronfenbrenner, 1977; Ettekal & Mahoney, 2017). Due to this study's focus on risk factors and their relationship to exclusionary discipline, the ecological systems theory is an ideal guide to explain the ways risk factors have the potential to affect development as well as academic and behavioral success.

Statement of the Problem

In this study, the relationship between student risk factors and exclusionary discipline outcomes was examined. Student risk factors included poverty, race, disability, and gender (Aguilar, 2019; Baker & Coley, 2013; Dill, 2015; Gibson & Gibson, 2019; Henderson & Guy, 2017; McCarter, 2017; O'Higgins et al., 2015; Sparks, 2016; Sullivan et al., 2013). Discipline infractions may result in decreased student achievement, school expulsion, increased dropout rates, and likelihood of future incarceration (Black, 2016;

Jones, 2018; Mallett, 2016; McCarter, 2017). While research exists regarding risk factors, opportunity gaps, and exclusionary discipline, there is a gap in the research regarding schools within the same district with similar student demographics but different exclusionary discipline rates.

In the United States, the public school system determines if a student is educationally disadvantaged based almost entirely on family income (United States Department of Health and Human Services, 2020). Researchers have identified an achievement and opportunity gap between students from middle- to high-income families and students from lower-income families (Baker & Coley, 2013; Porter, 2015; Williams et al., 2017). Researchers have also acknowledged the likelihood of behavioral and mental health problems caused by the stress and trauma of living in poverty, which could lead to exclusionary discipline outcomes such as in-school suspension, out-of-school suspension, and expulsion (McCarter, 2017; Palomar-Lever & Victorio-Estrada, 2017; Sullivan et al., 2013).

Exclusionary discipline outcomes have been connected to student dropout rates and the school-to-prison pipeline (Black, 2016; Crosby et al., 2018; Green et al., 2018; Jones, 2018; Mallett, 2016; McCarter, 2017). Other identified risk factors with the potential to create an opportunity gap include race (specifically African American and Hispanic), English Language Learner (ELL) status, student mobility, gender, special education status, homelessness, and neglected/delinquent status (Aguilar, 2019; Dill, 2015; Henderson & Guy, 2017; McCarter, 2017; Sparks, 2016; Sullivan et al., 2013).

According to Gibson and Gibson (2019), Jensen (2019), and Souers and Hall (2016), neurons are developed to reflect the environment, and chronic exposure to trauma

or poverty impacts the areas of the brain responsible for impulse regulation, memory, language, visuospatial actions, conflict, and cognitive capacity. Students who reside in poverty are prone to illness due to exposure to toxins and chronic stress, demonstrate weaker cognitive and relationship skills, have difficulties with self-regulation, and struggle to reach their academic potential (Gibson & Gibson, 2019; Jensen, 2019). The behaviors of students who reside in poverty exemplify the effects of trauma and chronic stress, which can lead to discipline intervention such as suspension or expulsion (Jensen, 2019).

Purpose of the Study

The purpose of this study was to examine the relationship between student risk factors and exclusionary discipline rates. The data collected for this study were analyzed to determine the strength of the relationships that exist between student risk factors and exclusionary student discipline outcomes. Also, the difference between student exclusionary discipline incidents at two demographically similar schools was analyzed. The information gained as a result of this study will increase educator awareness of the impact of risk factors and of resources to support appropriate intervention (Craig, 2016; Payne, 2019; Souers & Hall, 2016). The outcomes of this research study may enable educators to implement procedures and practices to support deficiencies and encourage success for students.

Research Questions and Hypotheses

The following research questions and hypotheses guided the study:

1. What is the relationship between the student risk factor of free meal status and student exclusionary discipline outcomes for elementary students in one Missouri school district?

$H1_0$: There is no relationship between the student risk factor of free meal status and student exclusionary discipline outcomes for elementary students in one Missouri school district.

$H1_a$: There is a relationship between the student risk factor of free meal status and student exclusionary discipline outcomes for elementary students in one Missouri school district.

2. What is the relationship between the student risk factor of disability and student exclusionary discipline outcomes for elementary students in one Missouri school district?

$H2_0$: There is no relationship between the student risk factor of disability and student exclusionary discipline outcomes for elementary students in one Missouri school district.

$H2_a$: There is a relationship between the student risk factor of disability and student exclusionary discipline outcomes for elementary students in one Missouri school district.

3. What is the relationship between the student risk factor of race and student exclusionary discipline outcomes for elementary students in one Missouri school district?

$H3_0$: There is no relationship between the student risk factor of race and student exclusionary discipline outcomes for elementary students in one Missouri school district.

$H3_a$: There is a relationship between the student risk factor of race and student discipline outcomes for elementary students in one Missouri school district.

4. What is the relationship between the student risk factor of gender and student exclusionary discipline outcomes for elementary students in one Missouri school district?

$H4_0$: There is no relationship between the student risk factor of gender and student exclusionary discipline outcomes for elementary students in one Missouri school district.

$H4_a$: There is a relationship between the student risk factor of gender and student exclusionary discipline outcomes for elementary students in one Missouri school district.

5. In one Missouri school district, what is the difference in student exclusionary discipline outcomes between two elementary schools with similar student risk factors?

$H5_0$: There is no difference in student exclusionary discipline outcomes between two elementary schools with similar student risk factors in one Missouri school district.

$H5_a$: There is a difference in student exclusionary discipline outcomes between two elementary schools with similar student risk factors in one Missouri school district.

Significance of the Study

This study is important because the findings provide insight about student risk factors and their potential impact on development and educational achievement. In the United States, a preponderance of students who attend public school qualify as poor (Payne, 2019; Suitts, 2016). Since the rate of childhood poverty is increasing, and available resources required to help students in generational and situational poverty situations differ from the resources available in higher socioeconomic areas (Baker & Coley, 2013; Payne, 2019), an examination of these factors was necessary. Trauma and stress associated with student risk factors, such as poverty or race, have the potential to create negative impacts on learning, health, social-emotional skills, and brain development (Bailey, 2015; Bellibas, 2016; Craig, 2016; Crosby, 2015; Payne, 2019; Souers, 2018). Further study could lead to the identification of risk factors with the strongest relationship to student exclusionary suspension incidents and of trauma-informed practices most likely to reduce exclusionary discipline (Bokas, 2016; Craig, 2016; Crosby et al., 2018; Gibson & Gibson, 2019; Jensen, 2019; Minahan, 2019; Souers & Hall, 2016).

In this study, data were analyzed to determine if student risk factors and discipline are related, thereby providing an opportunity to examine options for procedural, relationship-building, and discipline techniques that encourage behavioral and academic success for at-risk students (Craig, 2016; Crosby, 2015; Gibson & Gibson, 2019; Gorski, 2018; Minahan, 2019). This study is significant because it provides educators with knowledge about risk factors, the impact of trauma, and successful trauma-sensitive alternatives that increase achievement and decrease exclusionary discipline and dropout

rates (Green et al., 2018; Henderson & Guy, 2017; Jones, 2018; McCarter, 2017; Public Counsel, 2020; Sacks, 2016). Furthermore, decreased exclusionary discipline and dropout rates benefit society by decreasing the likelihood of the punitive school-to-prison pipeline (Mallet, 2016; McCarter, 2017). This study will add to the knowledge base of existing research about the relationship between exclusionary discipline and risk factors; furthermore, the case study component of this study will contribute to existing research through exploration of demographically similar school environments with different exclusionary discipline rates.

Definition of Key Terms

For the purposes of this study, the following terms are defined:

Epigenetics

Epigenetics is "the study of changes in organisms caused by modification of gene expression rather than alteration of the genetic code itself" (Lexico, 2020, para. 1) and also refers to the ability of an environment to modify genes by turning them off and on (Payne, 2019).

Free Meal Status

Free meal status is the American public school eligibility status for free meals, determined by income and the number of family members in the household (Shahin, 2017).

Neurogenesis

Neurogenesis is the development of the components of the nervous system, including tissues and nerves (*Merriam-Webster*, 2020a).

Neuroplasticity (Plasticity)

Neuroplasticity is the "capacity for continuous alteration of the neural pathways and synapses of the living brain and nervous system in response to experience or injury" (*Merriam-Webster*, 2020b, para. 4). Neuroplasticity also "refers to the brain's continuous capacity to generate new neural networks in response to stimuli" (McTighe & Willis, 2019, p. 11).

Risk Factors

Risk factors are characteristics, such as child or family demographics, that have the potential to increase the probability of negative results (O'Higgins et al., 2015).

Student Mobility

Student mobility pertains to the frequency of a student moving to another school mid-year for reasons excluding promotion to the next grade (Sparks, 2016).

Title I

Title I is an educational program/status established to provide supplemental funding to schools with a significant number of students from poverty (USDOE, 2004). One of the purposes of Title I is to meet "the educational needs of low-achieving children in our nation's highest-poverty schools, limited English proficient children, migratory children, children with disabilities, Indian children, neglected or delinquent children, and young children in need of reading assistance" (USDOE, 2004, para. 3).

Under-Resourced

Under-resourced refers to individuals considered to have less money or materials than are necessary or needed (*Oxford Learner's Dictionary*, 2020). For the purposes of

this study, under-resourced refers to students at an educational disadvantage who qualify for free or reduced meals per federal guidelines.

Delimitations, Limitations, and Assumptions

The scope of the study was bounded by the following delimitations:

Time Frame

Data were collected during the Fall 2020 semester related to the 2018–2019 school year. Data from the most recent school year, 2019–2020, were not used due to an unforeseen school closure related to the COVID-19 pandemic. The school closure began in March 2020 and continued until the end of the 2019–2020 school year, resulting in an incomplete data set that would not be comparable to a typical school year.

Location of the Study

The study took place in a midwestern school district located in southwest Missouri.

Sample

The participants in the sample were students enrolled at two similar elementary schools in one southwest Missouri school district.

Criteria

Only participants who attended the two similar elementary schools in the southwest Missouri school district were considered.

The following limitations were identified in this study:

Sample Demographics

The research in this study focused on students who attended grades K–5 in a midwestern school district; therefore, the sample in this study was a limitation and the analysis results are not absolute (Fraenkel et al., 2019).

Instrument

The instrument used in this research was the PowerSchool eSchool Plus Student Information System, which is used by the midwestern school district to manage student information. The student and discipline data obtained from PowerSchool eSchool Plus Student Information System are considered to be secondary data. The PowerSchool eSchool Plus system is entirely web-based, configurable, intuitive, secure, scalable, can be accessed anywhere, and is designed to intelligently manage student data (PowerSchool, 2020b).

The following assumptions were accepted:

1. Discipline entries are subjective, based on situation and administrator judgment at each school building, and can differ across the school district. The assumption was made that school administrators followed the scope and sequence of the district's discipline handbook.

2. Paperwork regarding risk factors, such as race and free and reduced meal status, must be completed correctly by parents or guardians. The assumption was made that all eligible families correctly completed the necessary paperwork.

Summary

Included in Chapter One were the background of the study, the theoretical framework, and the statement of the problem. The purpose of the study, the research

questions, hypotheses, and the significance of the study were presented. The definition of key terms and the delimitations, limitations, and assumptions were also presented.

Chapter Two includes the review of current literature. Main topics presented include a thorough investigation of Bronfenbrenner's ecological systems theory; a history of learning and accountability; school discipline; the school-to-prison pipeline; and the risk factors of poverty, race, gender, and special education. Finally, a review of trauma-informed schools and alternatives to exclusionary discipline are presented.

Chapter Two: Review of Literature

The purpose of this study was to examine the relationship between student risk factors and exclusionary discipline rates. Also, the difference in discipline outcomes between elementary schools with similar student risk factors was examined. The study was based upon demographic and exclusionary discipline data obtained from a midwestern school district and the two similar school buildings within the midwestern school district. The goal of this study was to increase awareness about the impact of risk factors on students and to identify potential resources for intervention.

The literature review is framed by Bronfenbrenner's (1977) ecological systems theory, which posits that an individual's development is affected by the various facets of that individual's environment. The literature review includes integrated information about the history of learning and accountability, historical and recent aspects of discipline, the link between exclusionary discipline and the school-to-prison pipeline, and risk factors that have the potential to impact a student's academic and behavioral success in school. The literature review includes recent research regarding trauma, the impact of trauma on brain development, and alternatives to exclusionary discipline.

Theoretical Framework

Bronfenbrenner (1977), in his ecological systems theory, postulated how the varying levels of an individual's environment affect the individual and the individual's development. Bronfenbrenner initially developed the ecological systems theory in an attempt to enrich school psychology research and application and to increase understanding of the impact of relationship systems and interactions that can affect, as well as be affected by, an individual throughout the individual's life course (Burns et al.,

2015; Elliott & Davis, 2018; Ettekal & Mahoney, 2017; Hertler et al., 2018; Johnson, 2008). The varying levels of an individual's environment, also referred to as nested connections or networks that can hinder or support achievement, include the microsystem, the mesosystem, the exosystem, and the macrosystem (Bronfenbrenner, 1977; Ettekal & Mahoney, 2017; Okilwa, 2016).

The microsystem, the level closest to the individual, is the system within which an individual has direct contact and maintains bidirectional influence with others in the immediate environment (Crosby, 2015; Johnson, 2008). The microsystem encompasses structures and interactions between the individual and his or her family, school, peers, or workplace and is explained as a pattern of roles, interpersonal relationships, and activities performed by an individual in a specific setting with other individuals with distinct characteristics and belief systems (Bronfenbrenner, 1977; Ettekal & Mahoney, 2017; Johnson, 2008). According to Tudge et al. (2017), the microsystem is the most important and influential environment due to the potential for close contact with individuals and objects for a significant amount of time.

Within the next level, the mesosystem, an individual is indirectly influenced by interactions and dynamics of relationships, such as interactions between the individual's parent and teacher, in important settings during particular times (Bronfenbrenner, 1977; Crosby, 2015; Johnson, 2008). Mesosystem analysis can provide an understanding of the requirements of different settings and that different behaviors are acceptable in different environments (Tudge et al., 2017). The exosystem is a representation of the larger social structure that does not directly interact with the individual but can impact the individual's microsystems through policies, decisions, regulations, mandates, and economics

(Bronfenbrenner, 1977; Crosby, 2015; Johnson, 2008, Tudge et al., 2017). The macrosystem, often referred to as the social blueprint of a culture, includes influential factors such as legislation, cultural perceptions, ideologies, belief systems, access to resources, customs, and lifestyles (Bronfenbrenner, 1977; Crosby, 2015; Johnson, 2008; Tudge et al., 2017).

Researchers have utilized Bronfenbrenner's ecological systems theory to provide information about frameworks aimed at assisting educators when implementing bullying prevention and trauma-informed practices (Burns et al., 2015; Crosby, 2015). An ecological systems model may enable educators in addressing individual student difficulties as well as issues that may be created or supported by the individual's environment (Burns et al., 2015). For instance, if a program was designed for the prevention of bullying, it would be more effective if it included ecologically-based strategies such as improved supervision, parent training and involvement, improved classroom management techniques, and school policies about bullying (Burns et al., 2015). Trauma can hinder social, emotional, and cognitive development, which may impact a child's success in academics, behavior, and interpersonal relationships (Crosby, 2015). Educators who utilize an ecological systems model understand how to provide a holistically-based intervention system that guides students through the various levels of their lives and provides them with environments where they can be successful (Crosby, 2015).

When facets of a child's ecosystem are compromised, the child is at greater risk of developing maladaptive and unhealthy behaviors, which leads to decreased opportunity for success in a school setting (Crosby, 2015). Unhealthy student behaviors

have been associated with negative family structures (microsystem), little or no parental involvement with the child's school (mesosystem), and oppressive living conditions or poverty (macrosystem) (Crosby, 2015). Educators who utilize trauma-informed school practices based on Bronfenbrenner's ecological systems theory take into consideration the importance of each student's environment and experiences, and such practices enable educators to assist students at each ecological level (Crosby, 2015; Tudge et al., 2017).

Educators can assist students at the microsystem level by being attuned to behaviors and needs, developing positive relationships, being emotionally present, and demonstrating unconditional positive regard (Crosby, 2015; Tudge et al., 2017). At the mesosystem level, educators can support positive peer relationships by teaching interpersonal skills, interacting with community organizations in support of students and their families, and collaborating with mental health professionals to develop strategies for student success (Crosby, 2015). At the exosystem level, schools can implement and maintain a positive culture with trauma-informed practices that appropriately communicate expectations, hold students accountable, and promote seated instructional time through a decreased practice of exclusionary discipline (Crosby, 2015). At the macrosystem level, school districts can assist students and families by implementing policies and programs that engage educators in trauma-based practices and professional opportunities for decreasing cultural biases (Crosby, 2015).

Bronfenbrenner's (1977) ecological systems theory was utilized to frame this study to determine which factors have the most significant impact on student discipline incidents at the midwestern school district. Table 1 illustrates the risk factors included in this study, categorized into the levels of Bronfenbrenner's ecological systems theory. The

majority of the student risk factors detailed in this study fall into the microsystem level, which is the environmental level with the most impact on student development (Crosby, 2015). Student exclusionary suspensions fall into the mesosystem level because they exist within the interactions of the school environment (Crosby, 2015). The levels of Bronfenbrenner's (1977) ecological systems theory, as related to the risk factors in this study, were utilized in the interpretation of the data results to determine which levels have the greatest relationship with exclusionary discipline rates.

Table 1

Risk Factors Categorized by Ecological Systems Theory Environmental Level

Risk Factor	Environmental Level
Students qualified for free meals	Microsystem
Student gender	Microsystem
Students qualified for special education	Microsystem
African American students	Microsystem
Student exclusionary suspensions	Mesosystem

History of Learning and Accountability

The 10th Amendment of the *United States Constitution* provided a foundation for state governmental power over education (DuFour et al., 2018). Despite this provision, the federal government has also supported education in myriad ways throughout history (DuFour et al., 2018; Jennings, 2000). In the 18th century, Congress demonstrated support for schools when they set aside almost 80 million acres of land for school establishment (Jennings, 2000, "Federal Aid Before Title I" section, para. 1). Following the Civil War, Congress ruled that all new union states would provide nonsectarian free

public schools (Jennings, 2000). More recently, state and federal governments have been concerned about students who report to school with economic, physical, mental, and educational disadvantages (Jennings, 2000). In response to this concern, a national commitment has been demonstrated toward the authorization of legislation specifically designed to assist in the education of children who are educationally and economically disadvantaged (DuFour et al., 2018; Jennings, 2000; Office of Education, 1969; USDOE, 2016a).

In 1954, the Supreme Court ruled in *Brown v. Board of Education* that racial segregation in schools violated the 14th Amendment (DuFour et al., 2018, p. 10; Jennings, 2000, "The Birth of Title I" section, para. 1). The ruling in *Brown v. Board of Education* set the foundation for the federal government's right to limit the authority of states with regard to education and started a national debate about the quality of education provided to African American children (DuFour et al., 2018; Jennings, 2000). This national debate led to a needs-based discussion about all children of all races who had disadvantages (Jennings, 2000).

After assuming office in 1961, President John Kennedy proposed a federal aid program for education that included a focus on the education of African American students and poor or disadvantaged students (Jennings, 2000, "The Birth of Title I" section, para. 1). These proposals linked the issues of race and poverty with regard to educational opportunity but were never enacted because southerners feared forced racial integration, conservatives thought the aid would lead to federal control, and private schools blocked legislation that did not also support their facilities (Jennings, 2000). In 1965, President Lyndon B. Johnson, who assumed office following Kennedy's

assassination, declared a war on poverty, and Congress passed the Elementary and Secondary Education Act of 1965 (DuFour et al., 2018, p. 11; Jennings, 2000, "The Birth of Title I" section, para. 5; Paul, 2016, para. 1).

The Elementary and Secondary Education Act, or ESEA, represented a national commitment to equal educational access and the provision of resources and financial assistance to schools that served children from low-income families (DuFour et al., 2018; Paul, 2016). Title I of the Elementary and Secondary Education Act, which accounts for five-sixths of ESEA-authorized funds, was enacted to improve educational programs and close the educational opportunity gap between students from low-income households and students from higher-income households (Office of Education, 1969, p. 1; Paul, 2016, para. 2). A schoolwide Title I program is a reform strategy designed to be comprehensive and to provide support for the entire educational program of a school (Paul, 2016; USDOE, 2016b).

A schoolwide program can be operated if 40% of its students reside in poverty, the school receives a waiver stating the 40% poverty threshold need not be met, or if the school implements a program through a School Improvement Grant (USDOE, 2016b, p. 2). Initially, many educators felt a goal of Title I was to break the cycle of poverty through the addition of resources and an increased focus on the needs of disadvantaged children (Jennings, 2000). The Elementary and Secondary Education Act was initially authorized for a period of five years; however, Congress, between the years 1965 and 2015, modified and reauthorized the law 10 times (DuFour et al., 2018, p. 12). In 1966, a provision for handicapped children was added, and provisions for delinquent or neglected children and migratory children were added in 1967 (Office of Education, 1969, pp. 7–8).

In the 1983 report *A Nation at Risk,* President Ronald Reagan's National Commission on Excellence in Education revealed its opinion about the overall performance of public schools, stating the mediocrity of education threatened the nation's future (DuFour et al., 2018, p. 12). During a scheduled reauthorization of Title I in 1988, a statute was added that required states to define academic achievement levels for disadvantaged students and to identify students who did not demonstrate progress (Jennings, 2000, "A Retrenchment in Title I" section, para. 6; Paul, 2016, para. 9). The statute allowed flexibility in the use of federal funds and set out a system for states to use in supporting low-performing schools, beginning with school improvement plans and ending with intervention from the state if schools failed (Jennings, 2000).

During an educational summit in 1989, President George H. W. Bush met with state governors and decided academic achievement in America could be improved through the establishment of national goals and standards that required state decisions regarding methods for goal achievement (DuFour et al., 2018, p. 12; Jennings, 2000, "A Retrenchment in Title I" section, para. 9). President Bush proposed America 2000, a strategy for national school reform, in 1991; however, the Bush Administration did not enact legislation that would provide funding for the entirety of the reform strategy (Jennings, 2000, "Academic Standards and Assessments" section, para. 1). Despite the lack of funding for the America 2000 strategy, President Bill Clinton later signed the Goals 2000: Educate America Act (1994), which became a framework for revamping federal programs, including Title I, and assisting states in the development of academic standards (DuFour et al., 2018, p. 13; Jennings, 2000, "Academic Standards and Assessments" section, para. 5). President Clinton and the United States Secretary of

Education, Richard Riley, asserted public schools would improve if states required holding all students, including disadvantaged students, to the same high standards (Jennings, 2000).

In 2001, President George W. Bush reauthorized the ESEA as No Child Left Behind (NCLB) and increased accountability measures for schools (Paul, 2016, para. 11). Under No Child Left Behind, President Bush's first legislative initiative, schools were mandated to report mathematics and reading assessment results annually and to disaggregate test results by student demographics such as race and ethnicity (DuFour et al., 2018; Paul, 2016). Schools were also required to hire highly qualified teachers, if the teachers were hired through Title I funding, and to meet Adequate Yearly Progress goals (Paul, 2016). If a school was identified as needing improvement and failed to meet Adequate Yearly Progress for two years, corrective actions were taken by the state (DuFour et al., 2018; Paul, 2016).

These corrective actions could include restructuring, providing students an option to transfer to a different school that was meeting standards, withholding a percentage of the school's Title I funds, requiring the school to provide free tutoring for students, or turning the school into a charter school (DuFour et al., 2018; Paul, 2016). No Child Left Behind's increased focus on accountability led to greater protection of at-risk students (Paul, 2016). However, it also led states to lower their standards to avoid being designated as failing, which then led to the national Common Core State Standards initiative in 2009, an initiative initially supported by most states (DuFour et al., 2018, p. 15). As stipulations of No Child Left Behind continued to be in effect, many schools failed to reach their Adequate Yearly Progress goals and petitioned the United States

Department of Education for waivers that would allow the schools to choose methods to demonstrate improvement (DuFour et al., 2018).

On December 10, 2015, the Elementary and Secondary Education Act of 1965 was reauthorized as the Every Student Succeeds Act (ESSA) (Paul, 2016, para. 13; USDOE, 2019b, para. 1). While the amended law continued to focus on accountability testing and reporting, it also offered increased flexibility compared to the law's previous provisions as long as schools continued to demonstrate the adoption of college and career-ready assessments and standards, implement systems of accountability for low-performing schools, and utilize effective evaluation and support programs (Paul, 2016). The ESSA considers a broad set of factors for school accountability measures alongside significant changes with regard to the role of state assessments and supports school efforts in streamlining testing procedures and reducing the amount of instructional time allocated to testing (Brown et al., 2016). The previous NCLB requirement that student assessment score growth be utilized in teacher performance evaluations was eliminated in the reauthorized version of the law, and NCLB's mandate regarding the hiring of highly qualified teachers was replaced with a provision stating that Title I teachers are required to meet state licensure and certification requirements (Brown et al., 2016; DuFour et al., 2018). The ESSA also states minority students and disadvantaged students who are taught in Title I-funded schools must not be taught by a higher ratio of ineffective teachers than students at other schools (DuFour et al., 2018).

The ESSA continued the No Child Left Behind policies regarding annual assessments and expanded reporting to include subgroup categories such as homeless students, foster children, and students from military families (DuFour et al., 2018). The

provisions of the ESSA allow states increased autonomy in defining school success and in the development of improvement plans for failing schools (Brown et al., 2016). States are granted the opportunity to utilize the flexibility of the ESSA in the development of more effective testing systems and are given the choice of having students complete condensed comprehensive assessments instructionally embedded throughout the school year instead of completing a single comprehensive summative assessment at the end of the school year (Brown et al., 2016; DuFour et al., 2018).

School Discipline

Since the 19th century, American school discipline policies and procedures have been an integral, although continually changing, part of the educational setting as a means to motivate students to behave appropriately (Middleton, 2008, p. 253). Practices have included corporal punishment, shaming, exclusionary discipline, zero tolerance policies, and restorative practices, each implemented with the intention to provide a safe school environment (Mallett, 2016; Middleton, 2008; Public Counsel, 2020; Stearns & Stearns, 2017). More recently, school suspensions, also referred to as exclusionary discipline, have been linked to increased dropout rates, the school-to-prison pipeline, and racial disparities; schools have responded with the implementation of restorative and trauma-sensitive practices (Black, 2016; Crosby et al., 2018; Ford, 2016; Green et al., 2018; Mallett, 2016; McCarter, 2017; Public Counsel, 2020; Steinberg & Lacoe, 2017).

Corporal Punishment and Shaming Practices

During the 19th century, corporal punishment was widely accepted and perceived as a non-controversial, important component of the school experience (Mallett, 2016, p. 16; Middleton, 2008, p. 253). According to Middleton (2008), educational theorists noted

school administrators and teachers found corporal punishment to be a simple method of motivating students to discontinue misbehavior and obey orders. Public humiliation methods of corporal punishment included reasonable force practices such as caning students on the hands and other parts of the body, such as the backside, in extreme situations (Black, 2016; Middleton, 2008).

During the 20th century, the ritual of corporal punishment began to be scrutinized as unnecessary punishment that was damaging to relationships and could possibly be discerned as institutional bullying (Mallett, 2016, p. 16; Middleton, 2008, pp. 270, 275). Due to tort law's articulation of school disciplinary authority as a concept of "in loco parentis," which means "in place of the parent" in Latin, the Supreme Court upheld schools' authority to use corporal punishment until the 1970s, stating teachers and administrators, considered benevolent parental figures, could impose reasonable force when disciplining a student (Black, 2016, pp. 29–31; Russo, 2018). Historical events related to African American discipline and school desegregation during the 1970s changed the view of educators as benevolent parental figures, as reports were made of school officials inappropriately using their discretion for ulterior motives or discriminatory reasons (Black, 2016, p. 32). Corporal punishment became less effective and less acceptable in the 1970s, and other discipline techniques such as suspensions and expulsions were used to remediate misbehavior (Mallett, 2016).

Alongside physical corporal punishment strategies, shaming was also routinely used in American classrooms throughout history, and both techniques have continued to be utilized by educators in various forms, despite the practices being under attack in the early 19th century and onward (Civil Rights Project, 2019; Middleton, 2008; Stearns &

Stearns, 2017, p. 58). The most recognized, or classic, symbol of shaming was the dunce cap derived from the medieval philosopher Duns Scotus, who posited a cone-shaped hat had the ability to focus a student's intelligence in the classroom (Stearns & Stearns, 2017, p. 65). The concept of shaming revolved around emotional disparagement of the student and was found in the Charles Dickens novel, *The Old Curiosity*; the McGuffy's Reader, a staple of instruction used from the 1800s to the 20th century; Mark Twain's book, *The Adventures of Tom Sawyer*; Laura Ingalls Wilder's book, *Little Town on the Prairie*; and in the book *Caddie Woodlawn* by Carol Ryrie Brink (Stearns & Stearns, 2017, pp. 65–68).

In the 20th century, most educators began to move away from the traditional practices of corporal punishment and shaming, which were finally recognized as cause for depression, lower academic gains, crushing of human dignity, increased bullying, damaged relationships, and degradation of a person's character (Civil Rights Project, 2019, p. 20; Middleton, 2008; Stearns & Stearns, 2017, p. 70). In the 1950s, educators took a step back from traditional, overt shaming practices and implemented a modified approach to shaming in which students were sent out of the classroom and to the principal's office in an effort to grant more privacy to punishment (Stearns & Stearns, 2017, p. 73). In more recent times, educators became concerned about sending students to the office because doing so could signal a classroom management problem, and the development of practices such as writing student names on the board and utilizing a colored card-turning system (the card colors signaled how the student was behaving) for disruptive students became commonplace (Stearns & Stearns, 2017). Overall, the practice

of shaming, in any form, leads to negative student emotion and decline in school climate (Lauricella, 2019; Stearns & Stearns, 2017).

Exclusionary Discipline and Zero Tolerance Policies

In the 1970s, after corporal punishment and shaming were perceived as unacceptable and ineffective, schools began practicing techniques such as suspensions and expulsions to address student misbehavior (Mallett, 2016, p. 16). In 1975, the Supreme Court determined, in *Goss v. Lopez*, that schools had previously violated due process and had suspended and expelled students without hearings (Mallett, 2016, p. 16; Russo, 2018). The Supreme Court ruled that students, prior to exclusion from school, are entitled to substantive due process proceedings (Black, 2016; Russo, 2018).

Substantive, rational due process eliminates administrative shortcuts such as presuming guilt or exacting unreasonable or harsh consequences for relatively innocent behavior (Black, 2016; Russo, 2018). Following *Goss v. Lopez*, schools altered their policies and began to incorporate in-school suspensions, a more rehabilitative practice that removed disruptive students while keeping them at school for work completion (Black, 2016; Mallett, 2016; Russo, 2018). In-school suspension efforts were favored until the 1980s when schools, juvenile courts, and adult courts began to transition to stricter consequences for youth crime that often resulted in young offenders being transferred to adult criminal courts (Mallett, 2016, p. 16).

The more stringent consequences for youth crime were evident with the rising rates of juvenile arrests for all crimes (including violent crimes such as homicide, assault, rape, and robbery), increasing societal concerns that youths were becoming more dangerous, and a peak of violent youth crimes in 1994 (Mallett, 2016, p. 17). In response

to the increase of violent crimes, state and federal legislators ruled for increased punitive outcomes for adolescents, including being tried as adults, and set forth policy changes regarding discipline and control in schools (Mallett, 2016; Russo, 2018). High-profile school shootings and a national tough-on-crime movement led to a zero tolerance approach of aggressively policing all problematic behavior, even relatively minor misbehavior, which resulted in an increased number of juveniles tried as adults and the tripling of prison populations for two decades (Black, 2016). In the early 1990s, zero tolerance policies, initially defined as "the systematic enforcement of predetermined exclusionary practices," were implemented in schools with the intention of promoting school safety and demonstrating an unmistakable stance against drug use and violence on school property (Crosby et al., 2018, p. 230; McCarter, 2017; Russo, 2018).

The Safe Schools Act of 1994 was enacted by the United States Senate to help schools be free of drugs and violence in order to maintain a disciplined environment conducive to learning by the year 2000 (GovTrack, 2020, p. 1). Under the Safe Schools Act, schools and police departments increased collaboration, and local educational agencies were required to report acts of violence and crime to law enforcement officials, as well as to the state education department, in efforts to improve student and school safety (Mallett, 2016; McCarter, 2017). As a symbolic seal of approval for the promotion of zero tolerance policies within school districts, Congress enacted the Gun Free Schools Act in 1994 in response to worsening perceptions of school violence, an increase of juvenile arrests, concerns about adolescent gangs, and a cocaine epidemic that impacted poor communities (Mallett, 2016, p. 19). School districts that received federal funds for education were required by the Gun Free Schools Act to expel students caught bringing a

weapon to school property, and the students were then referred to the juvenile or criminal justice system for additional punishment (Black, 2016). As a result of this act, all 50 states passed zero tolerance legislation regarding weapons on school grounds, and many states adopted zero tolerance procedures as a general discipline policy that mandated expulsion or suspension for behaviors ranging from drugs and disorderly conduct to excessive violence or weapons (Black, 2016; Russo, 2018).

The expansion of zero tolerance policies led to an increase in the utilization of security surveillance, metal detectors, and assignments of school-stationed law enforcement officers, often referred to as school resource officers (Mallett, 2016; Texas School Safety Center, 2016). In the 1970s, only 1% of schools reported the assignment of a law enforcement officer (Texas School Safety Center, 2016, para. 3). The percentage of law enforcement officers assigned to schools rose to 22% in 1997, 36% in 2004, 40% in 2007, and 57% in 2011 (McCarter, 2017, p. 55; Texas School Safety Center, 2016, para. 3).

A federal action, the Violent Crime Control and Law Enforcement Act, established the Office of Community Oriented Policing Services (COPS), a United States Department of Justice organization responsible for implementing, defining, and standardizing community-based police services and placing officers in school districts (Community Oriented Policing Services, 2020; Texas School Safety Center, 2016). The COPS office established the Cops in Schools grant in 1999, which was responsible for establishing more than $750 million for the placement of over 6,500 school resource officers in 1999 and has, in the past 20 years, assisted with funding for the placement of over 13,000 school resource officers (Texas School Safety Center, 2016, para. 5). The

COPS organization has invested over $14 billion toward community police services since 1994 (Community Oriented Policing Services, 2020, p. 1). The No Child Left Behind Act and other state initiatives established other funding for school resource officers (Mallett, 2016; Texas School Safety Center, 2016).

The implementation of zero tolerance policies and the Safe Schools Act resulted in school districts increasing and improving documentation of exclusionary discipline incidents (Green et al., 2018). During the 2013–2014 school year, approximately 2.8 million K–12th-grade students were suspended one or more times, and the majority of out-of-school suspensions were for minor disciplinary incidents such as disruption and noncompliance (Green et al., 2018, p. 419). In response to the ideology of zero tolerance and the Safe Schools Act in the 1990s, school districts increased suspension and expulsion in hopes that removing misbehaving students would improve overall student learning and the school environment; however, negative results also surfaced (Mallett, 2016).

Negative results of student suspension and expulsion include a decline in academic achievement, loss of instructional time, fragile cohesion between the school and students, an increase in student misbehavior, incident recidivism for suspended students who return to school, and an increase in risky behavior and the likelihood of students becoming involved with the juvenile or adult justice system (Green et al., 2018; Henderson & Guy, 2017; Mallett, 2016; McCarter, 2017). When a student has been suspended or expelled from school, it may be difficult for that student to overcome potential barriers to reenter school and then graduate high school (Mallett, 2016). Exclusionary discipline can have a negative impact on student self-image and

psychosocial functioning, cause students to become detached socially and disconnect from relationships, lead to more school absences, and increase the dropout rate (Crosby et al., 2018; Henderson & Guy, 2017; Souers & Hall, 2016).

In 2014, researchers found schools with high suspension rates have high dropout rates, and every suspension increases the dropout risk by 10% (Jones, 2018, p. 4). A high rate of suspensions within a school can have a negative impact on school climate and can result in a decline in academic achievement among non-suspended students due to an inherent punitive threat with the potential to create anxiety, distrust, dysfunction, a destabilized and toxic environment, and an increase in the chance of misbehavior in otherwise well-behaved students (Black, 2016). Out-of-school suspension and expulsion percentages modestly declined between 2000 and 2011, with the out-of-school suspension percentage falling from 73% to 57% of total enrollment and the expulsion percentage falling from 72% to 60% (Steinberg & Lacoe, 2017, p. 46).

Despite the decline in exclusionary discipline since 2000, high rates of serious offenses are still being committed by students (USDOE, 2019a, p. 2). According to 2015–16 Civil Rights Data Collection, approximately 1.1 million serious offense incidents were reported by United States public schools during the 2015–2016 school year (USDOE, 2019a, p. 2). This number of incidents, which resulted in nearly 291,000 students being arrested or referred to law enforcement, included physical attacks, fights, and threats with and without weapons, robberies, rape, sexual assaults, and possession of firearms or explosives (USDOE, 2019a, p. 3). At least one incident that involved a school-related shooting was reported by almost 230 schools, and more than 100 schools reported homicide that involved faculty, students, or staff (USDOE, 2019a, p. 2). During

the 2015–2016 school year, approximately 2.7 million students in grades K–12 served out-of-school suspensions one or more times, and nearly 121,000 students were expelled with or without opportunities for educational services (USDOE, 2019a, p. 13).

The goal of zero tolerance policies is to improve school safety; however, according to reported data, some teachers and students in high-discipline schools feel less safe in their school environment than other teachers and students in schools with similar students but lower suspension rates (Steinberg & Lacoe, 2017). In 2012, one-third of teachers reported student behavior problems interfered with lessons, and it has become common for schools with high suspension rates to have high teacher attrition and turnover (Steinberg & Lacoe, 2017, p. 47). The perceived safety level of schools is reflective of the quality of relationships among stakeholders as well as the presence of zero tolerance procedures. At times, student suspensions for less serious offenses may be discretionary; be highly subjective; not be levied impartially; not fit with the offenses; vary by school; be affected by school climate; be disproportionately applied to vulnerable or at-risk students; and be determined by the complicated interactions of the characteristics and behavior of the student, teacher, administrator, and school policies (McCarter, 2017; Sullivan et al., 2013). Zero tolerance and discipline policy variations between schools that are demographically similar result in suspension rates reflective of not only student behavior but also of subjective factors that influence the ways schools operate (Black, 2016; Mallett, 2016). The influence of subjective factors can lead to inconsistency in the application of student conduct codes, which can then lead to a disproportionate impact on specific groups of students as well as a decline in overall school climate (Mallett, 2016; Steinberg & Lacoe, 2017).

School-to-Prison Pipeline

The phenomenon known as the school-to-prison pipeline is a set of school practices and policies that increase the likelihood of students facing criminal charges instead of obtaining a quality education (Mallett, 2016). School suspension and expulsion, also known as exclusionary discipline, can cause a downward spiral for students (Steinberg & Lacoe, 2017). Students who are expelled or suspended are "three times as likely to become involved with the juvenile justice system the following year," and time spent in juvenile detention increases the likelihood of being incarcerated as an adult (Mallett, 2016; McCarter, 2017, p. 57; Public Counsel, 2020). A student's likelihood of dropping out of school doubles after one arrest, and a significant percentage of school dropouts end up unemployed, in poverty, or incarcerated as adults (Black, 2016, p. 11; Public Counsel, 2020, p. 37). Students with the most behavioral and academic challenges are funneled away from school and toward the juvenile or criminal justice system through exclusionary discipline practices, while the real issues impacting these students are not addressed (Crosby et al., 2018, p. 230).

Risk Factor: Poverty

According to Jensen (2019), poverty refers to "a chronic condition resulting from an aggregate of adverse social and economic risk factors" (p. 7). While living in poverty, families cannot afford to pay for necessities such as housing, food, health care, or clothing; therefore, poverty has also been defined as "the state of one who lacks a usual or socially acceptable amount of money or material possessions" (Gorski, 2018, p. 7; *Merriam-Webster*, 2020, para. 1). The American Psychological Association (2020) uses the term low-income and economic marginalization, or LIEM, to provide a more

complete conceptualization of poverty and economic oppression, which is more complex than a lack of financial resources (Barrett et al., 2019, p. 21).

Factors that impact poverty include education, family and economic security, health, food and nutrition, energy, and housing (Missouri Community Action Network, 2018). Generational poverty is poverty that spans generations in a family; situational poverty results from events such as job loss or divorce and can be temporary or can last for a longer period of time (Gorski, 2018; Jensen, 2017). Typical poverty is a condition that has existed in a family for two to 20 years; and absolute poverty is the most intense state of poverty in which individuals suffer daily food scarcity and survive on less than $2.00 per day (Gorski, 2018; Jensen, 2017, p. 2).

Poverty Statistics

In the past 20 years, the percentage of public school students who reside in low-income conditions has increased by more than 33% across the United States (Suitts, 2016, p. 37). An estimated 43% of children live in households without access to basic necessities, and nearly 53% of children are considered low-income (Gorski, 2018, p. 43). In the top-five populated states (Florida, California, New York, Illinois, and Texas), more than 48% of students reside in poverty (Jensen, 2019, p. 5). According to the *2018 Missouri Poverty Report* published by the Missouri Community Action Network (2018) in partnership with Missourians to End Poverty, the statewide poverty rate in Missouri in 2016 was 14%, which included a child poverty rate of 19.2% and indicated an increase of approximately 1% since 2007 (pp. 3–4).

According to data included in the 2012 United States Census, approximately 47 million people lived in poverty, a number that included nearly 25% of the total

population of children in the United States (Gorski, 2018, pp. 41–43). In 2012, the National Poverty Center estimated that almost 1.5 million households were surviving on a daily income of $2.00 or less per person (Baker & Coley, 2013, p. 16). In 2012, nearly one-third of the children in the United States lived in a household where none of their guardians held a full-time, year-round job (Baker & Coley, 2013, p. 4). In 2018, more than one out of every six children lived in poverty and experienced food insecurity (Children's Defense Fund, 2020, p. 12). In 2019, nearly 31% of children lived in a household where more than 30% of the family income was spent on housing costs (Children's Defense Fund, 2020, p. 16).

In 2016, approximately 65% of student dropouts lived in a low-income situation, and the graduation gap between students from poor families and nonpoor families ranged from 3% to 24% (Jensen, 2019, p. 5). According to Missourians to End Poverty, the statewide poverty rate in Missouri was 14% in 2018, with nearly 20% of children living in poverty (Missouri Community Action Network, 2018, pp. 5 & 19). In 2018, the United States poverty rate was 11.8%, and students qualified for free school meals if their family income (family of four) was $31,960 or less annually (see Appendix A) (United States Census Bureau, 2019, p. 1; Shahin, 2017, p. 1). The poverty guideline is currently an income of less than $26,200 for a family of four people (United States Department of Health and Human Services, 2020, p. 1).

Environmental, Health, and General Manifestations of Poverty

Children who live at or below the poverty level experience a high percentage of acute and chronic stress through traumatic events such as neglect, household dysfunction, and abuse (Baker & Coley, 2013; Jensen, 2017; Missouri Community Action Network,

2018; Palomar-Lever & Victorio-Estrada, 2017; Souers & Hall, 2016). Stressful and traumatic events are commonly referred to as Adverse Childhood Experiences, or ACEs. (Missouri Community Action Network, 2018; Souers & Hall, 2016). Low-income families have a decreased understanding of healthy parenting practices, which increases a child's risk for experiencing ACEs (Barrett et al., 2019; Missouri Community Action Network, 2018). Risk outcomes of ACEs that could transpire in later years include substance abuse, obesity, depression, attempted suicide, health problems, and poor work performance (Missouri Community Action Network, 2018).

Students in poverty are more likely to live in single-parent homes and in neighborhoods with greater risk of environmental pollution, limited resources, and unsafe conditions (Henderson & Guy, 2017; Jensen, 2017; Missouri Community Action Network, 2018; Okilwa, 2016; Sacks, 2016). Material deprivation, toxic stress, and traumatic events have a lasting effect on a child's development and can alter resiliency, behavior, ability to learn, and overall mental and physical health (Palomar-Lever & Victorio-Estrada, 2017; Payne, 2019). Other manifestations of poverty include food insecurity, iron deficiency, increased exposure to air toxins and second-hand smoke pollutants, and inadequate access to appropriate health care or insurance (Baker & Coley, 2013; Payne, 2019; Rothstein, 2016).

Academic and Behavior Manifestations of Poverty

Socioeconomic status has been correlated with educational achievement and cognitive ability since the 1960s (Turner & Juntune, 2018, pp. 91–92). The achievement and opportunity gaps between poor and nonpoor students are often apparent prior to the beginning of kindergarten and can persist until students complete high school (Barrett et

al., 2019; Jensen, 2017; Suitts, 2016; Williams et al., 2017). An opportunity gap occurs when material, experiential, and service-oriented dispositional tools that support academic achievement are lacking (Barrett et al., 2019; Gorski, 2018). Due to limited opportunities and supports, as well as an increased exposure to negative conditions that impede learning, students from poverty often begin kindergarten one to three years behind their middle-class peers in vocabulary acquisition, engage in fewer opportunities for complex thinking, have decreased understanding of literacy concepts, and lag more than a year behind children of college graduates (George, 2018; Jensen, 2017, p. 5; Porter, 2015; Rothstein, 2016; Turner & Juntune, 2018; Williams et al., 2017). Students from low-income families have a 16% lower graduation rate than their higher-income peers, and they are less likely to attend college (Bellibas, 2016; Suitts, 2016, p. 37; Williams et al., 2017, p. 184).

Poverty can also negatively impact student behavior because poor students begin kindergarten with a different understanding of social norms and rules, which can generate frustration, work avoidance, and lower achievement (Payne, 2019). Children who reside in poverty are at a greater risk of suspension because they often have difficulties with self-regulation and executive functioning skills that manifest as inattention, defiance, and impulsivity (Barrett et al., 2019; McCarter, 2017). If physical mistreatment has occurred in the home, a child could struggle with cognitive deficits, depression, psychosis, aggression, low self-esteem, and other mental health conditions that have negative impacts on behavior and education (Palomar-Lever & Victorio-Estrada, 2017).

Risk Factor: Race

The Supreme Court declared segregation in schools was unconstitutional during the ruling of *Brown v. Board of Education* in 1954; *The Civil Rights Act of 1964* prohibited discrimination in federally funded schools and programs; and the Supreme Court in *Green v. County School Board of New Kent* ruled desegregation in schools was to end in 1968 (Black, 2016, p. 32). The introduction of integrated classrooms created unrest, and in the early 1970s, as referenced in *Hawkins v. Coleman*, significant racially-biased disparities in school discipline occurred, creating a racial gap in school suspensions (Black, 2016, pp. 34–35; Ford, 2016, p. 44). Racial disparities in school suspensions have continued, revealed by the percentages and increased likelihood of exclusionary discipline for Black students as compared to White students (Ford, 2016; Henderson & Guy, 2017; McCarter, 2017; Public Counsel, 2020; Steinberg & Lacoe, 2017, p. 47; Sullivan et al., 2013).

According to Civil Rights Data Collection for the 2013–2014 school year, Black students in kindergarten through 12th grades were nearly 1.5 times as likely to be chronically absent when compared to White students, were almost four times as likely as White students to receive out-of-school suspensions, were almost twice as likely to be expelled and have no educational services, and were more than twice as likely to be referred to law enforcement or arrested for a school-related incident (Green et al., 2018, p. 419; USDOE, 2016b, pp. 3–8). The Office for Civil Rights reported that during the 2015–2016 school year, Black students represented 16% of the total student enrollment, accounted for 39% of students who received an out-of-school suspension, and accounted for 33% of students who were expelled (USDOE, 2019a, pp. 13, 15). The Civil Rights

Data Collection for the 2013–2014 school year revealed absences were also a concern, with 23% of Black high school students considered chronically absent and Black elementary school students being absent at a rate 1.5 times as often as White students (USDOE, 2016b, pp. 7–8).

Researchers have found Black students are more likely to experience harsher consequences and exclusionary discipline than White students (Ford, 2016, p. 45; Henderson & Guy, 2017, p. 39; McCarter, 2017, pp. 54–55; Public Counsel, 2020, p. 34; Sullivan et al., 2013, p. 100). Racial disparities and disproportionality of exclusionary discipline between Black and White students may be partially attributed to implicit racial bias, which refers to "unconscious attitudes about groups of people that influence our behavior and decision making" (Ford, 2016, p. 45; Gibson & Gibson, 2019). Researchers have suggested disproportionality of exclusionary suspension has a negative impact on students from racial minority groups, and attention should be given to the differential treatment of minority students (Gibson & Gibson, 2019, p. 51; Henderson & Guy, 2017, p. 39; Sullivan et al., 2013, p. 100).

Risk Factor: Gender

According to Civil Rights Data Collection by the United States Department of Education (2016a), in 2013–2014, boys represented 54% of students enrolled in preschool and 78% of preschool students who received out-of-school suspension (p. 3). In grades K–12, boys who were Black or White represented more than one-third of the student population and represented 61% of students subjected to seclusion or restraint (USDOE, 2016a, p. 5). During the 2015–2016 school year, male students represented 51% of the total student population and 69% of the total students who were arrested or

referred to law enforcement (USDOE, 2019a, p. 3). Across all racial categories in kindergarten through 12th grade, male students are more likely than female students to receive disciplinary consequences, approximately twice as likely to be suspended, and are arrested or referred to law enforcement more often (Crosby et al., 2018; McCarter, 2017, p. 55; Sullivan et al., 2013, p. 100; USDOE, 2019a).

Risk Factor: Special Education

Students with disabilities often manage reactions to traumatic stress by engaging in behaviors commonly perceived as inappropriate or noncompliant (Szarkowski & Fogler, 2020). In recent years, students with disabilities have represented less than 15% of the total student population, but they have been twice as likely as students without disabilities to serve out-of-school suspension and 75% more likely to be expelled (Green et al., 2018, p. 419; McCarter, 2017, p. 55; Steinberg & Lacoe, 2017, pp. 47–48; USDOE, 2016a, p. 4; USDOE, 2019a, p. 8). During the 2013–2014 school year, students with disabilities represented 12% of the total student population, yet they represented 67% of students who had experienced seclusion or restraint (USDOE, 2016a, p. 5). Students with disabilities are chronically absent approximately 1.5 times as often as students without disabilities (USDOE, 2019a, p. 8). Students who exhibit emotional disturbances are more than 10 times as likely to be removed from the school setting, and Black students with disabilities are nearly three times as likely as other students with disabilities to experience exclusionary discipline (McCarter, 2017, p. 55).

Neuroscience and Trauma-Based Maladaptive Neuroplasticity

Poverty and exposure to trauma and toxic stress are associated with changes in the development of brain architecture, behavioral and academic problems, an increased

chance of dropping out of school, and an increase in the possibility of imprisonment (Craig, 2016; Gorski, 2018; Public Counsel, 2020; Sacks, 2016). Nearly two-thirds of children experience a childhood trauma such as maltreatment, neglect, violence, or abuse (Craig, 2016; Minahan, 2019, p. 30). When a child experiences trauma, areas of the brain become overdeveloped for protection, which can cause the child to respond in a survival or fight-or-flight fashion to unrelated situations that trigger a reminder of trauma (Bailey, 2015; Gibson & Gibson, 2019; Gorski, 2018; Public Counsel, 2020; Souers, 2018). Traumatized students have not learned healthy ways to express emotions, are dysregulated, operate from a state of stress, appear antagonistic, have difficulty with self-regulation and trust, are defensive and guarded, demonstrate distress by being aggressive or shutting down, are inattentive, have poor relationship skills, and cannot learn unless they feel cared for and safe (Craig, 2016; Minahan, 2019; Souers, 2018).

Neuroscience

The reticular activating system is the lower portion of the posterior brain that is reactive, critical for survival, involuntarily filters and prioritizes sensory information, decides what information should be attended to by the brain, and sends an alarm to the limbic system if the information is threatening (McTighe & Willis, 2019; Sprenger, 2020). Inside the reticular activating system, the amygdala serves as an emotional filter that processes external stimuli, examines information, and determines if a fight or flight response is necessary before sending the message to other parts of the brain (Bailey, 2015; Gibson & Gibson, 2019; Sprenger, 2020). When the brain receives prolonged or extreme messages of traumatic stress, neuron pathways in the hypersensitized amygdala become less elastic, which causes the brain to become survival-oriented and to release

neurotransmitters and hormones such as cortisol that increase the size of the amygdala and decrease the size of the areas in the brain responsible for executive functioning and logical thought, such as the hippocampus and prefrontal cortex (Gibson & Gibson, 2019; McTighe & Willis, 2019; Sprenger, 2020). The hippocampus serves as an ally to the amygdala, connects emotions to memories and learning, and recalls previous survival methods used during threatening experiences (Gibson & Gibson, 2019; Jensen, 2019).

As the brain adjusts and adapts to recurring emotions, actions, experiences, and observations, it undergoes neuroplasticity and makes connections, builds new neural networks, and remaps and restructures itself (Bailey, 2015; Gibson & Gibson, 2019; Jensen, 2019; McTighe & Willis, 2019). When the brain achieves relative physiological stability necessary for survival, allostasis occurs; however, if stability is not achieved, a chronically active, dysregulated, maladaptive neuronal activity called allostatic load occurs (Gibson & Gibson, 2019; Payne, 2019). Allostatic load is the brain's attempt to readjust many physiological systems for survival through the overutilization and normalization of neuronal stress response activity (Gibson & Gibson, 2019; Payne, 2019).

Trauma-Based Maladaptive Neuroplasticity

The brain adapts and develops new capabilities and greater capacity as it copes with stimuli and experiences (Gibson & Gibson, 2019). Trauma can alter the chemistry, biology, function, and structure of the brain, cause epigenetic changes, force the brain to overutilize stress response activity, and maladaptively create new neural pathways to reflect the environment and survive toxic stress (Gibson & Gibson, 2019; Gorski, 2018; Jensen, 2019; Payne, 2019). Even simple exposure to verbal abuse from caregivers has an

adverse, deleterious impact on the integrity of brain connectivity (Jensen, 2019). When a brain undergoes trauma-based maladaptive neuroplasticity, the ability to regulate thinking, behavior, and emotions is diminished, and the need to reenact trauma becomes compulsive (Craig, 2016; Gibson & Gibson, 2019; Minahan, 2019; Platt, 2019).

Serious childhood trauma has affected nearly two-thirds of America's children (Minahan, 2019, p. 30). While experiencing trauma and operating in a state of survival, the brain cannot move to a state of executive functioning that supports logic and reasoning (Souers, 2018). This causes children to struggle with self-regulation, negativity, motivation, trust, aggression, defiance, relationships, dealing with stress, and handling emotions (Craig, 2016; Minahan, 2019; Platt, 2019; Souers, 2018). Early trauma can also cause guardedness, particular attentiveness to perceptions of negativity from others, and resistance to participation in classroom activities (Craig, 2016).

Trauma-Informed Schools and Alternatives to Exclusionary Discipline

In a trauma-informed school, the main purpose is to promote educational goals by proactively optimizing student positivity and productivity while reducing emotional difficulties and problematic behaviors (Public Counsel, 2020). A relationship-centered school culture that is trauma-informed motivates and educates the whole child, providing greater success for students considered at-risk (Bokas, 2016; Craig, 2016; Gray, 2017; Okilwa, 2016; Souers, 2018). Trauma-informed discipline policies and procedures encourage the development of positive, unconditional staff and student relationships to support and encourage students as they correct maladaptive behaviors, learn to handle stressful triggers, and build confidence (Crosby et al., 2018; Dill, 2015; Minahan, 2019).

Trauma-Informed Schools

Researchers have found students who live in high-poverty homes or who have experienced trauma can be successful if they attend a school with a culture of strong emotional and instructional support (Berkowitz et al., 2017; Crosby et al., 2018; Gray, 2017; Jensen, 2019; Sacks, 2016). Strong support is imperative because students who have experienced trauma-based maladaptive neuroplasticity are often negative and defensive, and they disproportionately display dysregulated behavior and emotions, which hinders the learning process (Gibson & Gibson, 2019; Minahan, 2019). The damaging effects of poverty and trauma can be reduced through empathetic relationships, which foster the growth of the hippocampus, an area of the brain responsible for memory and learning (Bailey, 2015; Bokas, 2016; Jensen, 2019; Payne, 2019; Platt, 2019). Educators who provide a learning environment that is safe, personal, non-chaotic, intentional, empowering, challenging, and organized can encourage the development of the prefrontal cortex and a reduction of allostatic load in students who have experienced trauma-based maladaptive neuroplasticity (Bellibas, 2016; Berkowitz et al., 2017; Dill, 2015; Gibson & Gibson, 2019; Gray, 2017; Jensen, 2019; McKibben, 2018b; Payne, 2019; Souers & Hall, 2016).

Maslow's hierarchy of needs is a theory about how human behavior is driven by the impact of increasingly complex needs, beginning with low-level deprivation needs such as physiological and safety, and ending with high-level personal growth needs such as esteem and self-actualization (Cherry, 2019). When lower-level needs such as hunger and safety are unmet, a student's focus is on daily survival and not on academics (Bokas, 2016; Platt, 2019). Comprehensive educational programs, such as the Association for Supervision and Curriculum Development's Whole Child approach and the Safe and

Supportive Schools Model, are based on Maslow's theory and address the varying needs of students, offer empathy, encourage student engagement, equip students for learning and facing complex challenges through high expectations, and promote long-term development (Berkowitz et al., 2017; Griffith & Slade, 2018; Platt, 2019). Educating the whole child requires recognition of the trauma embedded into student lives and ensuring students have adequate resources to succeed (Souers, 2018; Suitts, 2016).

Trauma-informed educators utilize proactive and supportive methods to help students develop an awareness of their own emotions, connect with their own needs, and regulate their own behavior so they are able to optimize their productivity (Public Counsel, 2020; Sprenger, 2020). Some trauma-informed schools have incorporated mindfulness practices into the school curriculum to help students cultivate awareness of each moment, pay attention to their feelings and thoughts, manage impulsivity and negative experiences, enhance executive function skills, and improve self-control (Aguilar, 2019; Armstrong, 2019; Sacks, 2016). Counseling, sensory integration, and other mental health interventions help students cope with trauma-related stress, process emotional triggers, and learn healthy self-regulation strategies (Armstrong, 2019; Crosby et al., 2018). Educators trained to understand the potential impact of trauma can identify behaviors that signal a student's attempt to reenact a trauma, and they are more equipped to deescalate the student and prevent re-traumatization (Craig, 2016).

Emotions drive cognition, and each thought has an emotion affixed to it; therefore, students in a positive emotional state will be more engaged in the learning process because positive emotions allow the prefrontal cortex (executive functioning area) of the brain to be active and to make connections (Brackett, 2018; McTighe &

Willis, 2019; Sprenger, 2020). Conscious Discipline practices are centered around helpfulness and contribution through the development of a supportive school family, which provides a sense of safety and connectedness (Bailey, 2015). Supportive, positive relationships reduce reliance on survival reactions, encourage optimal neural connections, and can begin to reverse the negative effects of trauma-based maladaptive neuroplasticity (Bailey, 2015; Gibson & Gibson, 2019; McTighe & Willis, 2019).

Educators who utilize Social Emotional Learning strategies understand both positive and negative emotions can become resources for making decisions and reaching goals (Brackett, 2018). Social Emotional Learning practices are focused on both intellectual and character development (McKibben, 2018a; Public Counsel, 2020; Sprenger, 2020). Within the Social Emotional Learning practices, character strengths are grouped into three categories: interpersonal (empathy and honesty), intrapersonal (self-control and grit), and intellectual (open-mindedness and humility) (McKibben, 2018a). The key competencies taught and reinforced in the Social Emotional Learning structure are self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Public Counsel, 2020). The components of Social Emotional Learning are empathy, teacher-student relationships, self-management and awareness, focusing on people, responsible decision making, relationship skills, and social awareness (Sprenger, 2020).

Researchers have found educators who implement Social Emotional Learning strategies have assisted in the improvement of academics, created a more positive school community, helped students develop coping mechanisms, and reduced discipline incidents (Lenz et al., 2018; McTighe & Willis, 2019). A key focus of Social Emotional

Learning is intrapersonal character strengths and grit, which refers to overcoming obstacles and maintaining the strength and tenacity to reach goals (Jensen, 2019). The Social Emotional Learning curriculum for elementary schools, Caring School Community, is evidence-based and nationally recognized for successful strategies provided to help students develop their interpersonal character strengths through schoolwide communities (Lenz et al., 2018). The Communities in Schools program is an outreach program designed to build relationships between students and the community and further support vulnerable students as they develop academic and life skills (Milliken & Shorthouse, 2016).

In order to help students who have experienced trauma, effective educators are committed to equity, fostering safety, providing a positive school environment with high expectations and rigorous educational experiences, and having courageous conversations to remove barriers to education (Berkowitz et al., 2017; Budge & Parrett, 2016; Gorski, 2016; Raymond, 2016; Smith & Brazer, 2016). A commitment to equity requires the ability to cognize inequity, a willingness to immediately address inequity and create a plan for preventing long-term inequity, and following through in order to sustain an equitable situation (Gorski, 2016). A safe, rigorous, and positive school environment increases intrinsic motivation and brain function, which promotes academic success and decreases risky and aggressive behavior (Bailey, 2015).

Alternatives to Exclusionary Discipline

To develop an equitable and respectful school culture with discipline procedures that help students correct misbehavior, trauma-informed schools utilize restoration practices such as Social Emotional Learning, Restorative Justice, Response to

Intervention, and Schoolwide Positive Behavioral Interventions and Supports (Armstrong, 2019; Black, 2016; Brackett, 2018; McKibben, 2018a; Public Counsel, 2020; Sacks, 2016). Restorative practices recognize student misbehaviors harm relationships, allow students to learn from mistakes and make amends, and teach students how to behave rather than punishing them for acting in a problematic fashion (Fisher & Frey, 2019). A successful learning environment without reliance on exclusionary discipline can be created and maintained through restorative practices (McCarter, 2017).

Through high-quality, positive relationships, trauma-sensitive schools promote rehabilitation, resilience, and safety for at-risk students (Craig, 2016; McCarter, 2017). Social Emotional Learning practices are centered around intellectual, intrapersonal, and interpersonal character strengths; focus on resilience, hope, grit, growth mindset, and emotional intelligence; and actively model and reinforce key competencies such as self-awareness, self-management, relationship skills, responsible decision-making, and social awareness (Brackett, 2018; Jensen, 2019; Lenz et al., 2018; McKibben, 2018a; McTighe & Willis, 2019; Public Counsel, 2020; Sprenger, 2020). Trauma-informed educators who utilize Social Emotional Learning practices understand disproportionate displays of negative emotion can stem from traumatic stress, and they hold students accountable with compassion and appropriate interventions to build trust and coping skills instead of focusing on penalizing the student (Gibson & Gibson, 2019).

With practices originating in the justice system, Restorative Justice is a proactive set of principles that create inclusion and connectedness, is centered on accountability and relationship reparation, and utilizes prevention strategies to curtail behaviors considered inappropriate (Black, 2016; Public Counsel, 2020). Schools that utilize

Restorative Justice approach discipline equitably and respectfully in order to maintain a school culture that strengthens relationships, addresses the root of problems, and focuses on harm instead of rule-breaking (Fisher & Frey, 2019; Public Counsel, 2020). Punitive discipline strategies are exclusionary in nature, while Restorative Justice practices build community by bringing together authority figures, harmed individuals, and the individuals who did the harm to repair the situation and the relationships (Sprenger, 2020). Practices of collaborative problem-solving in Restorative Justice give a voice to the harmed individuals, empower everyone involved in the situation, and promote growth opportunities (Public Counsel, 2020).

Schoolwide Positive Behavioral Interventions and Supports takes a whole-system approach, focuses on school culture, teaches communication and self-management strategies, reinforces positive behavior, teaches emotional and social skills, and encourages proactive and prosocial behavior through the instruction of behavioral expectations (Green et al., 2018; Steinberg & Lacoe, 2017). The Response to Intervention model maintains a goal of preventing future behavior problems by tailoring behavioral interventions to the specific needs of each student (Steinberg & Lacoe, 2017). A proactive classroom management technique called a precorrection, which is a statement used to prompt students to display appropriate behavior before a problem occurs, can be used to guide interventions and prevent misbehavior (Green et al., 2018). Individualized interventions prioritize the student, are developmentally responsive, and ensure self-regulation capacities are strengthened while focusing on the health of the overall school community (Keels, 2020).

Student misbehavior is not only a function of trauma-based maladaptive neuroplasticity and subsequent student choices, it is also a function of the student's school environment (Black, 2016; Gibson & Gibson, 2019; Minahan, 2019). Directives, practices, and thoughtful interactions that convey transparency and respect will help traumatized and at-risk students feel safe, thereby increasing their opportunities for success (Minahan, 2019). Reform of exclusionary discipline practices is an essential intervention in the provision of acceptable and equitable educational opportunities (Black, 2016).

Summary

Included in Chapter Two was the review of current literature. The main topics presented in Chapter Two were Bronfenbrenner's ecological systems theory, the history of learning and accountability, school discipline, the school-to-prison pipeline, and the risk factors of poverty, race, gender, and special education. A review of trauma-informed schools and alternatives to exclusionary discipline was also presented.

Chapter Three includes an overview of the problem and purpose, the research questions and hypotheses, and details about the population and sample. Also included in Chapter Three are data collection procedures and statistical data analysis utilized in the study. Finally, a review of relevant ethical considerations is presented.

Chapter Three: Methodology

Chapter Three includes an overview of the problem and purpose of the study, the research questions and hypotheses, the research design, and the population and sample. Chapter Three also contains a discussion of data collection procedures and statistical data analysis utilized in the study. Finally, a review of relevant ethical considerations is presented. The information contained in this chapter can be utilized by administrators and educators who serve at-risk students and seek a greater understanding of the relationships between risk factors and exclusionary discipline.

Problem and Purpose Overview

Approximately 19% of American children reside in poverty, according to 2016 United States Census Bureau data (Payne, 2019, p. 169). Jensen (2019) emphasized under-resourced students are often exposed to stress and trauma that have a negative impact on brain development and behavior. Researchers have confirmed childhood trauma can hinder a student's ability to self-regulate, reach academic potential, and behave appropriately (Gibson & Gibson, 2019). Fortunately, teachers can effectively help under-resourced students by being trauma-informed and understanding the triggers that can potentially lead to trauma-based maladaptive neuroplasticity (Craig, 2016; Gibson & Gibson, 2019; McTighe & Willis, 2019; Souers & Hall, 2016). Jensen (2019) asserted positive and supportive interactions can reverse and potentially erase the damaging effects of poverty due to the neuroplasticity of a developing brain, which allows the brain to grow networks, make connections, and remap itself.

Achievement and opportunity gaps that exist between students from high-income families and low-income families have been identified by researchers (Baker & Coley,

2013; Porter, 2015; Williams et al., 2017). Researchers have linked poverty with behavioral and mental health concerns that lead to a greater likelihood of exclusionary discipline, and exclusionary discipline has been connected to increased dropout rates and the school-to-prison pipeline (Black, 2016; Crosby et al., 2018; Green et al., 2018; Jones, 2018; Mallett, 2016; McCarter, 2017; Sullivan et al., 2013). Opportunity gaps have also been associated with other risk factors such as ethnicity/race, gender, student mobility, English Language Learner (ELL) status, special education status, neglected/delinquent home situation status, and homelessness (Aguilar, 2019; Dill, 2015; Henderson & Guy, 2017; McCarter, 2017; Sparks, 2016; Sullivan et al., 2013).

The data gathered for this study were analyzed to determine the strength of the relationships that exist between student risk factors and exclusionary discipline outcomes. Also, the data was analyzed to determine the difference in discipline outcomes between two elementary schools with similar student risk factors. The results and other information contained in this study will potentially increase educator awareness of risk factors, their impact on education, and practices and resources that can be utilized to support appropriate intervention (Payne, 2019; Souers & Hall, 2016).

Research Questions and Hypotheses

The following research questions and hypotheses guided the study:

1. What is the relationship between the student risk factor of free meal status and student exclusionary discipline outcomes for elementary students in one Missouri school district?

$H1_0$: There is no relationship between the student risk factor of free meal status and student exclusionary discipline outcomes for elementary students in one Missouri school district.

$H1_a$: There is a relationship between the student risk factor of free meal status and student exclusionary discipline outcomes for elementary students in one Missouri school district.

2. What is the relationship between the student risk factor of disability and student exclusionary discipline outcomes for elementary students in one Missouri school district?

$H2_0$: There is no relationship between the student risk factor of disability and student exclusionary discipline outcomes for elementary students in one Missouri school district.

$H2_a$: There is a relationship between the student risk factor of disability and student exclusionary discipline outcomes for elementary students in one Missouri school district.

3. What is the relationship between the student risk factor of race and student exclusionary discipline outcomes for elementary students in one Missouri school district?

$H3_0$: There is no relationship between the student risk factor of race and student exclusionary discipline outcomes for elementary students in one Missouri school district.

$H3_a$: There is a relationship between the student risk factor of race and student discipline outcomes for elementary students in one Missouri school district.

4. What is the relationship between the student risk factor of gender and student exclusionary discipline outcomes for elementary students in one Missouri school district?

$H4_0$: There is no relationship between the student risk factor of gender and student exclusionary discipline outcomes for elementary students in one Missouri school district.

$H4_a$: There is a relationship between the student risk factor of gender and student exclusionary discipline outcomes for elementary students in one Missouri school district.

5. In one Missouri school district, what is the difference in student exclusionary discipline outcomes between two elementary schools with similar student risk factors?

$H5_0$: There is no difference in student exclusionary discipline outcomes between two elementary schools with similar student risk factors in one Missouri school district.

$H5_a$: There is a difference in student exclusionary discipline outcomes between two elementary schools with similar student risk factors in one Missouri school district.

Research Design

To discover the relationship between student risk factors and exclusionary suspension incidents and to determine the difference in discipline outcomes at two schools in the same district with risk factors, a quantitative approach was utilized. The purpose of this quantitative research study, which involved discrete variables that can be

counted, included finding relationships between the variables, finding differences between variables, and seeking an explanation for the cause of such relationships and differences (Bluman, 2018; Fraenkel et al., 2019). In causal-comparative research, or *ex post facto* research (Latin for "after the fact"), an investigator studies information in retrospect and attempts to determine consequences or causes of differences that have previously occurred among or between groups (Fraenkel et al., 2019). According to Fraenkel et al. (2019), in a causal-comparative study, the group difference variable is a variable that cannot be manipulated or might have been manipulated but has not been for one reason or another. In this causal-comparative analysis, student risk factors such as free meal status, disability, gender, and race qualified as group difference variables. Analysis in this study involved comparing the risk factors of elementary students to determine if student risk factors are significantly related to the number of exclusionary suspension incidents. The data were analyzed to determine if a significant correlation, or linear relationship, existed between risk factors and student exclusionary discipline outcomes, and how similar schools compared with regard to student discipline outcomes (Bluman, 2018; Fraenkel et al., 2019).

Population and Sample

The midwestern school district is located in southwest Missouri. During the 2018–2019 school year, the focus year for this study, the total enrollment at the school district was 24,924 students, which included 11,727 elementary students in 36 elementary schools; 5,836 middle school students in 11 middle schools; and 7,357 high school students in five high schools. As shown in Table 2, almost half of the student population qualified for free or reduced meals. During the 2018–2019 school year, approximately

three-quarters of the student population were categorized as White. Less than 20% of the student population qualified for special education or gifted services. Data from the most recent school year, 2019–2020, were not used due to an unforeseen school closure related to the COVID-19 pandemic. The school closure began in March 2020 and continued until the end of the 2019–2020 school year, resulting in an incomplete data set that would not be comparable to a typical school year.

Table 2

Midwestern School District Total Population 2018–2019

Midwestern School District	Number of Students
Number of Elementary Students	11,727
Number of Elementary Buildings	36
Number of Middle School Students	5,836
Number of Middle School Buildings	11
Number of High School Students	7,357
Number of High School Buildings	5
Free Meal Status	45.29%
Reduced Meal Status	7.57%
Full-Pay Meal Status	47.14%
White	75.50%
Black	8.10%
Hispanic/Latino	6.70%
Asian/Pacific Islander	3.70%
Native American	0.60%
Multi-Race	5.40%
Students Qualified for Special Education	13.00%
Students Qualified for Gifted Services	5.00%

For the purposes of this study, the population included the elementary enrollment of 11,727 students. For the comparative component of this quantitative study, the researcher used professional judgment to select two elementary buildings as representative samples of a particular demographic within the district population. Fraenkel et al. (2019) stated that purposive sampling, otherwise referred to as nonrandom sampling, differs from convenience sampling in that it is intentional and based on prior knowledge that lends the researcher to believe the sample will provide necessary data. The two elementary buildings were chosen because their student populations were similar in enrollment number and in demographics.

The sample in this study, as shown in Table 3, was the total number of elementary students who attended the two selected elementary schools with similar risk factors. Building A had an enrollment of 363 students, Building B had an enrollment of 326 students, and the total sample size was 689 enrolled elementary students. The student populations at both Building A and Building B were more than 50% White and approximately 15% Black. Building A had a mobility rate of 96.4%, while Building B had a mobility rate of 77.6%. At Building A, almost 90% of the students qualified for free or reduced meal status, and just over 88% of the students qualified for free or reduced meal status at Building B. While Building A and Building B had similar student demographics during the 2018–2019 school year, the discipline count at Building A exceeded the discipline count at Building B significantly. Building A had 279 more in-school suspension incidents and 180 more out-of-school suspension incidents than Building B.

Table 3

Study Sample

Building A	363 Students	Building B	326 Students
White	53.20%	White	59.50%
Black	14.00%	Black	14.70%
Hispanic/Latino	12.70%	Hispanic/Latino	18.10%
Asian/Pacific Isl.	9.40%	Asian/Pacific Isl.	1.20%
Multi-Race	9.90%	Multi-Race	6.10%
Native American	0.80%	Native American	0.30%
Mobility Rate	96.40%	Mobility Rate	77.60%
Free Meal Status	83.15%	Free Meal Status	79.50%
Reduced Meal	6.46%	Reduced Meal	8.83%
Total F/R Meal	89.61%	Total F/R Meal	88.33%
ISS Count	339 incidents	ISS Count	60 incidents
OSS Count	207 incidents	OSS Count	27 incidents

Instrumentation

The instrument utilized for data collection in this research study was the PowerSchool eSchool Plus Student Information System. PowerSchool (2020a) developed the first online student information system over 20 years ago, and it now supports and provides technology for more than 45 million K–12 students in over 80 countries (para. 1). PowerSchool (2020c) ensures safety, security, and confidentiality of student data through compliance initiatives backed by regulations such as the Health Insurance Portability and Accountability Act, the Family Educational Rights and Privacy Act, and the Children's Online Privacy Protection Act.

The midwestern school district utilizes the PowerSchool eSchool Plus Student Information System to manage student information, which are considered secondary data.

Student demographic information is entered into the PowerSchool eSchool Plus Student Information System by individual school site office staff members; by representatives in the Analytics, Accountability, and Assessment Office; or by guardians through an online application upon student enrollment. Reliability and validity of student demographic information are ensured through the collection of legal documentation such as student birth certificates, immunization records, previous school records, guardian identification, student health inventories, and applicable sports medicine forms. Physical copies of these documents are collected and maintained in student record files at the schools where the students attend.

Information regarding income qualifications for free and reduced meal status is collected through an application completed by guardians online or at individual school sites. Reliability and validity of this information are ensured by legal documentation submitted by the guardian. Student discipline incidents are entered into the PowerSchool eSchool Plus Student Information System by individual school site administrators, and paper copies are maintained in student files. Validity and reliability of discipline entries are ensured by administrator adherence to the scope and sequence of the district student discipline handbook.

Data Collection

After acquiring permission from the midwestern school district and approval of the Lindenwood Institutional Review Board (see Appendix B), a meeting was held with the midwestern school district's Analytics, Accountability, and Assessment Department, and a request for secondary data was submitted. Student demographics, risk factor information, and discipline data were obtained from the PowerSchool eSchool Plus

Student Information System, which is used to manage student information. The PowerSchool eSchool Plus system is entirely web-based, configurable, intuitive, secure, scalable, can be accessed anywhere, and is designed to intelligently manage student data (PowerSchool, 2020b).

A request was made that all elementary buildings be assigned arbitrary codes unknown to the researcher, and if applicable, that the students in the buildings also be deidentified. A request was made for the Analytics, Accountability, and Assessment Department to provide data for exclusionary suspension incidents, student meal status, gender, special education status, and ethnicity/race for the 2018–2019 school year. The following 2018–2019 reports were requested from the Analytics, Accountability, and Assessment Department: June Student Core MOSIS file, June Discipline MOSIS file, October Educator Core, October Educator School, October Course Assignment, and June Enrollment and Attendance File.

Data Analysis

During this quantitative study, secondary data were collected from the midwestern school district and analyzed. Several statistical analyses were utilized in order to identify relationships between risk factors and student discipline outcomes. The Microsoft Excel Data Analysis Add-In was utilized, and a descriptive analysis was conducted to describe the relationships between the risk factors and discipline.

Linear relationships were identified and analyzed to determine which risk factors have a relationship with student exclusionary discipline outcomes. In order to identify the strength of each risk factor relationship with student exclusionary discipline outcomes, a chi-square test was used. The focus of research questions one through four was to

examine any possible relationship between the risk factors and exclusionary discipline, and a chi-square analysis was used to measure the strength of the correlation between the categorical data (Bluman, 2018). The focus of research question five was to compare and find a difference and was answered using descriptive statistics and a *t*-test, utilized for the mean of a population when the population has a normal distribution and an unknown standard deviation (Bluman, 2018).

Ethical Considerations

The student and discipline data used in this study were considered to be secondary data for the midwestern public school district and were obtained from the PowerSchool eSchool Plus Student Information System, which is used by the district to manage student information. The results of this study have been safeguarded, and each building was assigned an arbitrary code unknown to the researcher. The Coordinator of Accountability in the Analytics, Accountability, and Assessment Department deidentified the buildings and assigned building codes. Information regarding administrators, teachers, students, schools, discipline rates, and risk factors was deidentified to ensure anonymity. All data and supporting information were stored on a password-protected device, and electronic records of data collection will be deleted after three years. Paper records were stored in a secured, locked location with controlled access and will be destroyed after three years.

Summary

This chapter included the problem and purpose overview, the research questions and hypotheses, information about the research design, a description of the population and sample, data collection procedures, data analysis procedures, and an explanation of ethical considerations. The purpose of this study was to examine whether a relationship

exists between student risk factors and exclusionary discipline, to determine the strengths of the relationships, and determine the difference in exclusionary discipline between two demographically similar schools. Conclusions were made regarding the relationships after completion of an analysis of secondary data obtained from the midwestern school district.

The risk-factor variables taken into consideration for this study included free meal status, race, gender, special education status, and exclusionary discipline rates reported by the midwestern school district during the 2018–2019 school year. Data were collected from the Analytics, Accountability, and Assessment Department of the district following approval of the research study, and statistical analysis was completed to determine the relationship between the risk factors and exclusionary discipline rates. An analysis was also completed to determine the difference in exclusionary discipline incidents between two similar schools within the midwestern school district.

In Chapter Four, descriptions of the school district, eligible elementary student population, and case study schools are included. Results about the relationship between student risk factors and exclusionary discipline incidents are presented, and the difference in student exclusionary discipline incidents between two similar schools is revealed and explained. The findings of each research question are presented. Chapter Four concludes with a summary of information presented in the chapter.

Chapter Four: Analysis of Data

The purpose of this study was to examine whether a relationship exists between student risk factors and exclusionary discipline rates. Student risk factors of free meal status, disability, race, and gender were collected from the midwestern school district, correlated with suspension rates, and then analyzed to determine the strengths of the relationships. The difference in discipline outcomes between elementary schools with similar student risk factors was reviewed. The focus of this study was to increase awareness of the impact of poverty and other risk factors, as well as identify potential intervention resources and practices that support the educational success of at-risk students.

In order to close opportunity gaps, it is important educators have an awareness of the poverty and trauma-related health and behavior problems that can lead to exclusionary school discipline, as well as an understanding of the connection between exclusionary discipline and the school-to-prison pipeline (Baker & Coley, 2013; Black, 2016; McCarter, 2017; Palomar-Lever & Victorio-Estrada, 2017; Porter, 2015; Sullivan et al., 2013; Williams et al., 2017). The outcomes of this study could help educators identify the impact of risk factors on education. Furthermore, educators could utilize the alternatives to exclusionary discipline presented in this study to more effectively support student success.

Organization of the Chapter

This chapter contains a description of the data collection process of this study, a summary of the description of the student population and sample, a description of the data analyses used to answer the research questions, and the results of the statistical

analyses. Research questions one, two, three, and four were answered to show the strengths of relationships between risk factors and exclusionary discipline outcomes. In addition, research question five was answered to reveal the difference in discipline outcomes between two elementary schools with similar risk factors.

Data Collection

Following approval from the Lindenwood University Institutional Review Board and the midwestern school district (see Appendix B), student demographic and discipline data were collected. According to guidelines, all data collected were de-identified and protected. The data in this study are considered secondary data and were collected from the PowerSchool eSchool Plus Student Information System, which the midwestern school district utilizes to manage student information. Data collected for all district elementary students with discipline incidents included information about the discipline incidents, meal status, disability, race, and gender for each student.

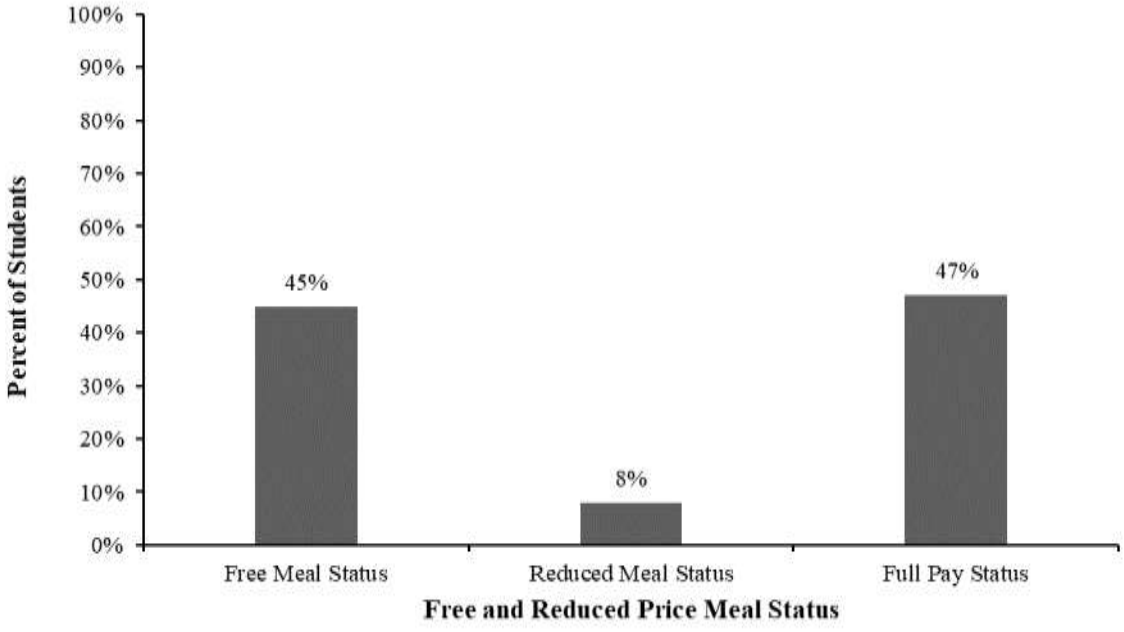
Description of School District Student Population

During the 2018–2019 school year, the total enrollment at the midwestern school district was 24,924 students. Of the nearly 25,000 students, 11,727 students were enrolled in elementary grades; 5,836 students were enrolled in middle school grades; and 7,357 students were enrolled in high school. The school district was comprised of 36 elementary schools, 11 middle schools, and five high schools. From kindergarten through 12th grade, over 12,000 disciplinary incidents were reported, with almost 8,500 incidents resulting in in-school suspension and over 3,500 incidents resulting in out-of-school suspension.

As shown in Figure 1, nearly half of the entire student population of the midwestern school district qualified for full-pay meal status. Less than 10% of students qualified for reduced price meal status, and approximately 45% of students qualified for free meal status.

Figure 1

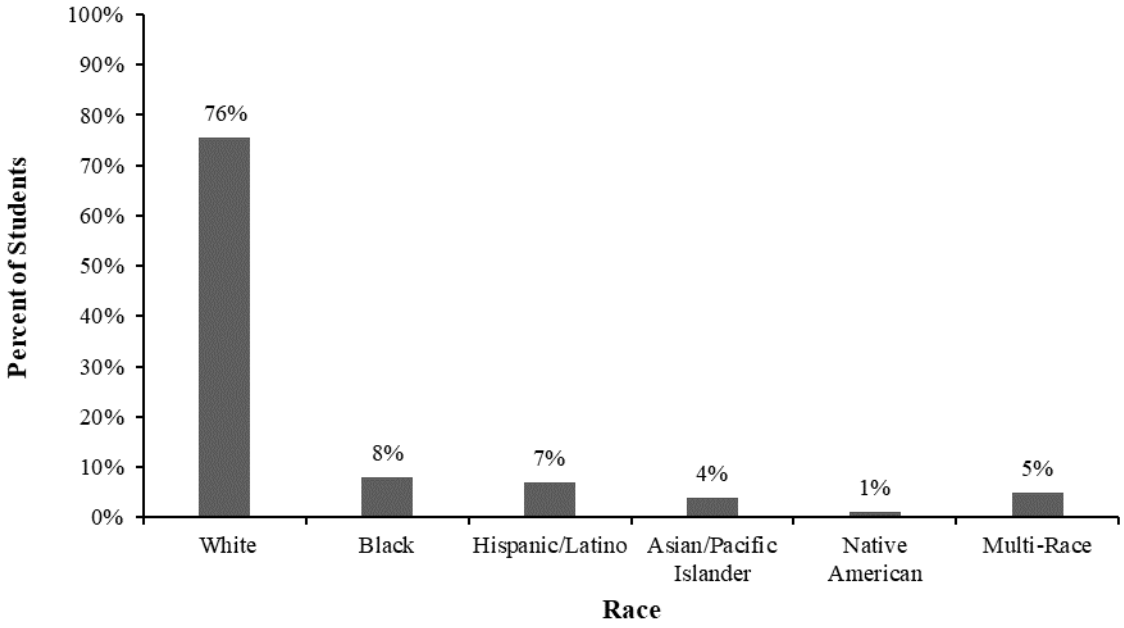
Midwestern School District K–12 Free and Reduced Price Meal Percentages



As shown in Figure 2, more than three-fourths of the midwestern school district student population was White. Approximately 8% of the students were Black, nearly 7% of the students were Hispanic or Latino, approximately 4% of the students were Asian or Pacific Islander, less than 1% of the students were Native American, and just over 5% of the students were multi-race.

Figure 2

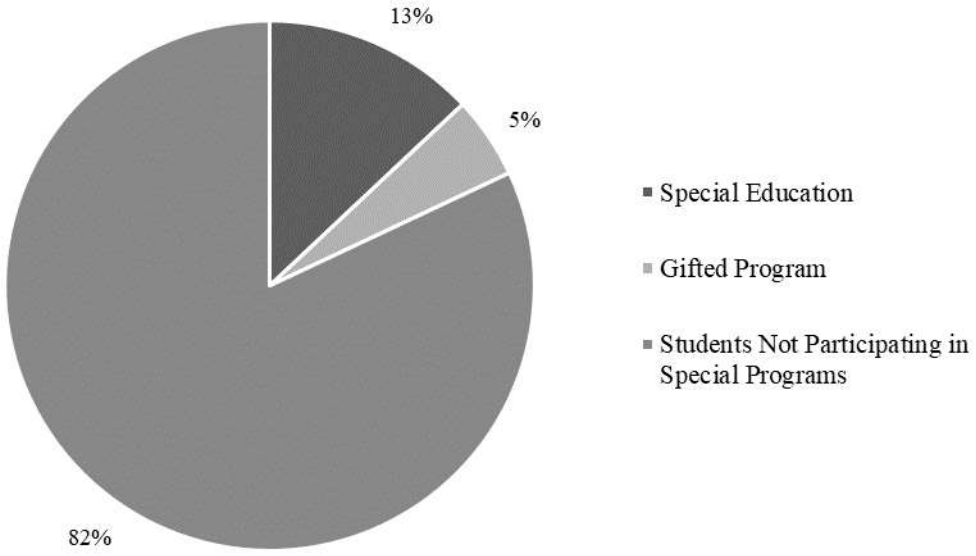
Midwestern School District K–12 Race Demographics



As shown in Figure 3, approximately 13% of the midwestern school district student population qualified for special education services. Nearly 5% of the students were enrolled in gifted programs, and the remaining 82% of students did not participate in special education programs.

Figure 3

Midwestern School District K–12 Special Education Demographics



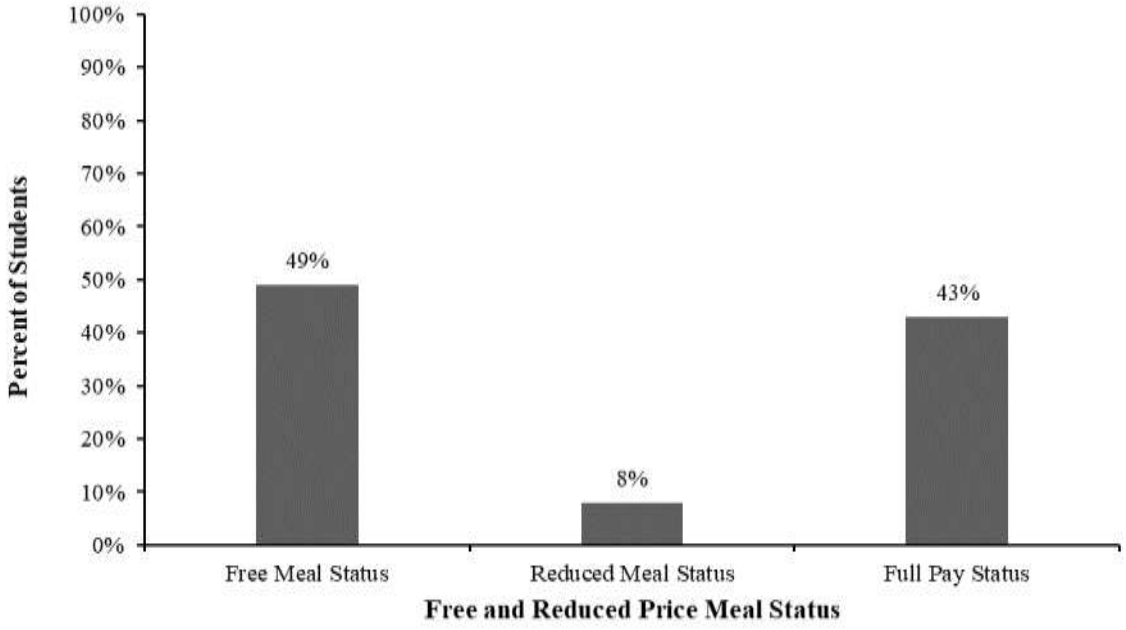
Description of Eligible Elementary Student Population

The population for this research study included all elementary students in attendance at the midwestern school district during the 2018–2019 school year. During the 2018–2019 school year, 11,727 students attended elementary grades in 36 elementary buildings. At that time, the smallest elementary school enrollment was 166 students, and the largest elementary school enrollment was 611 students. Overall building mobility rates varied across the district, with a range of 29% to 117% mobility. The range of total free and reduced meal percentages across the district was as small as 19.8% at one building and as high as 93.67% at another building. In total, 1,180 elementary students were involved in 3,592 reported discipline incidents, resulting in 2,315 in-school suspensions and 1,277 out-of-school suspensions.

As shown in Figure 4, nearly half of the elementary students enrolled in the midwestern school district qualified for free meal status. Less than 10% of the students qualified for reduced meal status.

Figure 4

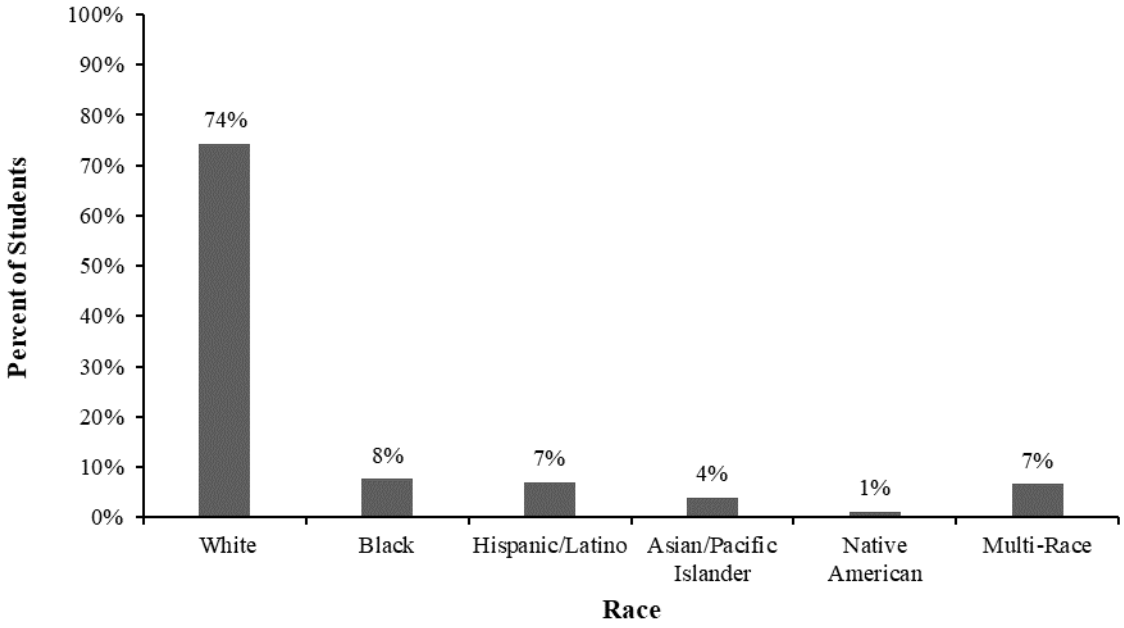
Midwestern School District Elementary Free and Reduced Price Meal Percentages



As shown in Figure 5, nearly three-fourths of the elementary students in attendance at the midwestern school district were White. Less than 10% of the students were Black. Students who were Asian, Hispanic, Latino, Pacific Islander, Native American, or Multi-Race comprised less than 20% of the total student population.

Figure 5

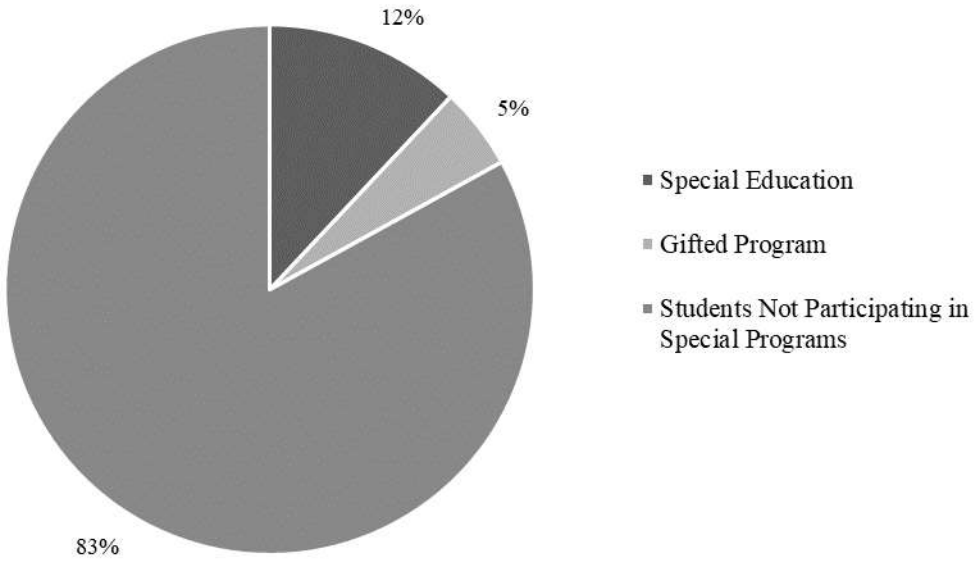
Midwestern School District Elementary Race Demographics



As shown in Figure 6, the elementary student participation in special programs such as special education and gifted education is similar to the overall district participation in special programs. Approximately 12% of students participated in special education, and nearly 5% of students participated in gifted education programs.

Figure 6

Midwestern School District Elementary Special Education Demographics



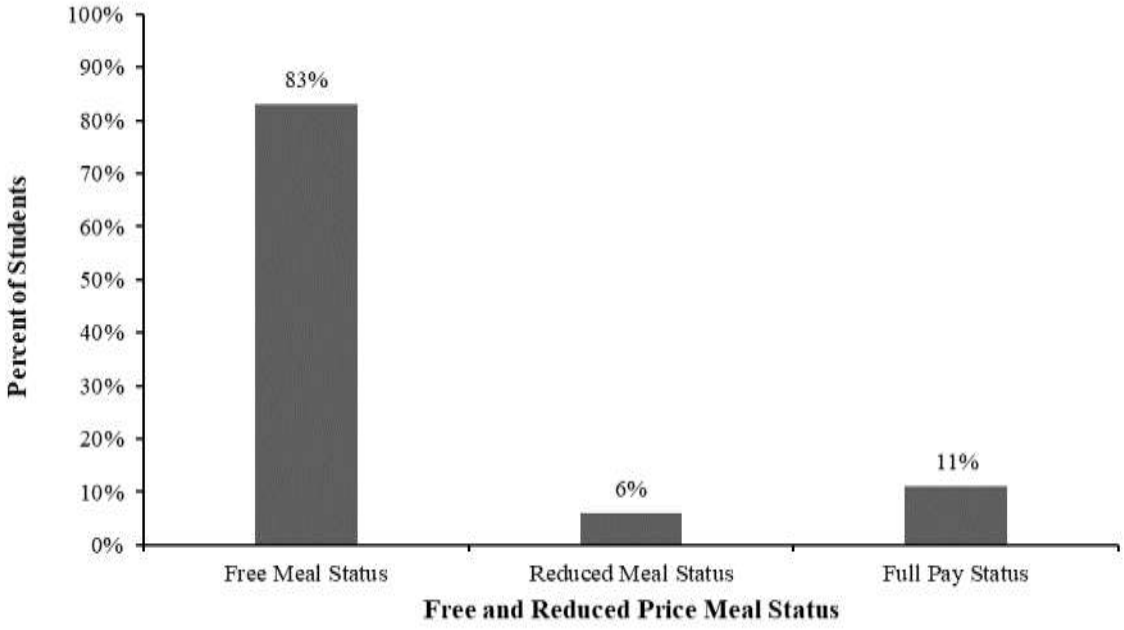
Description of Students Attending Case Study Schools

Purposive sampling was utilized to select two elementary schools within the midwestern school district similar in student demographics and enrollment size (Fraenkel et al., 2019). The two elementary buildings were located within five miles of each other in the center section of the midwestern school district. Building A had an enrollment of 363 students, and Building B had an enrollment of 326 students. The total sample size was 689 students. The total percentage of students who qualified for free or reduced meal status at Building A was 89.61%, and the total percentage at Building B was 88.33%. The mobility rate at Building A was 96.4%, and the mobility rate at Building B was 77.6%. At Building A, 120 students were involved in a total of 546 discipline incidents. At Building B, 25 students were involved in a total of 87 discipline incidents.

As shown in Figure 7, over 80% of students at Building A qualified for free meal status, and only 11% of the student population qualified for full-pay meal status.

Figure 7

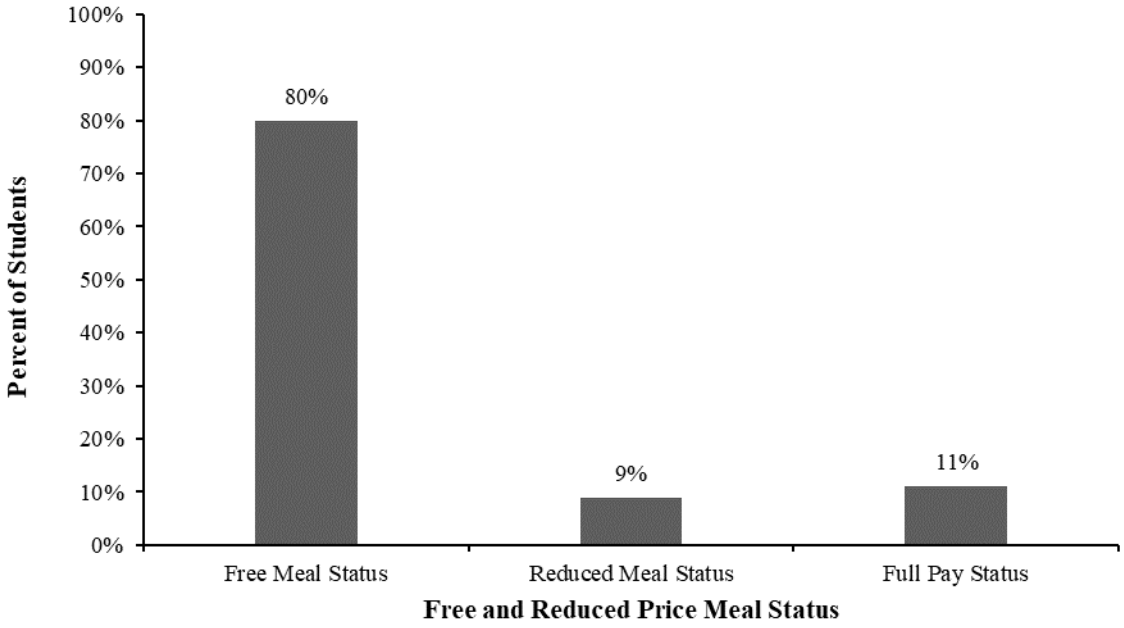
Building A: Free and Reduced Price Meal Percentages



As shown in Figure 8, 80% of students at Building B qualified for free meal status, and 11% of students qualified for full-pay meal status.

Figure 8

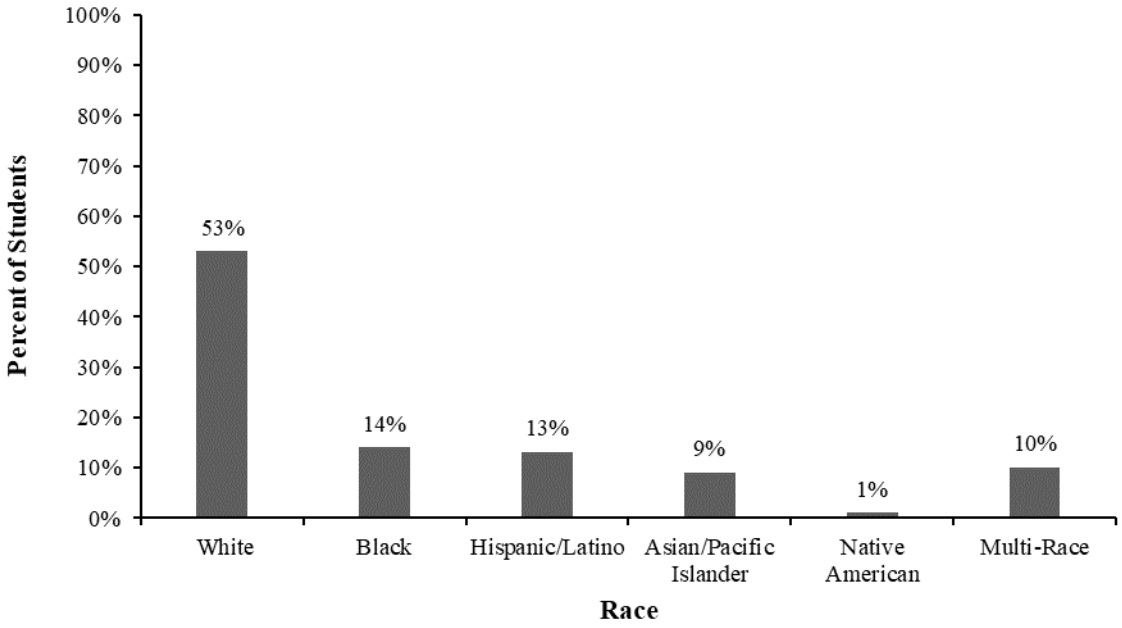
Building B: Free and Reduced Price Meal Percentages



As shown in Figure 9, over half of the student population at Building A was White. The percentage of students who were Black was 14%, and the percentage of students who were multi-race was approximately 10%. The percentage of Hispanic and Latino students was approximately 13%. Nine percent of the student population was Asian or Pacific Islander, and less than 1% of the student population was Native American.

Figure 9

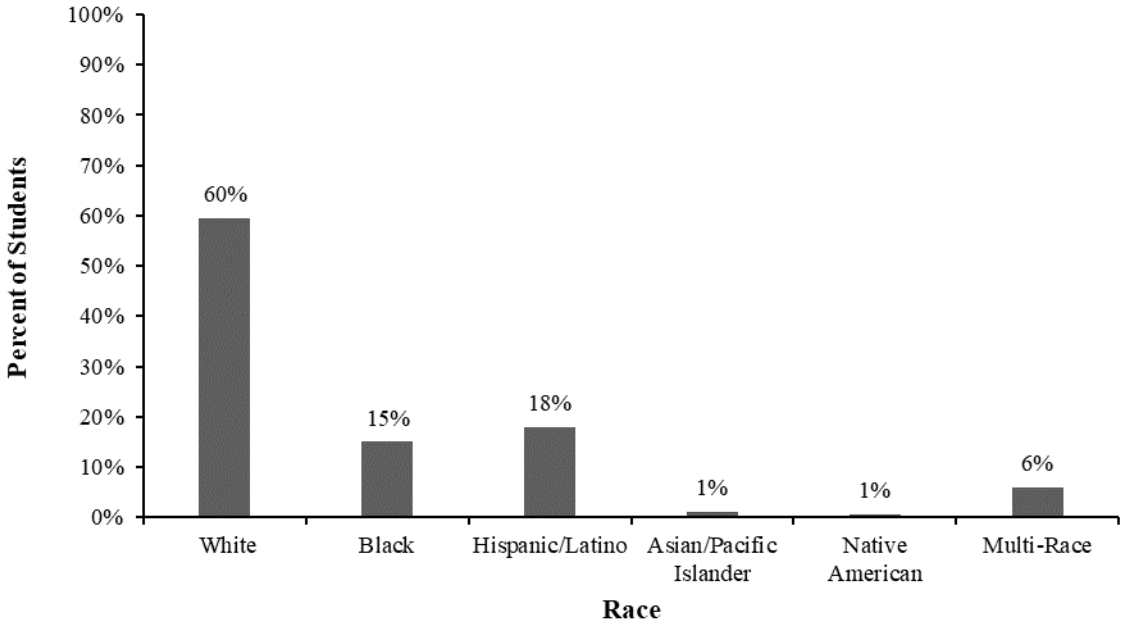
Building A: Race Demographics



As shown in Figure 10, 60% of the student population at Building B was White. The percentage of students who were Black was approximately 15%, and the percentage of students who were multi-race was approximately 6%. The percentage of Hispanic and Latino students was 18%. Only 1% of the student population was Asian or Pacific Islander, and less than 1% of the student population was Native American.

Figure 10

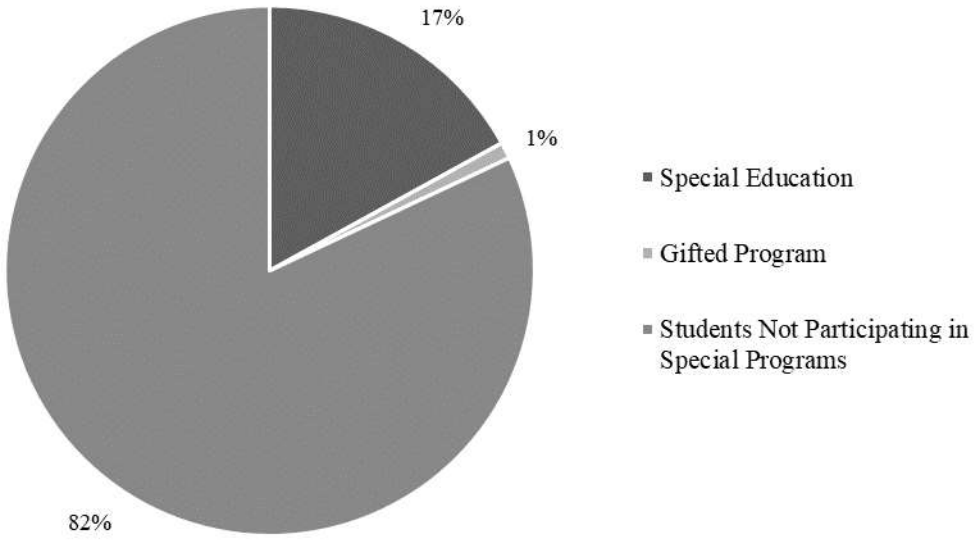
Building B: Race Demographics



As shown in Figure 11, the percentage of students participating in special programs at Building A is comparable to the overall school district and overall elementary percentages. At Building A, 17% of students qualified for special education services, and 1% of students qualified for gifted services, resulting in a total of 18% of students participating in special programs. Another 82% of students did not qualify for or participate in special programs.

Figure 11

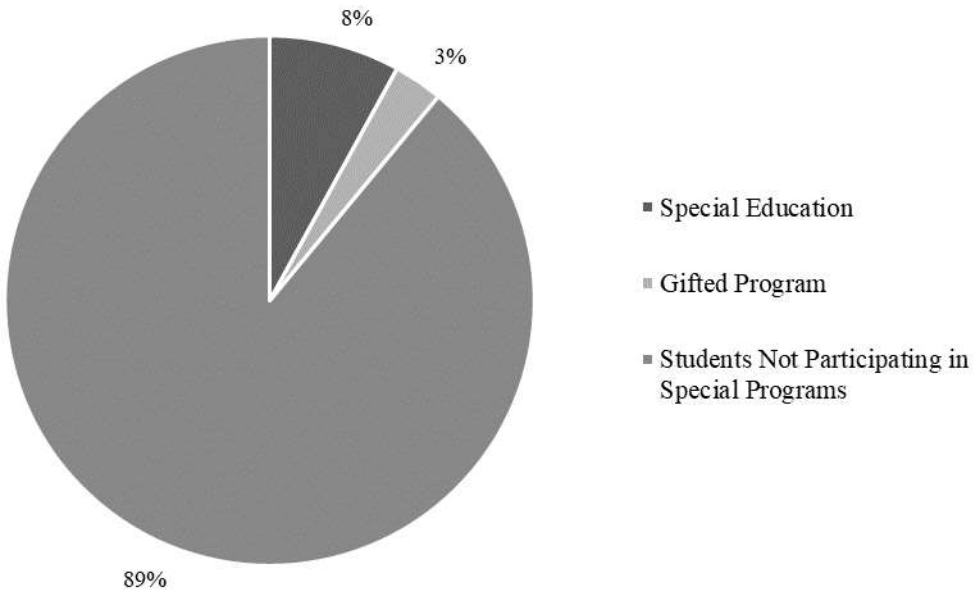
Building A: Special Education Demographics



As shown in Figure 12, the percentage of students participating in special programs at Building B is slightly less than the overall school district and overall elementary percentages. At Building B, 8% of students qualified for special education services, and 3% of students qualified for gifted services, resulting in a total of 11% of students participating in special programs. Another 89% of students did not qualify for or participate in special programs.

Figure 12

Building B: Special Education Demographics



Data Analysis

The purpose of the study was to examine and answer quantitative research questions. In order to measure the strength of the correlation between the data collected for research questions one through four, the chi-square analysis method was utilized to examine both the number of students with discipline incidents and the number of discipline incidents (Bluman, 2018). Descriptive statistics and a two-tailed *t*-test were utilized to examine the data collected for research question five. The two-tailed *t*-test was performed to compare data, find a difference between the case study schools, and determine if the difference was within limits to either reject or fail to reject the null hypothesis (Bluman, 2018).

Research Question One

What is the relationship between the student risk factor of free meal status and student exclusionary discipline outcomes for elementary students in one Missouri school district?

The null hypothesis stated there was no relationship between the student risk factor of free meal status and student exclusionary discipline outcomes for elementary students in one Missouri school district. Of the 11,727 elementary students in the midwestern school district population, 1,180 elementary students were disciplined, which resulted in 3,592 total discipline incidents. Districtwide, a total of 853 elementary students with discipline incidents qualified for free meal status and accounted for 2,760 discipline incidents. Within Building A of the study sample, 106 students with discipline incidents qualified for free meal status and accounted for 486 discipline incidents. Within Building B of the study sample, 23 students with discipline incidents qualified for free meal status and accounted for 82 discipline incidents. Percentages of discipline incidents by meal status are detailed in Table 4.

Table 4

Percentage of Discipline Incidents by Meal Status

Meal Status	All District Elementary Schools		Building A		Building B	
	ISS	OSS	ISS	OSS	ISS	OSS
Free Meal	74.73%	80.66%	88.50%	89.86%	93.22%	96.43%
Reduced Meal	5.83%	3.29%	2.06%	0.97%	0.00%	0.00%
Full Pay	19.44%	16.05%	9.44%	9.18%	6.78%	3.57%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

To test the hypothesis, two-way tables were created to calculate the marginal distribution and the conditional distribution of meal status given the number of students with discipline incidents. Meal status given the number of discipline incidents was also calculated. A chi-square test of independence was performed for each distribution to analyze the relationship between meal status and discipline outcomes for elementary students in the midwestern school district. Marginal and conditional distributions were also calculated for each of the study sample schools, Building A and Building B, and chi-square tests were performed to examine the relationship between meal status and discipline outcomes at each of the study sample schools.

Figure 13 highlights the conditional distribution of meal status given the number of students with discipline incidents within the entire elementary population of the midwestern school district. The chi-square test result yielded sufficient evidence of a significant statistical relationship between these variables, X^2 (6, N = 1,180) = 13.4, p = .037012. The chi-square statistic was 13.4068. The result was significant at $p < .05$; therefore, the null hypothesis was rejected. There was a relationship between meal status and number of elementary students with discipline incidents within the entire elementary population of the Missouri school district.

Figure 13

Midwestern School District Number of Elementary Students with Discipline Incidents by Meal Status

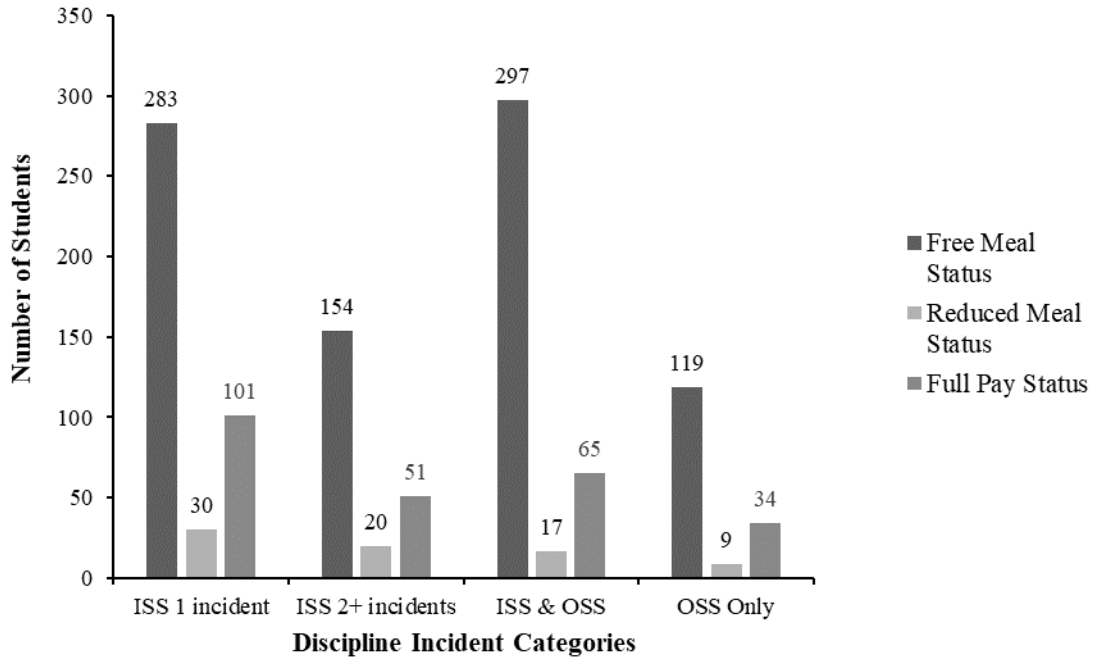


Figure 14 highlights the conditional distribution of meal status given the number of discipline incidents within the overall elementary population of the midwestern school district. The chi-square test result yielded sufficient evidence of a significant statistical relationship between these variables, X^2 (2, N = 3,592) = 19.7, p = .000052. The chi-square statistic was 19.7331. The result was significant at $p < .05$; therefore, the null hypothesis was rejected. There was a relationship between meal status and number of student discipline incidents within the overall elementary population of the Missouri school district.

Figure 14

Midwestern School District Number of Elementary Discipline Incidents by Meal Status

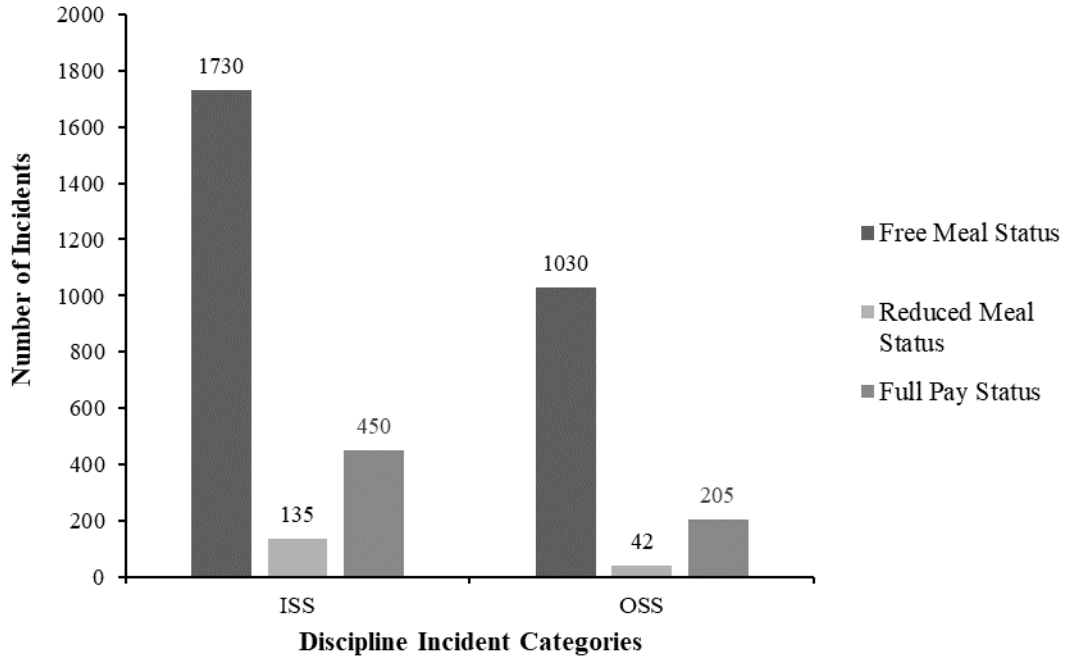


Figure 15 highlights the conditional distribution of meal status given the number of students with discipline incidents within Building A of the case study sample. The chi-square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, X^2 (2, N = 120) = 0.2, p = .866381. The chi-square statistic was 0.2869. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was no significant relationship between meal status and number of elementary students with discipline incidents at Building A.

Figure 15

Building A: Number of Students with Discipline Incidents by Meal Status

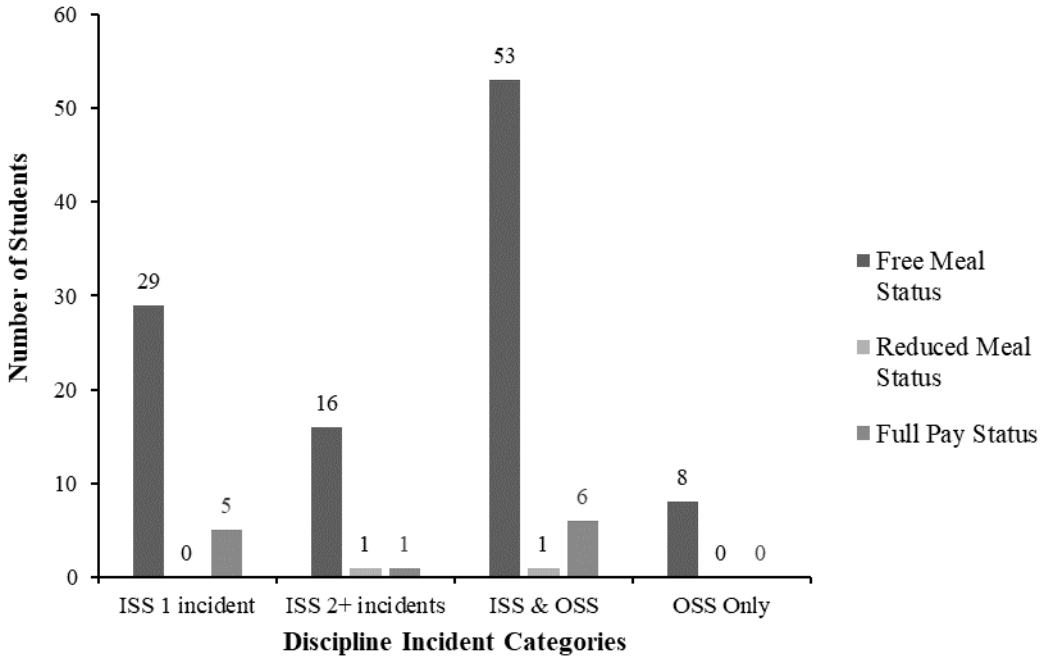


Figure 16 highlights the conditional distribution of meal status given the number of discipline incidents within Building A of the case study sample. The chi-square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, X^2 (2, N = 546) = 0.9, p = .613462. The chi-square statistic was 0.9773. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was no significant relationship between meal status and number of student discipline incidents within Building A.

Figure 16

Building A: Number of Discipline Incidents by Meal Status

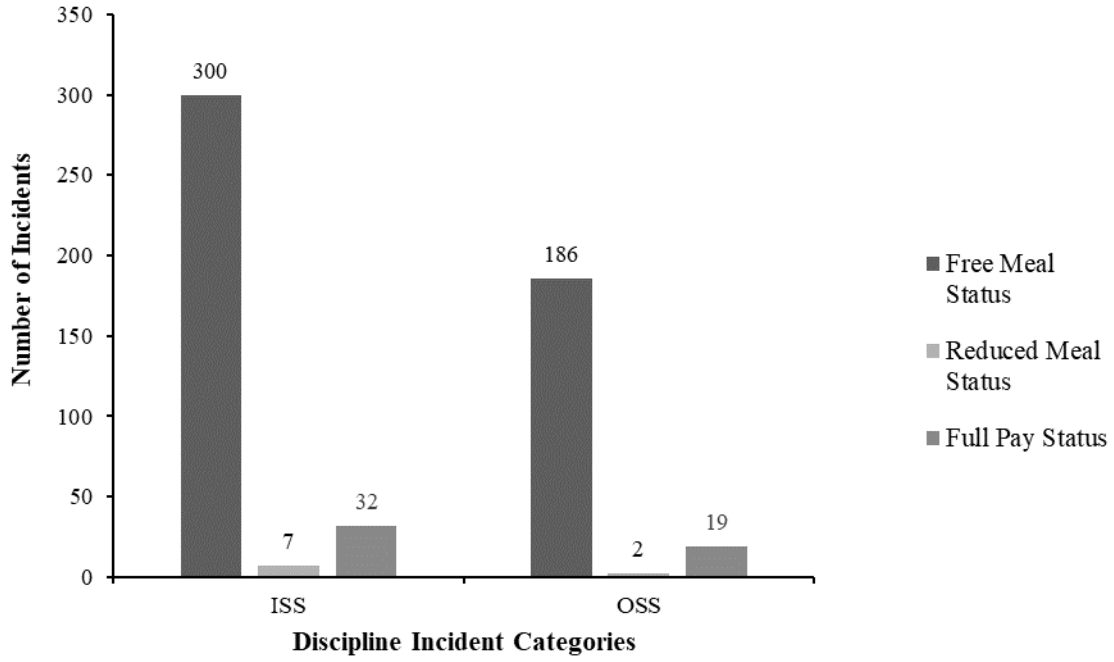


Figure 17 highlights the conditional distribution of meal status given the number of students with discipline incidents within Building B of the case study sample. The chi-square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, X^2 (1, N = 25) = 0.0, p = .952933. The chi-square statistic was 0.0035. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was no significant relationship between meal status and number of elementary students with discipline incidents at Building B.

Figure 17

Building B: Number of Students with Discipline Incidents by Meal Status

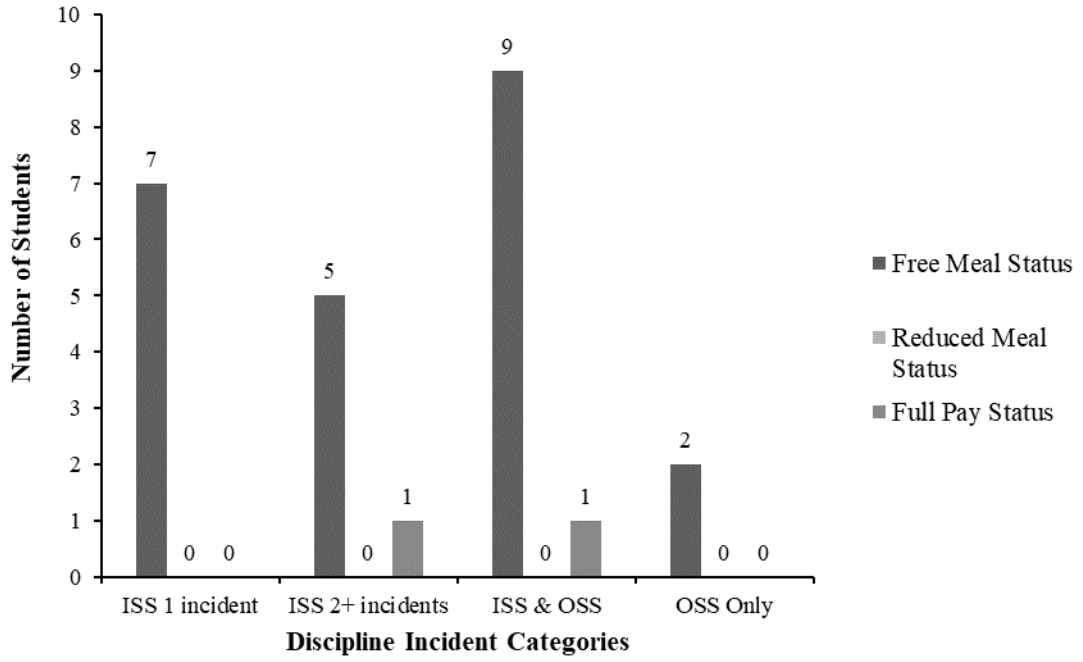
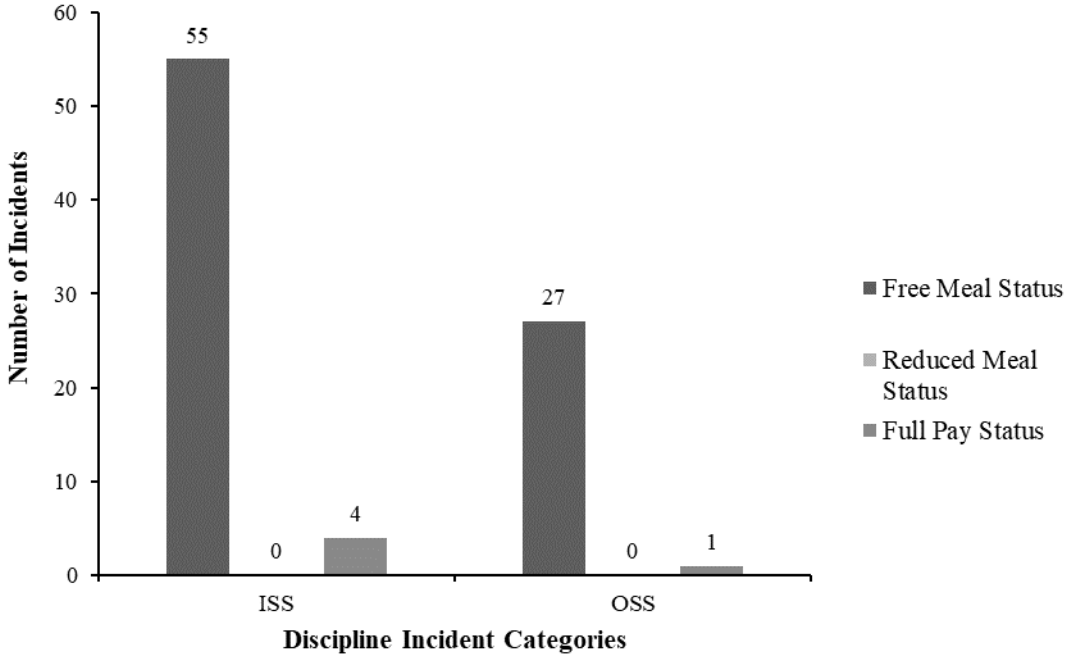


Figure 18 highlights the conditional distribution of meal status given the number of discipline incidents within Building B of the case study sample. The chi-square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, X^2 (1, N = 87) = 0.3, p = .548057. The chi-square statistic was 0.3608. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was no significant relationship between meal status and number of student discipline incidents within Building B.

Figure 18

Building B: Number of Discipline Incidents by Meal Status



Research Question Two

What is the relationship between the student risk factor of disability and student exclusionary discipline outcomes for elementary students in one Missouri school district?

The null hypothesis stated there is no relationship between the student risk factor of disability and student exclusionary discipline outcomes for elementary students in one Missouri school district. In the midwestern school district, 1,180 elementary students had school discipline records that resulted in a total of 3,592 discipline incidents. Of the 1,180 elementary students with discipline incidents districtwide, a total of 279 students qualified for special education services and accounted for 889 discipline incidents. Within Building A of the study sample, 32 students with discipline incidents qualified for

special education services and accounted for 152 discipline incidents. Within Building B of the study sample, six students with discipline incidents qualified for special education services and accounted for 13 discipline incidents. Percentages of discipline incidents by special education status are detailed in Table 5.

Table 5

Percentage of Discipline Incidents by Special Education Status

Special Education Status	All District Elementary Schools		Building A		Building B	
	ISS	OSS	ISS	OSS	ISS	OSS
No SPED Services	77.71%	70.79%	70.21%	75.36%	80.00%	96.30%
Special Education	22.29%	29.21%	29.79%	24.64%	20.00%	3.70%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

The marginal distribution and conditional distribution of special education services given the number of students with discipline incidents was calculated in order to test the hypothesis. Special education services given the number of discipline incidents was also calculated. A chi-square test of independence was performed for each distribution to analyze the relationship between special education status and discipline outcomes for elementary students in the midwestern school district. Marginal and conditional distributions were also calculated for Building A and Building B, and chi-square tests were performed to examine the relationship between special education status and discipline outcomes at each of the study sample schools.

Figure 19 highlights the conditional distribution of special education status given the number of students with discipline incidents within the entire elementary population of the midwestern school district. The chi-square test result yielded sufficient evidence of a significant statistical relationship between these variables, X^2 (3, N = 1,180) = 17.0, p = .00069. The chi-square statistic was 17.0508. The result was significant at $p < .05$; therefore, the null hypothesis was rejected. There was a relationship between special education status and number of elementary students with discipline incidents within the entire elementary population of the Missouri school district.

Figure 19

Midwestern School District Number of Elementary Students with Discipline Incidents by Special Education Status

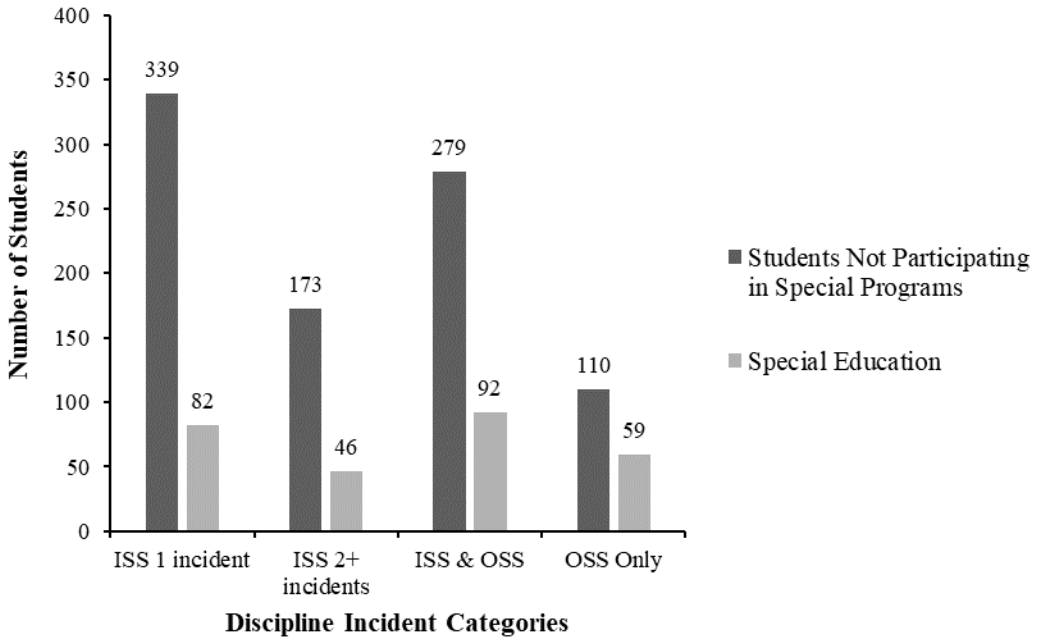


Figure 20 highlights the conditional distribution of special education status given the number of discipline incidents within the overall elementary population of the midwestern school district. The chi-square test result yielded sufficient evidence of a significant statistical relationship between these variables, X^2 (1, N = 3,592) = 21.1, p = < .00001. The chi-square statistic was 21.1593. The result was significant at $p < .05$; therefore, the null hypothesis was rejected. There was a relationship between special education status and number of student discipline incidents within the overall elementary population of the Missouri school district.

Figure 20

Midwestern School District Number of Elementary Discipline Incidents by Special Education Status

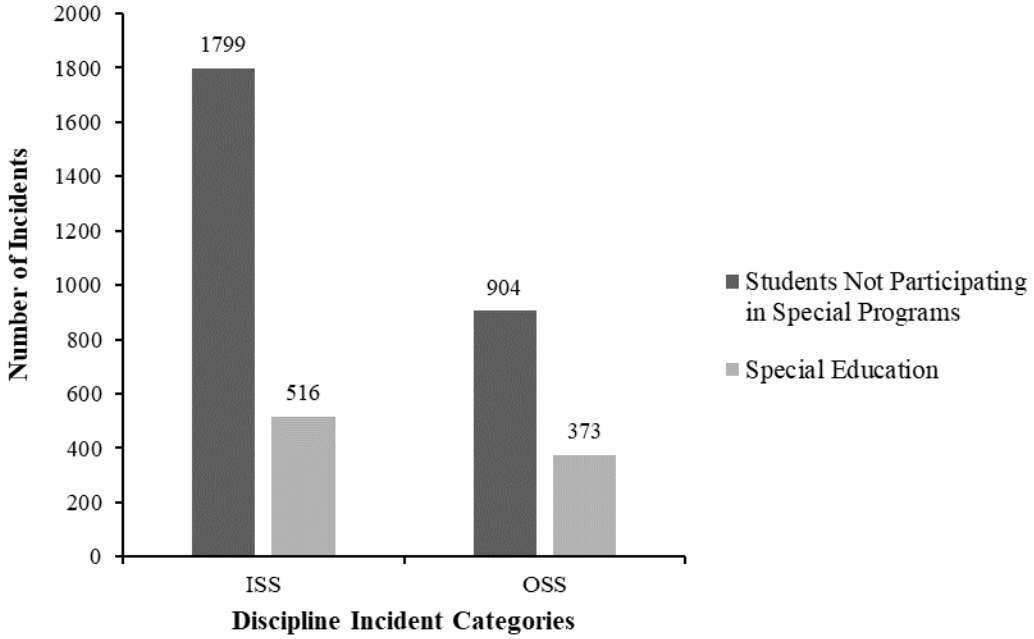


Figure 21 highlights the conditional distribution of special education status given the number of students with discipline incidents within Building A of the case study sample. The chi-square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, $X^2(3, N = 120) = 1.2$, $p = .743458$. The chi-square statistic was 1.2399. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was no significant relationship between special education status and number of elementary students with discipline incidents at Building A.

Figure 21

Building A: Number of Students with Discipline Incidents by Special Education Status

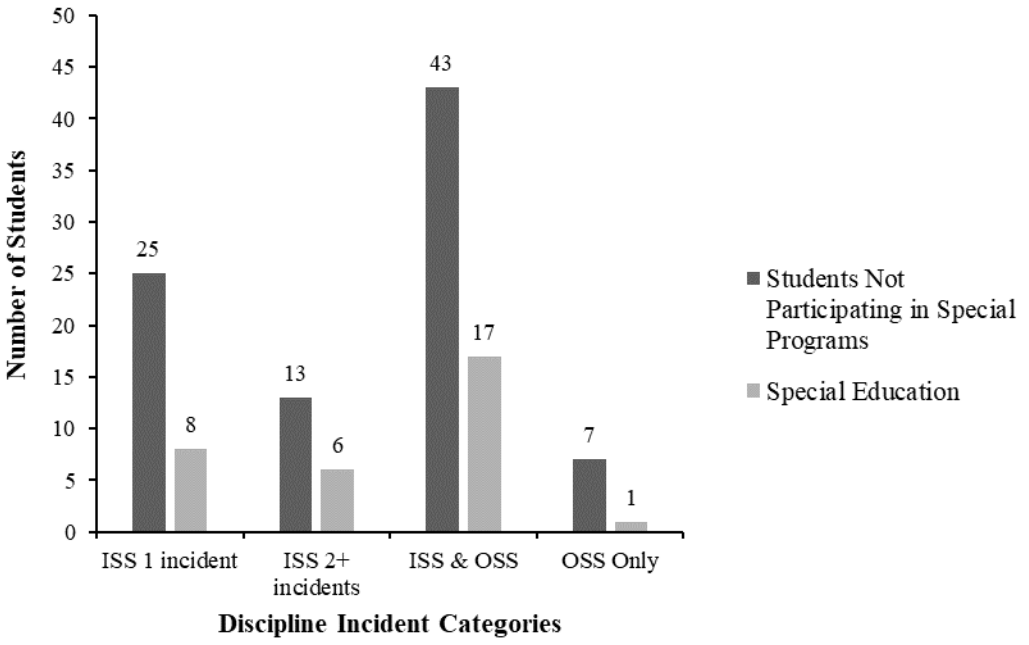


Figure 22 highlights the conditional distribution of special education status given the number of discipline incidents within Building A of the case study sample. The chi-

square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, X^2 (1, N = 546) = 1.7, p = .1922. The chi-square statistic was 1.7007. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was no significant relationship between special education status and number of student discipline incidents within Building A.

Figure 22

Building A: Number of Discipline Incidents by Special Education Status

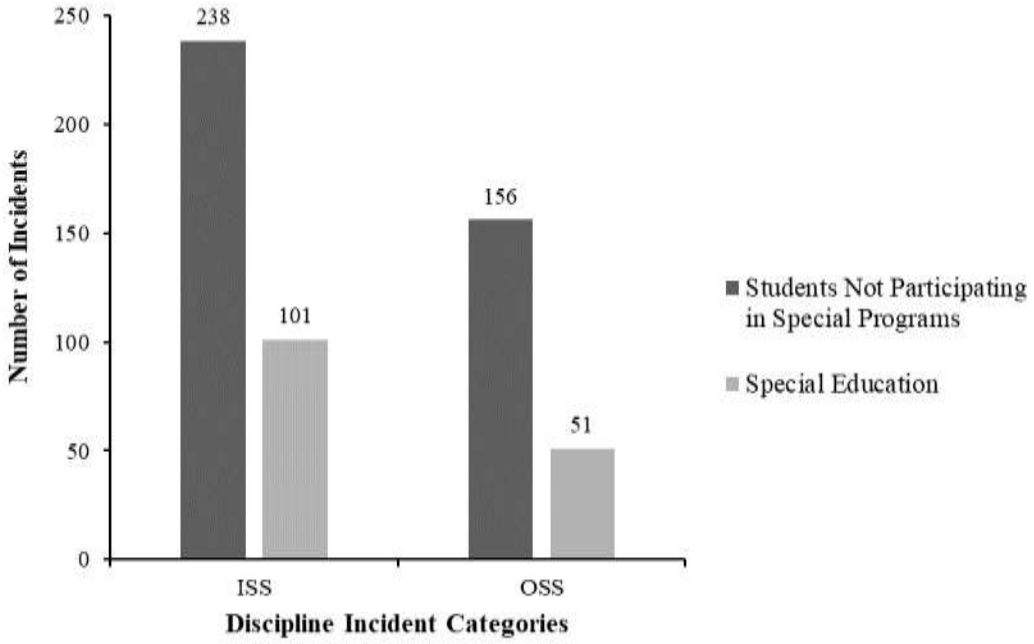


Figure 23 highlights the conditional distribution of special education status given the number of students with discipline incidents within Building B of the case study sample. The chi-square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, X^2 (2, N = 25) = 5.9, p = .051865. The chi-square statistic was 5.9182. The result was not significant at $p < .05$; therefore, the

null hypothesis was not rejected. It was concluded there was no significant relationship between special education status and number of elementary students with discipline incidents at Building B.

Figure 23

Building B: Number of Students with Discipline Incidents by Special Education Status

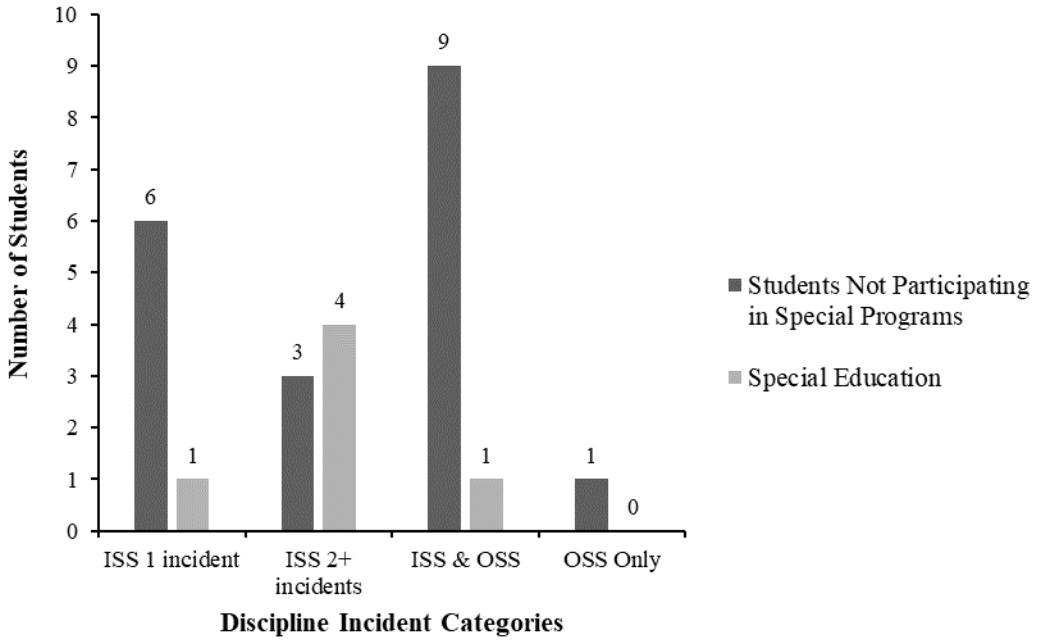
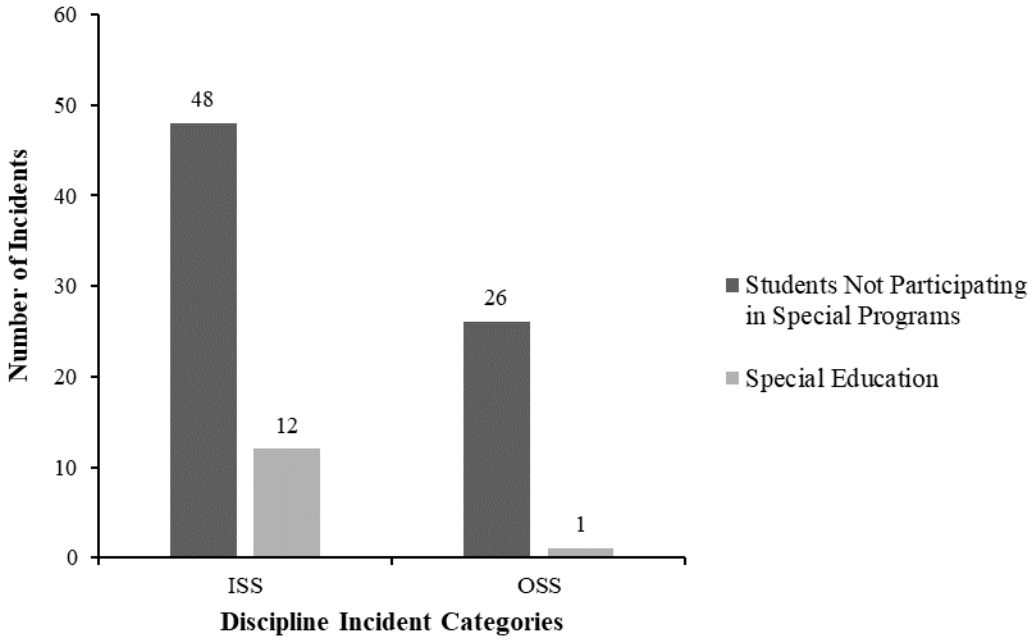


Figure 24 highlights the conditional distribution of special education status given the number of discipline incidents within Building B of the case sample study. The chi-square test result yielded sufficient evidence of a significant statistical relationship between these variables, X^2 (1, N = 87) = 3.8, p = .048552. The chi-square statistic was 3.8908. The result was significant at $p < .05$; therefore, the null hypothesis was rejected. There was a relationship between special education status and number of student discipline incidents within Building B.

Figure 24

Building B: Number of Discipline Incidents by Special Education Status



Research Question Three

What is the relationship between the student risk factor of race and student exclusionary discipline outcomes for elementary students in one Missouri school district?

The null hypothesis stated there is no relationship between the student risk factor of race and student exclusionary discipline outcomes for elementary students in one Missouri school district. Of the 1,180 elementary students with school discipline records in the Missouri school district, 786 students were White and accounted for 2,306 discipline incidents. A total of 178 students were Black and accounted for 612 discipline incidents. Within Building A of the study sample, 65 students with discipline incidents were White and accounted for 268 discipline incidents, and 30 students were Black and accounted for 170 discipline incidents. Within Building B of the study sample, 10

students with discipline incidents were White and accounted for 28 discipline incidents, and six students were Black and accounted for 26 discipline incidents. Percentages of discipline incidents by race are detailed in Table 6.

Table 6

Percentage of Discipline Incidents by Race

Race	All District Elementary Schools		Building A		Building B	
	ISS	OSS	ISS	OSS	ISS	OSS
Asian	0.78%	0.23%	1.77%	0.97%	0.00%	0.00%
Black	18.14%	15.04%	31.56%	30.43%	25.00%	40.74%
Hispanic	6.13%	6.42%	4.13%	4.83%	10.00%	29.63%
Indian	0.48%	0.08%	0.00%	0.00%	0.00%	0.00%
Multi-Race	11.23%	11.75%	10.62%	17.87%	26.67%	11.11%
Pacific Isl.	0.22%	0.16%	0.59%	0.48%	0.00%	0.00%
White	63.02%	66.33%	51.33%	45.41%	38.33%	18.52%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

The null hypothesis was tested following the calculation of the marginal distribution and conditional distribution of race given the number of students with discipline incidents. Race given the number of discipline incidents was also calculated. In order to analyze the relationship between race and discipline outcomes for elementary students in the midwestern school district, a chi-square test of independence was performed for each distribution. Marginal and conditional distributions were calculated for Building A and Building B, and chi-square tests were performed to examine the relationship between race and discipline outcomes at each of the study sample schools.

Figures 25, 26, and 27 highlight the conditional distribution of race given the number of students with discipline incidents within the entire elementary population of the midwestern school district. Figure 25 highlights students with only in-school suspension incidents. Figure 26 highlights students with both in-school and out-of-school suspension incidents. Figure 27 highlights students with only out-of-school suspension incidents. The chi-square test result did not yield sufficient evidence of a significant statistical relationship between these variables, X^2 (12, N = 1,180) = 9.8, p = .62911822. The chi-square statistic was 9.85. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was not a significant relationship between race and number of elementary students with discipline incidents within the entire elementary population of the Missouri school district.

Figure 25

Midwestern School District Number of Elementary Students with Discipline Incidents by Race – Students with Only In-School Suspension

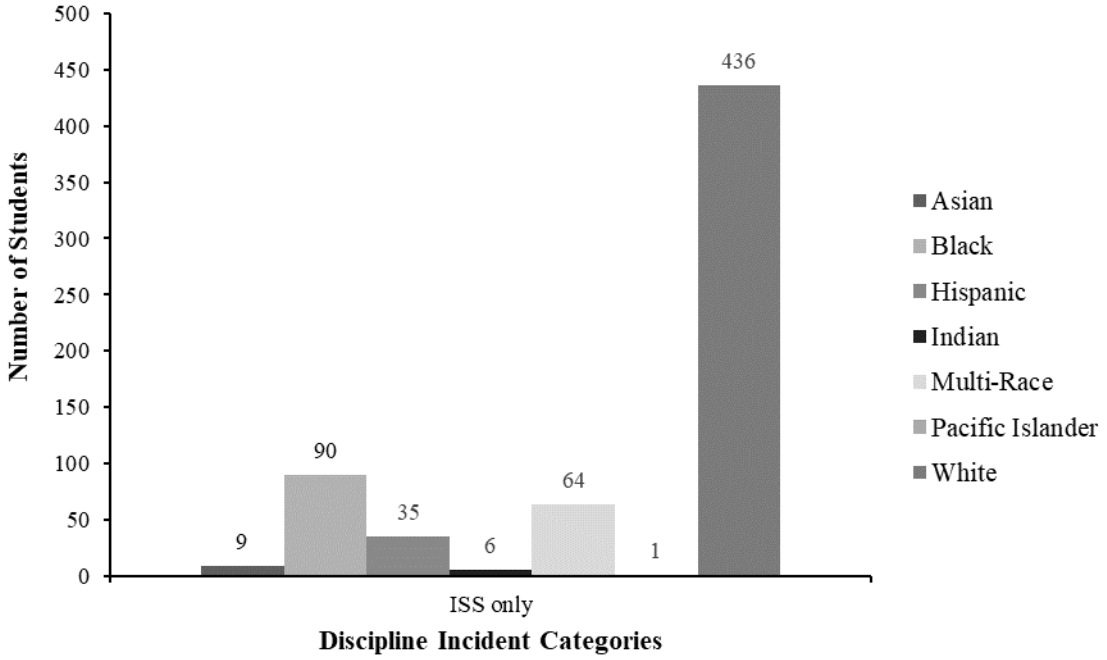


Figure 26

Midwestern School District Number of Elementary Students with Discipline Incidents by Race – Students with In-School Suspension and Out-of-School Suspension

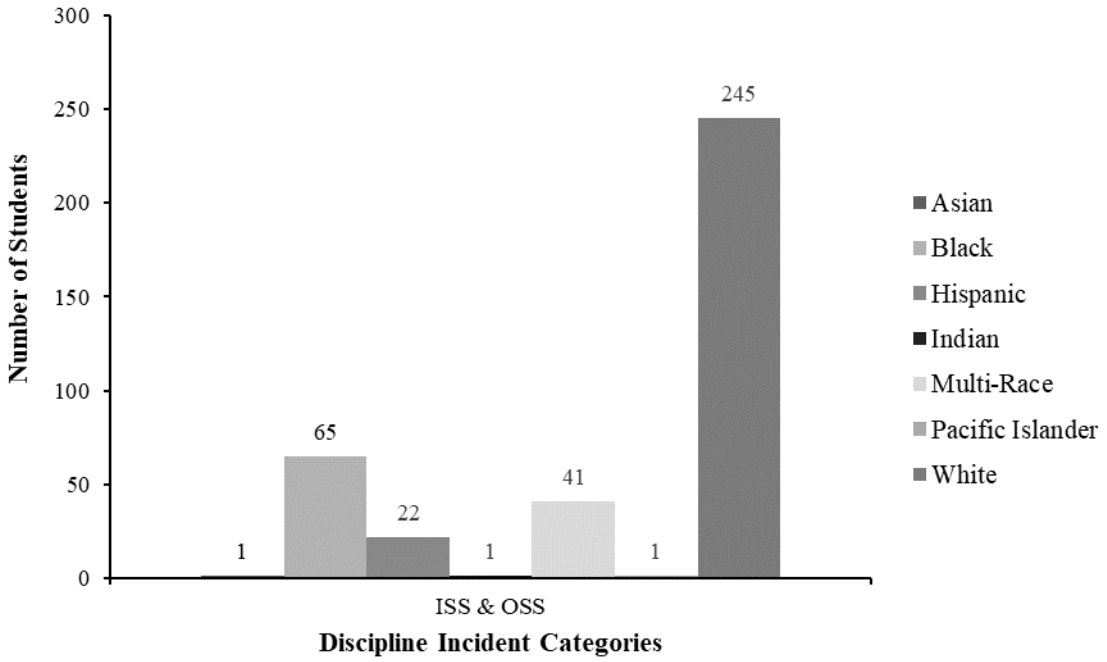


Figure 27

Midwestern School District Number of Elementary Students with Discipline Incidents by Race – Students with Only Out-of-School Suspension

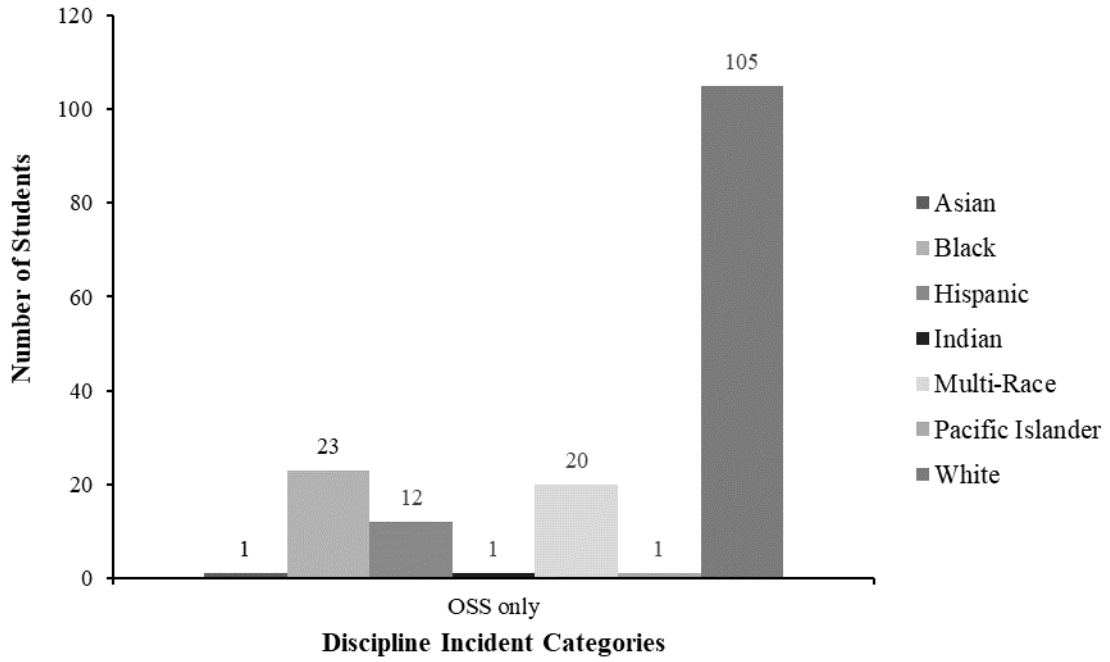


Figure 28 highlights the conditional distribution of race given the number of discipline incidents within the overall elementary population of the midwestern school district. The chi-square test result yielded sufficient evidence of a significant statistical relationship between these variables, X^2 (6, N = 3,592) = 14.5, p = .02418022. The chi-square statistic was 14.537. The result was significant at $p < .05$; therefore, the null hypothesis was rejected. There was a relationship between race and number of student discipline incidents within the overall elementary population of the Missouri school district.

Figure 28

Midwestern School District Number of Elementary Discipline Incidents by Race

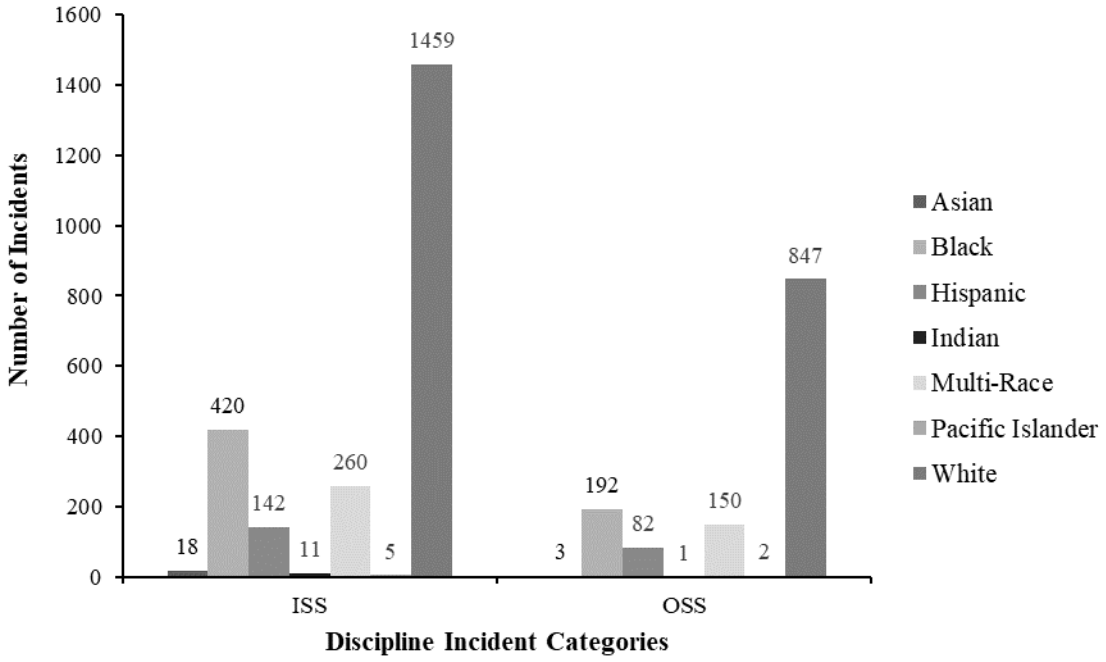


Figure 29 highlights the conditional distribution of race given the number of students with discipline incidents within Building A of the case study sample. The chi-square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, $X^2(5, N = 120) = 3.0$, $p = .69890658$. The chi-square statistic was 3.007. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was no significant relationship between race and number of elementary students with discipline incidents at Building A.

Figure 29

Building A: Number of Students with Discipline Incidents by Race

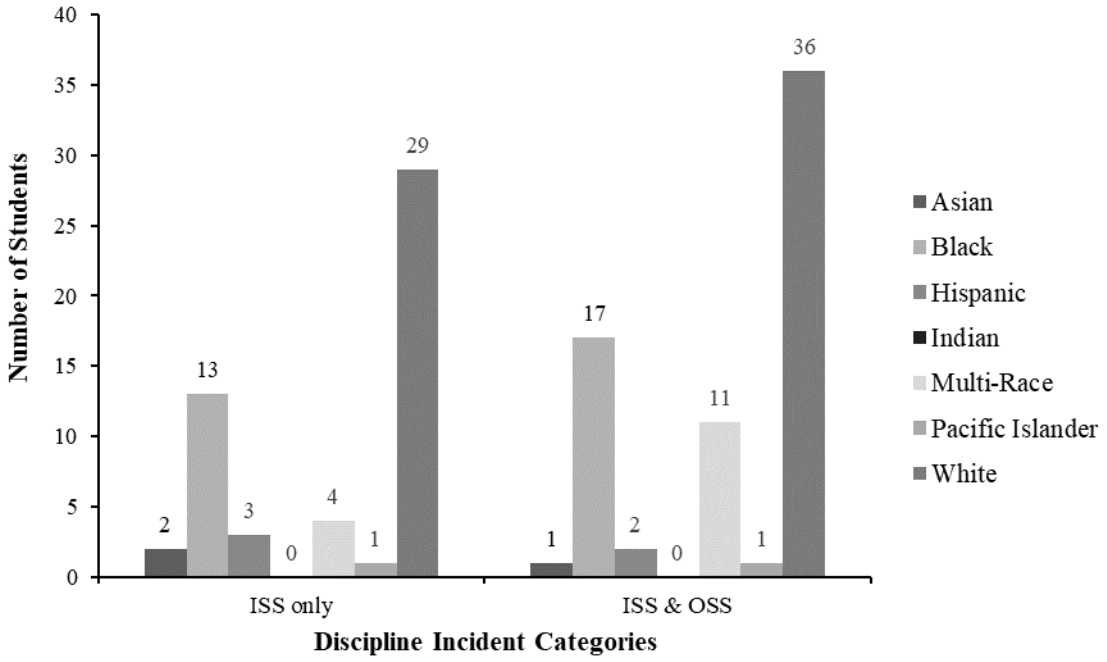


Figure 30 highlights the conditional distribution of race given the number of discipline incidents within Building A of the case study sample. The chi-square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, $X^2(5, N = 546) = 6.7$, $p = .23863292$. The chi-square statistic was 6.766. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was no significant relationship between race and number of student discipline incidents within Building A.

Figure 30

Building A: Number of Discipline Incidents by Race

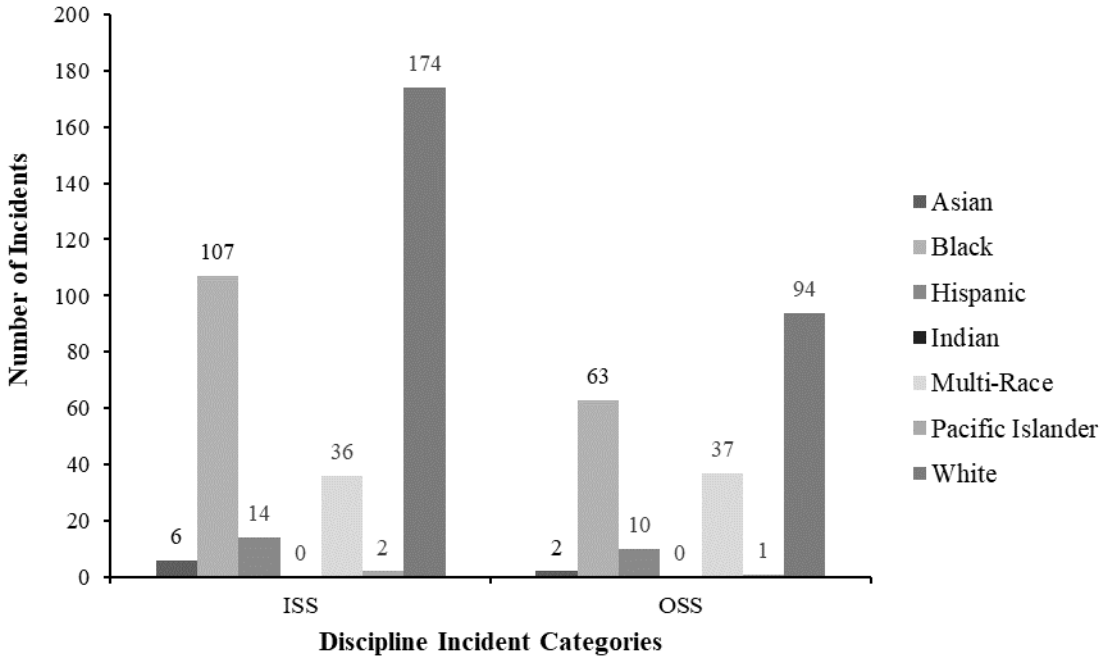


Figure 31 highlights the conditional distribution of race given the number of students with discipline incidents within Building B of the case study sample. The chi-square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, X^2 (3, N = 25) = 6.3, p = .09494. The chi-square statistic was 6.3698. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was no significant relationship between race and number of elementary students with discipline incidents at Building B.

Figure 31

Building B: Number of Students with Discipline Incidents by Race

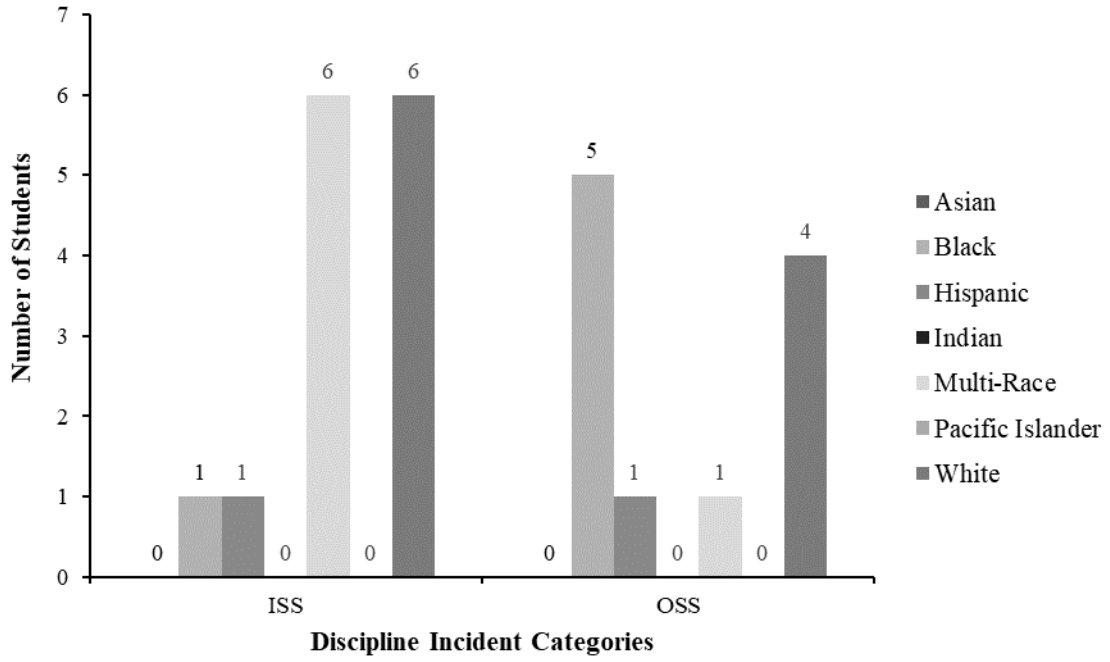
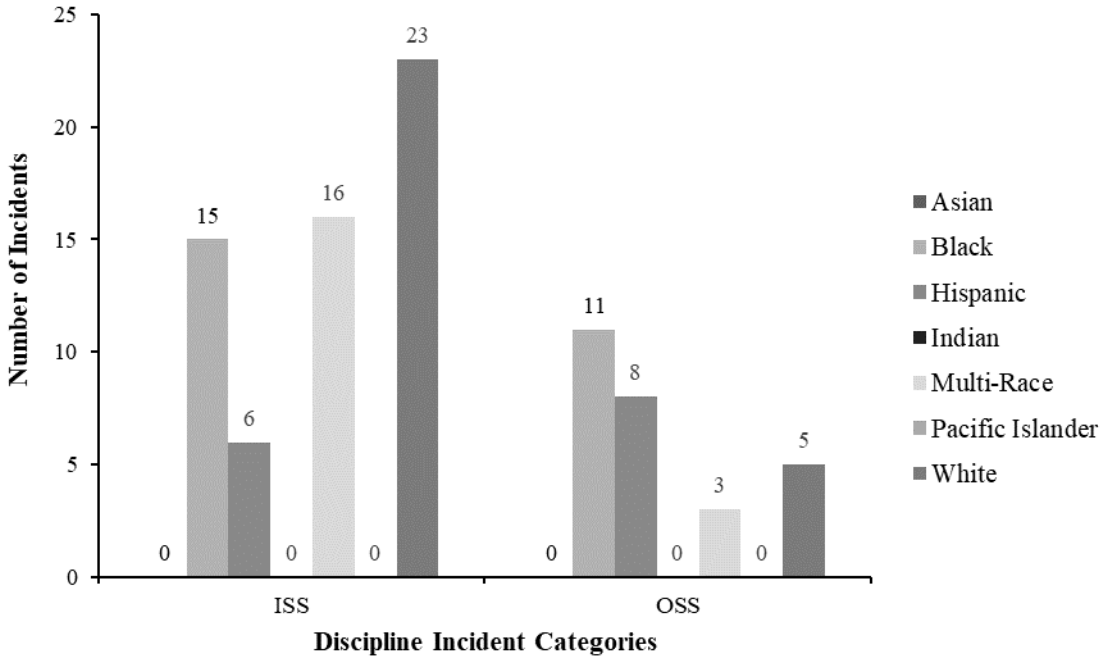


Figure 32 highlights the conditional distribution of race given the number of discipline incidents within Building B of the case sample study. The chi-square test result yielded sufficient evidence of a significant statistical relationship between these variables, $X^2(3, N = 87) = 10.3$, $p = .015906$. The chi-square statistic was 10.3373. The result was significant at $p < .05$; therefore, the null hypothesis was rejected. There was a relationship between race and number of student discipline incidents within Building B.

Figure 32

Building B: Number of Discipline Incidents by Race



Research Question Four

What is the relationship between the student risk factor of gender and student exclusionary discipline outcomes for elementary students in one Missouri school district?

The null hypothesis stated there is no relationship between the student risk factor of gender and student exclusionary discipline outcomes for elementary students in one Missouri school district. Districtwide, 1,180 elementary students in the midwestern school district had school discipline incidents. Of the 1,180 elementary students with discipline incidents, 938 students were male and accounted for 2,999 discipline incidents. Within Building A of the study sample, 89 students with discipline incidents were male and accounted for 411 discipline incidents. Within Building B of the study sample, 22

students with discipline incidents were male and accounted for 82 discipline incidents. Percentages of discipline incidents by gender are detailed in Table 7.

Table 7

Percentage of Discipline Incidents by Gender

Gender	All District Elementary Schools		Building A		Building B	
	ISS	OSS	ISS	OSS	ISS	OSS
Male	82.63%	85.04%	75.22%	75.36%	96.67%	88.89%
Female	17.37%	14.96%	24.78%	24.64%	3.33%	11.11%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

In order to test the hypothesis, the marginal distribution and conditional distribution of gender given the number of students with discipline incidents was calculated. The relationship between gender and discipline outcomes for elementary students in the midwestern school district was analyzed after a chi-square test of independence was performed for each distribution. In addition, distributions were calculated for Building A and Building B, and chi-square tests were performed to examine the relationship between gender and discipline outcomes.

Figure 33 highlights the conditional distribution of gender given the number of students with discipline incidents within the entire elementary population of the midwestern school district. The chi-square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, X^2 (3, N = 1,180) = 7.1, p = .067998. The chi-square statistic was 7.1257. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was not a

significant relationship between gender and number of elementary students with discipline incidents within the entire elementary population of the Missouri school district.

Figure 33

Midwestern School District Number of Elementary Students with Discipline Incidents by Gender

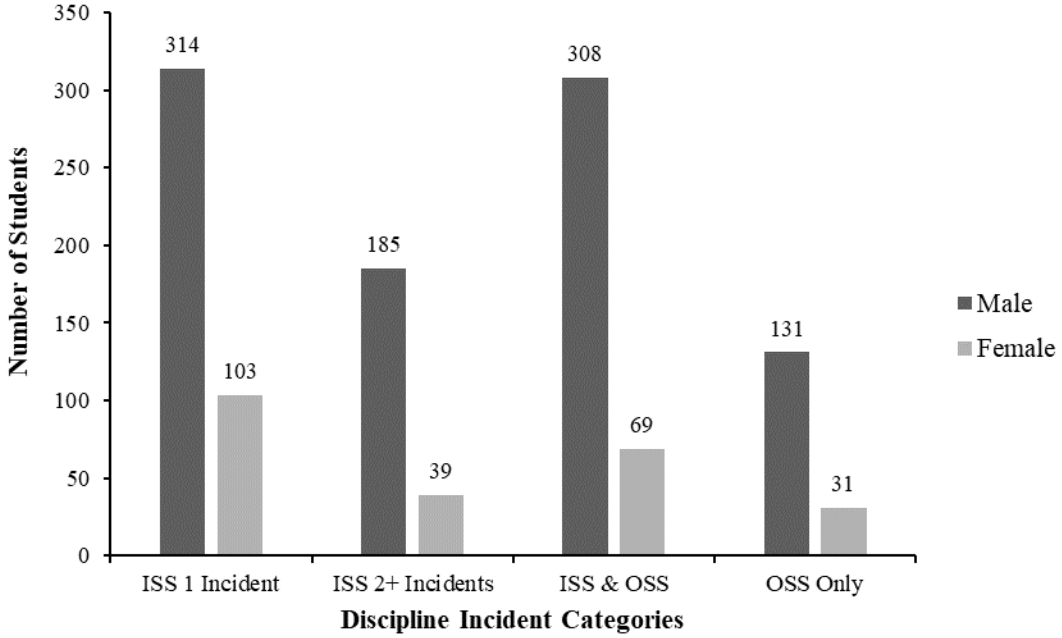


Figure 34 highlights the conditional distribution of gender given the number of discipline incidents within the overall elementary population of the midwestern school district. The chi-square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, X^2 (1, N = 3,592) = 3.4, p = .062776. The chi-square statistic was 3.4625. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was not a significant relationship

between gender and number of student discipline incidents within the overall elementary population of the Missouri school district.

Figure 34

Midwestern School District Number of Elementary Discipline Incidents by Gender

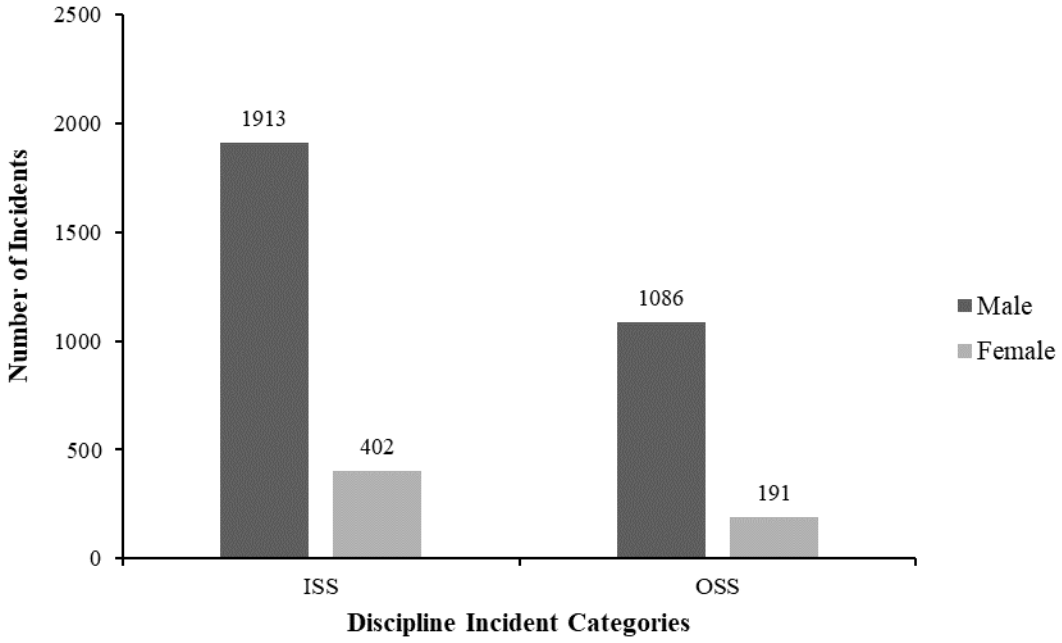


Figure 35 highlights the conditional distribution of gender given the number of students with discipline incidents within Building A of the case study sample. The chi-square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, X^2 (3, N = 120) = 2.0, p = .570444. The chi-square statistic was 2.0095. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was no significant relationship between gender and number of elementary students with discipline incidents at Building A.

Figure 35

Building A: Number of Students with Discipline Incidents by Gender

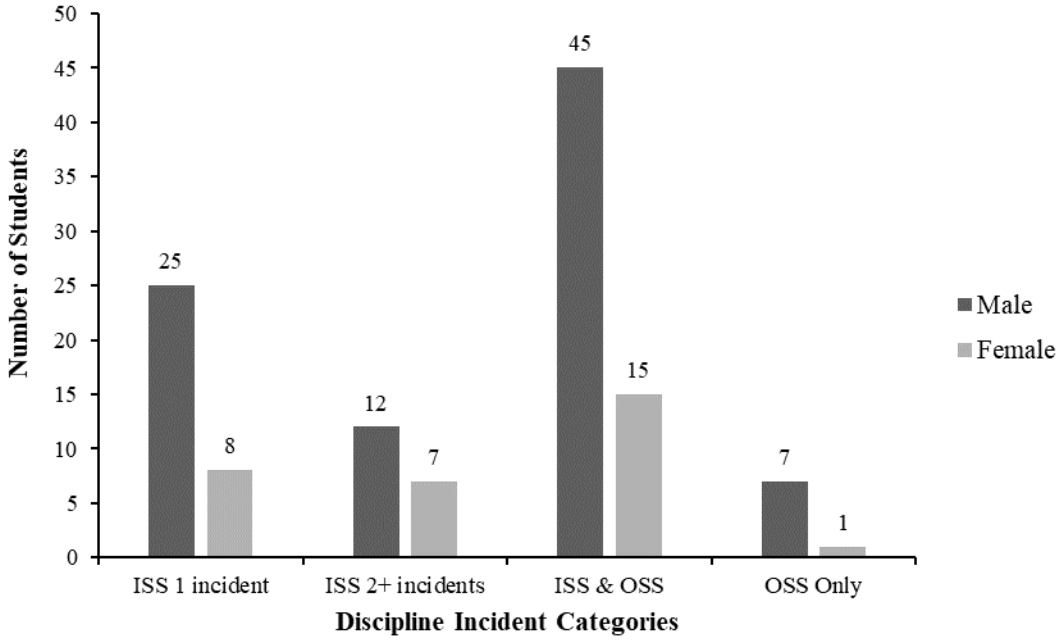


Figure 36 highlights the conditional distribution of gender given the number of discipline incidents within Building A of the case study sample. The chi-square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, $X^2(1, N = 546) = 0.0$, $p = .970427$. The chi-square statistic was 0.0014. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was no significant relationship between gender and number of student discipline incidents within Building A.

Figure 36

Building A: Number of Discipline Incidents by Gender

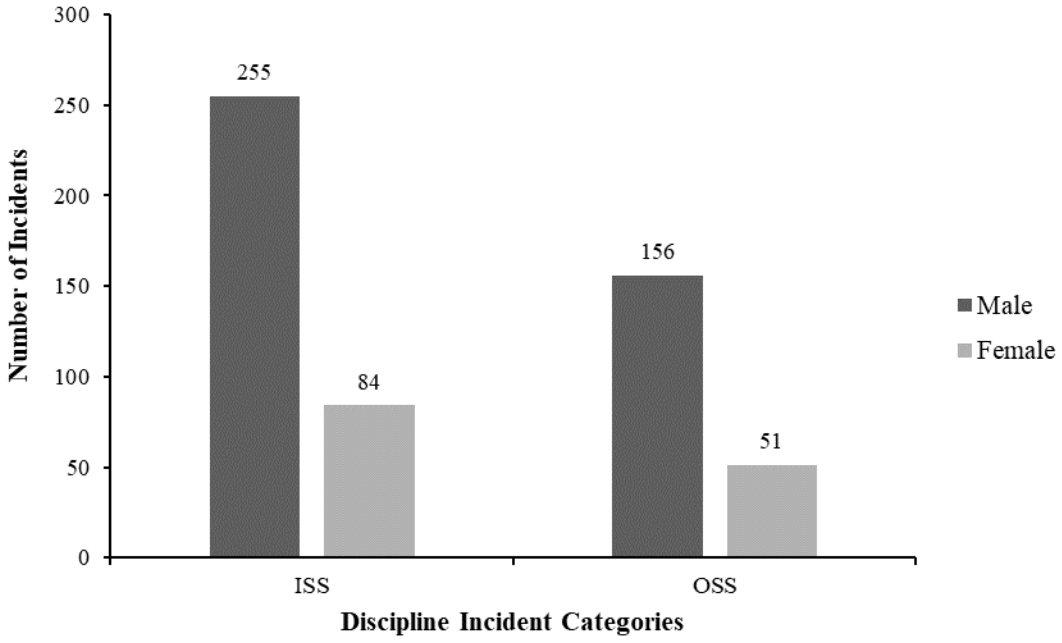


Figure 37 highlights the conditional distribution of gender given the number of students with discipline incidents within Building B of the case study sample. The chi-square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, X^2 (1, N = 25) = 2.9, p = .084682. The chi-square statistic was 2.9727. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was no significant relationship between gender and number of elementary students with discipline incidents at Building B.

Figure 37

Building B: Number of Students with Discipline Incidents by Gender

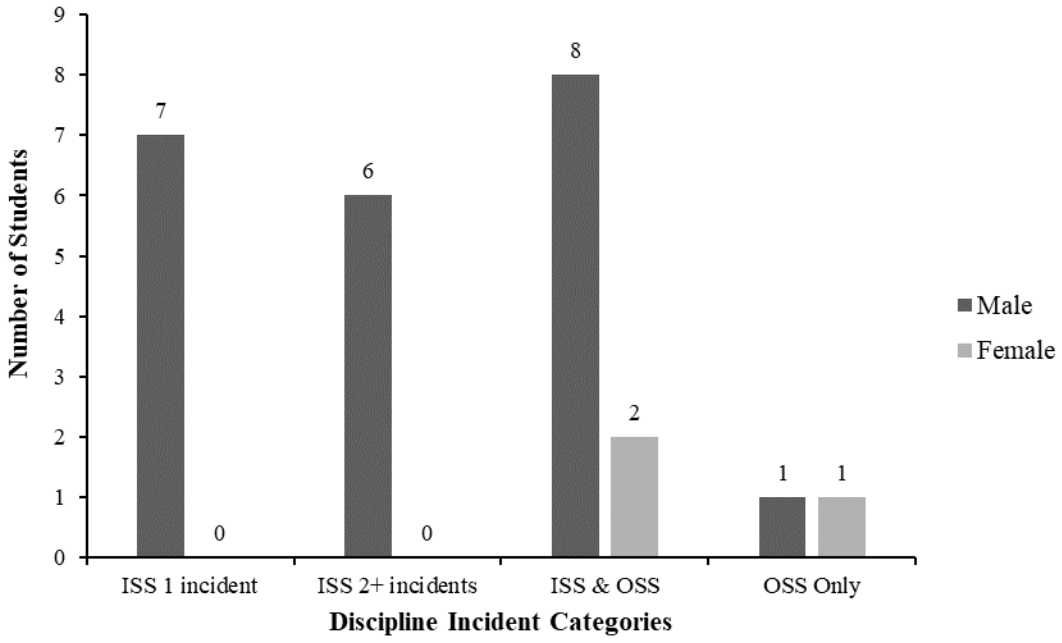
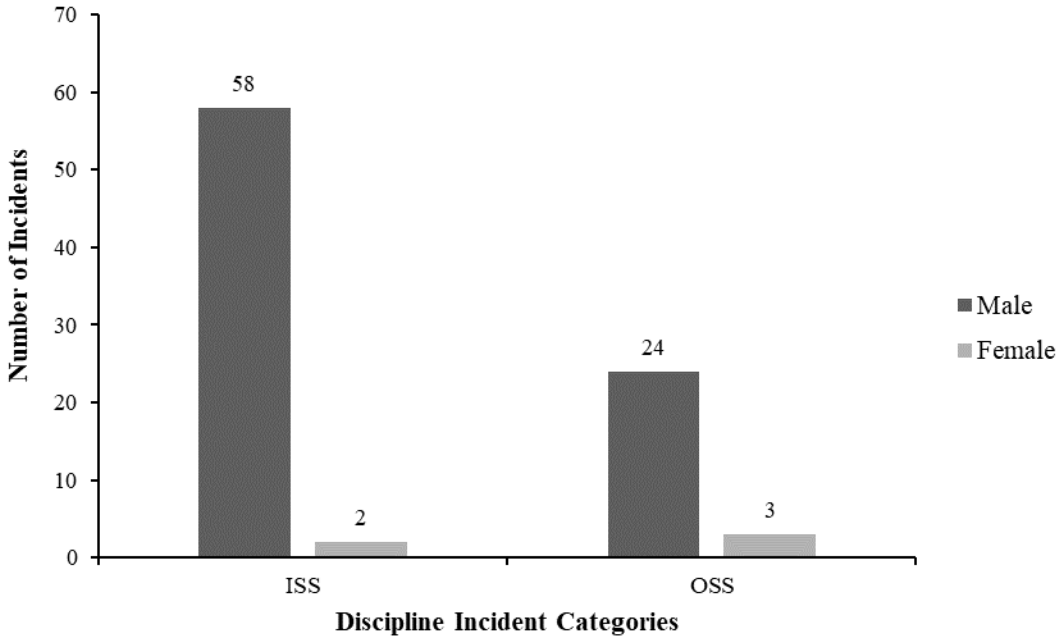


Figure 38 highlights the conditional distribution of gender given the number of discipline incidents within Building B of the case study sample. The chi-square test result failed to yield sufficient evidence of a significant statistical relationship between these variables, $X^2(1, N = 87) = 2.0$, $p = .149288$. The chi-square statistic was 2.0795. The result was not significant at $p < .05$; therefore, the null hypothesis was not rejected. It was concluded there was no significant relationship between gender and number of student discipline incidents within Building B.

Figure 38

Building B: Number of Discipline Incidents by Gender



Research Question Five

In one Missouri school district, what is the difference in student exclusionary discipline outcomes between two elementary schools with similar student risk factors?

The null hypothesis stated there is no difference in student exclusionary discipline outcomes between two elementary schools with similar student risk factors in one Missouri school district. Table 8 highlights the number of discipline incidents associated with the student risk factors of race, meal status, special education status, and gender at the two case study sample buildings in the midwestern school district. The total in-school, out-of-school, and cumulative suspension incidents for Building A and Building B are also detailed. As noted in Table 8, Building A had nearly four times as many students involved in discipline incidents as Building B. Out of the total enrollment of 363

students at Building A, 120 students were involved in discipline incidents, which is approximately one-third of the student population at Building A. Of the total enrollment of 326 students at Building B, 25 students were involved in discipline incidents, which is approximately one-13th of the student population at Building B. The students at Building A accounted for a total discipline count more than six times greater than the total discipline count at Building B.

Table 8

Study Sample Buildings Total Number of Discipline Incidents by Risk Factor

Building A	363 Total Students	Building B	326 Total Students
120 Students with Discipline Incidents		25 Students with Discipline Incidents	
White	268 incidents	White	28 incidents
Black	170 incidents	Black	26 incidents
Hispanic	24 incidents	Hispanic/Latino	14 incidents
Asian/Pacific Isl.	11 incidents	Asian/Pacific Isl.	0 incidents
Multi-Race	73 incidents	Multi-Race	19 incidents
Native American	0 incidents	Native American	0 incidents
Free Meal Status	486 incidents	Free Meal Status	82 incidents
Reduced Meal	9 incidents	Reduced Meal	0 incidents
Full Pay Meal	51 incidents	Full Pay Meal	5 incidents
Special Education	152 incidents	Special Education	13 incidents
Not Sp. Education	394 incidents	Not Sp. Education	74 incidents
Female	135 incidents	Female	5 incidents
Male	411 incidents	Male	82 incidents
ISS Total Count	339 incidents	ISS Total Count	60 incidents
OSS Total Count	207 incidents	OSS Total Count	27 incidents
Total Discipline	546 incidents	Total Discipline	87 incidents

In order to test the hypothesis, a two-sample assuming unequal variances *t*-test analysis was utilized to determine the difference between the total discipline incidents for each risk factor at Building A and Building B. The results of the two-tailed *t*-test analysis for the number of discipline incidents associated with each risk factor were a *t*-critical two-tail value of 2.144787, a *t*-statistic of 2.85926, and a *p*-value of .012617. The result was significant at $p < .05$; therefore, the null hypothesis was rejected. There was a significant difference in student exclusionary discipline outcomes between the two elementary schools with similar student risk factors in one Missouri school district.

Summary

The purpose of this research was to determine the strength of a relationship between student risk factors and exclusionary discipline and the difference between student exclusionary discipline incidents at two similar schools within the same school district. In order to conduct the study, deidentified secondary data were collected from the midwestern school district. The secondary data included 1,180 elementary students with a combined total of 3,592 discipline incidents and information about each student's discipline incidents, race, disability status, gender, and meal status. Descriptions of the district population, eligible elementary population, and sample case study schools were provided. Five research questions were answered through a quantitative approach by using the chi-square analysis method, descriptive statistics, and a two-tailed *t*-test.

Through data analyses of the components of research question one, a significant statistical relationship was discovered between meal status and the number of students with discipline incidents as well as between meal status and the number of discipline incidents for the overall elementary population of the midwestern school district. Data

analyses of the individual case study schools, Building A and Building B, failed to yield sufficient evidence of a statistical relationship between meal status and student exclusionary discipline outcomes.

Data analyses of research question two yielded a significant statistical relationship between special education status and the number of students with discipline incidents as well as between special education status and the number of discipline incidents for the overall elementary population of the midwestern school district. Data analyses of Building A and Building B failed to yield sufficient evidence of a statistical relationship between special education status and number of students with discipline incidents; however, a significant statistical relationship was discovered between special education status and number of discipline incidents at Building B.

Data analyses of research question three failed to yield a significant statistical relationship between race and the number of students with discipline incidents for the overall elementary population of the midwestern district; however, a significant statistical relationship was discovered between race and the number of exclusionary discipline incidents. Data analyses of Building A and Building B failed to yield sufficient evidence of a statistical relationship between race and the number of students with discipline incidents; however, a significant relationship was discovered between race and number of discipline incidents at Building B.

Data analyses of research question four failed to yield a significant statistical relationship between gender and exclusionary discipline outcomes for the overall elementary population, for Building A, and for Building B. Data analysis for research

question five yielded a significant difference in discipline outcomes for the case study schools, Building A and Building B.

In Chapter Five, the research study is concluded with a review of the findings, interpretations, and conclusions for each research question. Implications for practice and recommendations for future research are included. Lastly, a summary of major elements of the study is delivered.

Chapter Five: Conclusions and Implications

Since President Johnson's declaration of war on poverty and the enactment of Title I, opportunity gaps and behavior differences have continually been identified between high-income students and students who reside in poverty (Baker & Coley, 2013; Gibson & Gibson, 2019; Jennings, 2000; Office of Education, 1969; USDOE, 2016b; Williams et al., 2017). Also connected with opportunity gaps are risk factors such as special education and race (Aguilar, 2019; McCarter, 2017). Students who are under-resourced are more frequently exposed to stressors and trauma that impact brain development and the ability to regulate emotions or behavior, which can lead to exclusionary discipline (Black, 2016; Gibson & Gibson, 2019; Jensen, 2019).

Exclusionary discipline practices can be detrimental to student success and potentially increase the likelihood of future involvement with the justice system (Black, 2016; Crosby et al., 2018; Mallett, 2016; Public Counsel, 2020). In this study, literature was presented regarding the history of Title I, the history of discipline, risk factors, the impact of trauma on development, and alternative methods schools utilize to decrease the impact of trauma. Secondary data were obtained from a large midwestern school district and analyzed to determine if an opportunity gap existed through relationships between risk factors and exclusionary discipline.

The purpose of this study was to examine the relationship between exclusionary discipline outcomes and student risk factors of meal status, disability, race, and gender. Also, the difference in discipline outcomes between elementary schools with similar student risk factors was reviewed. The study included a case study component wherein two demographically similar schools with different exclusionary discipline rates were

examined. In this chapter, the findings from Chapter Four are addressed. Conclusions supported by current research are detailed. Following the conclusions, implications for practice and recommendations for future research are presented. Lastly, a summary concludes the chapter.

Findings

Five research questions guided the research study. Statistical analyses of data resulted in the following findings regarding the five research questions and hypotheses:

Research Question One

What is the relationship between the student risk factor of free meal status and student exclusionary discipline outcomes for elementary students in one Missouri school district?

After calculating the marginal distribution and conditional distribution of meal status given the number of elementary students with discipline incidents and the distribution of meal status given the number of elementary discipline incidents, statistical analyses were conducted. It was determined that a significant relationship existed between both meal status and number of students with discipline incidents and between meal status and number of discipline incidents for the overall elementary population of the midwestern school district. Therefore, with regard to the overall elementary population of the midwestern school district, the null hypothesis was rejected because a significant relationship was discovered. After conducting statistical analyses for each of the individual case study schools, Building A and Building B, it was determined the null hypothesis should not be rejected, as no significant relationship was discovered between

meal status and number of students with discipline incidents or between meal status and number of discipline incidents.

Research Question Two

What is the relationship between the student risk factor of disability and student exclusionary discipline outcomes for elementary students in one Missouri school district?

After calculating the marginal distribution and conditional distribution of disability given the number of elementary students with discipline incidents and the distribution of disability given the number of elementary discipline incidents, statistical analyses were conducted. It was determined a significant relationship existed between both disability and number of students with discipline incidents and between disability and number of discipline incidents for the overall elementary population of the midwestern school district. Therefore, with regard to the overall elementary population of the midwestern school district, the null hypothesis was rejected because a significant relationship was discovered.

After conducting statistical analyses for each of the individual case study schools, Building A and Building B, it was determined the null hypothesis should not be rejected with regard to disability given the number of students with discipline incidents, as no significant relationship was discovered at either school. Data analysis for disability given the number of discipline incidents for Building A also resulted in a determination of no significant relationship; however, a significant relationship between disability and number of discipline incidents was discovered for Building B. Therefore, the null hypothesis was rejected for Building B because a significant relationship was discovered between disability and number of discipline incidents.

Research Question Three

What is the relationship between the student risk factor of race and student exclusionary discipline outcomes for elementary students in one Missouri school district?

After calculating the marginal distribution and conditional distribution of race given the number of elementary students with discipline incidents and the distribution of race given the number of elementary discipline incidents, statistical analyses were conducted. It was determined there was not a significant relationship between race and number of students with discipline incidents; however, a significant relationship was discovered between race and number of discipline incidents for the overall elementary population of the midwestern school district. With regard to the overall elementary population of the midwestern school district, the null hypothesis was rejected because a significant relationship was discovered between race and number of discipline incidents.

After conducting statistical analyses for each of the individual case study schools, Building A and Building B, it was determined the null hypothesis was not rejected with regard to race given the number of students with discipline incidents, as no significant relationship was discovered at either school. Data analysis for race given the number of discipline incidents for Building A also resulted in a determination of no significant relationship; however, a significant relationship between race and number of discipline incidents was discovered for Building B. Therefore, the null hypothesis was rejected for Building B because a significant relationship was discovered between race and number of discipline incidents.

Research Question Four

What is the relationship between the student risk factor of gender and student exclusionary discipline outcomes for elementary students in one Missouri school district?

After calculating the marginal distribution and conditional distribution of gender given the number of elementary students with discipline incidents and the distribution of gender given the number of elementary discipline incidents, statistical analyses were conducted. It was determined there was not a significant relationship between either gender and number of students with discipline incidents or between gender and number of discipline incidents for the overall elementary population of the midwestern school district. Therefore, with regard to the overall elementary population of the midwestern school district, the null hypothesis was not rejected because no significant relationship was discovered. After conducting statistical analyses for each of the individual case study schools, Building A and Building B, the null hypothesis was not rejected, as no significant relationship was discovered between gender and number of students with discipline incidents or between gender and number of discipline incidents.

Research Question Five

In one Missouri school district, what is the difference in student exclusionary discipline outcomes between two elementary schools with similar risk factors?

Through the use of purposive sampling, two elementary schools within the midwestern school district were selected for the case study component of this study due to their similarities in both demographics and enrollment size (Fraenkel et al., 2019). Out of the total enrollment size of 363 students at Building A, 120 students accounted for 546 total discipline incidents. At Building B, 326 students were enrolled, and 25 students

accounted for the 87 total discipline incidents. Both Building A and Building B had a high percentage of students eligible for free meal status. At Building A, 83% of students were eligible for free meal status, and 80% of students were eligible for free meal status at Building B. Racial diversity was prevalent at both Building A and Building B, with between 50%–60% of the student population White and the other half of the population comprised of students who were Black, multi-race, Asian, Hispanic, Latino, Pacific Islander, or Native American.

After conducting a two-sample assuming unequal variances *t*-test statistical analysis for the number of discipline incidents associated with each risk factor at Building A and Building B, a significant difference between the two elementary schools was discovered. The data analysis resulted in a *p*-value of .012617, which was significant at $p < .05$. The null hypothesis was rejected because a significant difference was discovered between the number of exclusionary discipline outcomes at each of the two elementary schools with similar risk factors.

Conclusions

Review of the data analyses associated with research questions one and two revealed a significant statistical relationship between exclusionary discipline and the risk factors of meal status and disability for the elementary population of the midwestern school district. The results of the data analyses supported researcher statements regarding low-income students and their increased risk of suspension due to trauma, lack of self-regulation skills, and a different understanding of social rules (Barrett et al., 2019; McCarter, 2017; Palomar-Lever & Victorio-Estrada, 2017; Payne, 2019). In the midwestern school district, 49% of all elementary students were eligible for free meal

status and accounted for 74% of the total elementary in-school-suspension incidents and 80% of the total out-of-school suspension incidents.

Of the total elementary population, 12% of students were eligible for special education services based on disability. Elementary students eligible for special education services based on disability accounted for more than 22% of total elementary in-school suspension incidents and almost 30% of out-of-school suspension incidents in the midwestern school district. These data analyses supported researchers who have stated students with disabilities represent a small part of the total school population but have an increased likelihood of suspension when compared to students without disabilities (Green et al., 2018; Steinberg & Lacoe, 2017; USDOE, 2019a).

While the results for question three were varied regarding the relationship between race and number of students with discipline incidents and the relationship between race and number of exclusionary discipline incidents, a relationship was discovered between race and the number of discipline incidents for the overall elementary population in the midwestern school district. Of the total elementary population, 74% of the students were White and accounted for 63% of in-school and 66% of out-of-school suspension incidents. Students who were Black accounted for 8% of the elementary student population and 18% of in-school and 15% of out-of-school suspension incidents. Students who were multi-race accounted for 7% of the population and 11% of both in-school and out-of-school suspension incidents.

Students who were Hispanic accounted for 7% of the total population and 6% of both in-school and out-of-school suspension incidents. Students who were Asian or Pacific Islander accounted for approximately 4% of the total population and less than 1%

of both in-school and out-of-school suspension incidents. Students who were Native America/Indian accounted for 1% of the student population and less than 1% of both in-school and out-of-school suspension incidents. This analysis supports researchers who have stated that Black students have an increased likelihood of exclusionary discipline compared to students who are White (Ford, 2016; Henderson & Guy, 2017; McCarter, 2017; Steinberg & Lacoe, 2017).

An examination of the data analysis for research question five revealed a significant difference in student exclusionary discipline outcomes between the two case study schools. The two schools served demographically similar students and differed in enrollment by fewer than 40 students; however, the number of discipline incidents varied greatly, with Building A accounting for a number of discipline incidents more than six times greater than the discipline incidents at Building B. The number of students involved in disciplinary incidents at Building B was approximately one-fourth the number of students involved in disciplinary incidents at Building A.

Bronfenbrenner (1977) and researchers of his ecological systems theory such as Burns et al. (2015), Elliott and Davis (2018), Ettekal and Mahoney (2017), and Hertler et al. (2018) have posited that individuals are greatly affected by the varying levels of their environment. The microsystem, the level with the most impact due to its close proximity to an individual for a significant period of time, includes interactions with family, school, and peers (Bronfenbrenner, 1977; Ettekal & Mahoney, 2017; Johnson, 2008). A microsystem analysis could be utilized to determine if a home environment or school culture is supportive of appropriate development and trauma-informed practices conducive to student success (Burns et al., 2015; Crosby, 2015; Tudge et al., 2017).

Exclusionary discipline could be classified as part of the mesosystem, which is the second-most influential level, because the practice of exclusionary discipline is associated with practices that teach consequences for unacceptable behavior in the school environment (Crosby, 2015; Tudge et al., 2017). Mesosystem analysis could be utilized to evaluate culture and disciplinary procedures in a school setting and determine any necessary modifications to ensure student success (Tudge et al., 2017).

Implications for Practice

Based on the results of this study, the following practices are suggested to promote a positive culture and increased student success in school districts with a high percentage of at-risk students and discipline incidents: pre-certification training for aspiring educators and professional development for current teachers focused on trauma and its detrimental impacts on neurogenesis and resulting student behavior, management models that focus on relationships and social-emotional development, and proactive rehabilitative methods that promote school wide accountability and serve as alternatives to exclusionary discipline.

Professional Development

In this study, a significant relationship was discovered between exclusionary discipline and the risk factors of student meal status, special education status, and race. Also, a significant difference was discovered between disciplinary outcomes at two similar schools with a high percentage of at-risk students. This outcome supports researchers who have stated that individuals, especially children, exposed to chronic stress and trauma are often dysregulated and operate in a consistent fight-or-flight state due to maladaptive neuroplasticity (Gibson & Gibson, 2019; Gorski, 2018; Jensen, 2019).

When a brain undergoes trauma-based maladaptive neuroplasticity, stress response activity is over utilized, a compulsive need to reenact trauma manifests, and neural pathways are created for survival (Craig, 2016; Gibson & Gibson, 2019; Minahan, 2019; Platt, 2019). While operating in a survival state, individuals cannot easily transition to a state of executive functioning and often struggle with self-regulation, aggression, defiance, negativity, poor interactions with others, and difficulty handling stress and emotions (Craig, 2016; Platt, 2019; Souers, 2018). Students who operate in a survival state are more prone to discipline incidents in a school setting that is reactive to misbehavior rather than proactive with preventative strategies (Craig, 2016; Minahan, 2019; Souers, 2018).

An embedded pre-certification course about the deleterious effects of trauma on a developing brain would be helpful to aspiring educators as they develop an understanding of relationship building and reducing problematic behaviors within the classroom (Public Counsel, 2020). Classroom teachers are trained to meet the needs of students theoretically and academically; however, academic learning cannot begin until students feel understood, respected, safe, and connected in their environment (Craig, 2016; Gibson & Gibson, 2019; Souers, 2018). Practicing educators, especially those who serve at-risk student populations, would also benefit from professional development sessions about changes in the development of brain architecture due to trauma (Gibson & Gibson, 2019; Jensen, 2019; Public Counsel, 2020). A teacher with an understanding of brain function and adaptations can help a trauma-ridden student learn strategies to handle difficult emotions or situations, which can effectively create new, healthy neural pathways and

physiological stability that allows behavior to improve and learning to take place (Bailey, 2015; Gibson & Gibson, 2019; Jensen, 2019).

Proactive Management Models

Students who have experienced trauma tend to be disproportionately involved in disruptive incidents and displays of misplaced aggression (Gibson & Gibson, 2019; Minahan, 2019). Educators can assist students by becoming trauma-informed, understanding the signs and impact of trauma, learning how to respond and assist in possible recovery techniques, and seeking ways to prevent re-traumatization (Craig, 2016; Gibson & Gibson, 2019). Teachers can also assist students by being proactive in their classroom management and developing relationships with students, demonstrating unconditional positive regard and respect, practicing compassion, being intentional, establishing trust, providing structure and routines, eliminating yelling or arguing, and incorporating practices such as mindfulness in order to help students understand and manage their emotions (Aguilar, 2019; Gibson & Gibson, 2019; Sacks, 2016). The practice of mindfulness allows students to cultivate an awareness of their thoughts and emotions and to improve executive functioning and self-control, thereby decreasing misbehavior and increasing success in school (Aguilar, 2019; Armstrong, 2019).

Educators can also utilize Social Emotional Learning strategies to create a healthy environment, decrease misbehavior, help students understand positive and negative emotions, focus on improving character and intellectual development, and help students develop self-regulation and coping mechanisms (Brackett, 2018; Lenz et al., 2018; McTighe & Willis, 2019; Public Counsel, 2020). An extension of Social Emotional Learning beyond the walls of the classroom and into the school and surrounding

community can help students develop character strengths and life skills (Lenz et al., 2018; Milliken & Shorthouse, 2016). By recognizing trauma and taking the approach of educating the whole child, teachers can help students focus on success at school instead of focusing on survival (Berkowitz et al., 2017; Bokas, 2016; Griffith & Slade, 2018; Platt, 2019).

Rehabilitative Schoolwide Practices

Students who operate in survival mode due to trauma often exhibit behaviors of self-protection, cannot regulate emotions, and react defensively when they are overwhelmed by a perceived threat or negativity from another person (Gibson & Gibson, 2019). However, trauma-based neuroplasticity is not the only cause for misbehavior in schools, because oftentimes, misbehavior can be unintentionally spurred by the school culture or environment (Black, 2016; Gibson & Gibson, 2019; Minahan, 2019). If educational leaders aim to reform exclusionary discipline practices and provide equitable educational opportunities, it is vital they provide a positive, consistent, transparent, respectful, and supportive school culture (Black, 2016; Minahan, 2019). In Bronfenbrenner's ecological systems theory, the school environment is within the most influential level of an individual's development; therefore, intentional positivity within a school environment can potentially reduce the detrimental impact of trauma and increase opportunities for success (Bronfenbrenner, 1977; Ettekal & Mahoney, 2017; Gibson & Gibson, 2019; Minahan, 2019).

School leaders can create a safe and effective school culture by providing mental health interventions and resources to help students learn self-regulation techniques, de-escalation strategies, and methods of processing triggers (Armstrong, 2019; Craig, 2016;

Crosby et al., 2018). A sense of connectedness and intrinsic motivation are vital to the reduction of student misbehavior, and school leaders can promote both of these areas by maintaining high expectations, providing rigorous educational opportunities, and teaching prosocial and proactive behaviors (Bailey, 2015; Berkowitz et al., 2017; Green et al., 2018; Steinberg & Lacoe, 2017). Methods such as Conscious Discipline, Schoolwide Positive Behavioral Interventions and Supports, and Response to Intervention focus on the proactive improvement of school culture through behavioral expectations and interventions that are differentiated and developmentally responsive (Bailey, 2015; Green et al., 2018; Keels, 2020; Steinberg & Lacoe, 2017). Leaders with a goal to provide a positive environment should hold students accountable in a compassionate way and not focus on shaming methods, such as reward or punishment-based incentive systems, that penalize students or promote fear (Lauricella, 2019; Stearns & Stearns, 2017).

School leaders who have a goal of decreasing exclusionary discipline outcomes and addressing the root of behavior problems can utilize the Restorative Justice method, which is a proactive rehabilitative alternative to exclusionary discipline that focuses on relationship reparation and accountability (Black, 2016; Public Counsel, 2020). While standard discipline practices are punitive and exclusionary, Restorative Justice promotes growth opportunities and collaborative problem solving, strengthens relationships, encourages a sense of community, and focuses on repairing a harm done to a person rather than serving punishment for breaking rules (Fisher & Frey, 2019; Public Counsel, 2020; Sprenger, 2020). While exclusionary discipline increases the likelihood of future discipline, a decline in academic achievement, higher dropout rates, and potential involvement with the justice system, alternatives such as Restorative Justice focus on the

improved well-being of those involved with a discipline incident and the well-being of the entire school community (Crosby et al., 2018; Green et al., 2018; Keels, 2020; Mallett, 2016; McCarter, 2017).

Recommendations for Future Research

In this study, a relationship was discovered between exclusionary discipline and the risk factors of meal status, special education status, and race. A significant difference in student exclusionary discipline outcomes was discovered between the two case study schools with similar risk factors. The results of this study raised thoughts and questions deserving of additional consideration. The recommendations for future research involve the risk factors found to have a relationship with exclusionary discipline outcomes, the relevancy and importance of school culture, the impact of trauma and Adverse Childhood Experiences on student success, and an in-depth continuation of the case study component.

Risk Factors

This study was focused on the elementary enrollment of one midwestern school district, and a limitation of this study was the sample and population size. While a relationship was found between exclusionary discipline and the risk factors of meal status, special education status, and race in the elementary population of the midwestern school district, future researchers could expand the population and sample size to include all students from grades kindergarten through 12th grades. The inclusion of all grade levels would result in a more comprehensive determination of relationships and would also include high school expulsion data. Since a significant relationship was not found

between exclusionary discipline and gender, future researchers could focus only on the risk factors of free meal status, special education status, and race.

After analyzing the percentages of discipline incidents that students were accountable for, it was apparent that Black students in the midwestern school district had an increased likelihood of suspension as compared to White students. In future studies, consideration could be given to completing a similar study in a district with a more equitable distribution of race categories to determine if the same likelihood or relationship exists between race and discipline incidents. Approximately half of the elementary student population in the midwestern school district qualified for free meal status, and just over 40% qualified for full-pay status. While this distribution is diverse, future researchers could analyze data from a district with higher free meal percentages to determine if the relationship remains significant. Lastly, previous researchers stated students with disabilities typically represent less than 15% of the total student population and are twice as likely to be suspended (Green et al., 2018, p. 419; McCarter, 2017, p. 55; Steinberg & Lacoe, 2017, pp. 47–48; USDOE, 2016a, p. 4; USDOE, 2019a, p. 8). The results of this study were consistent with those statements. In a future study, researchers could examine the relationships between exclusionary discipline and disability at the elementary, middle school, and high school levels to determine if the relationship changed in significance depending on student grade level.

The Impact of Trauma

Results of this study confirmed a relationship between exclusionary discipline and meal status, which supports researchers who have stated that poverty and associated traumatic events can negatively impact development and behavior (Barrett et al., 2019;

McCarter, 2017; Palomar-Lever & Victorio-Estrada, 2017; Payne, 2019). Researchers have also referred to traumatic events as Adverse Childhood Experiences (Missouri Community Action Network, 2018; Souers & Hall, 2016). Researchers looking to further the current study could consider adding a qualitative component to the study that analyzes the Adverse Childhood Experiences associated with students who qualify for free meal status and have discipline records. A mental health component could also be considered in the study, and counselors or other practitioners could be interviewed to gain information about interventions for students who have experienced trauma to determine if alternatives to exclusionary discipline are offered.

Role of School Culture

The case study component of this study revealed there was a significant difference in the exclusionary discipline outcomes between two elementary schools with similar enrollment and risk factors in the midwestern school district. Researchers looking to further this component of the study could change the study to a mixed-methods study by adding qualitative components and conducting interviews and observations of the two case study schools to determine why such a significant difference in discipline outcomes exists. A future researcher might also consider determining if there is a significant correlation between teacher and administrator efficacy and discipline rates. In the past, researchers have found students are more successful if the school they attend has a culture that is trauma-informed and supportive (Berkowitz et al., 2017; Crosby et al., 2018; Gray, 2017; Jensen, 2019; Sacks, 2016). An expansion of this component of the study could further support the alternative methods to exclusionary discipline presented in this research.

Extension of the Study

This study was based on data related to the 2018–2019 school year. An extension of the entire study could span over a period of several years and follow the same student population through middle and high school grades. Following a student population within the district and across grade levels could allow a researcher to determine if a student was more or less successful in a different school setting or by grade level. Student success in a different setting could lead to even further research into school culture, teacher and administrator efficacy, and alternatives used instead of exclusionary discipline. If future researchers were able to track student success following interventions, this could inform the district of successful practices that should be considered for students who have been impacted by trauma.

Summary

In order to be successful, students should have the opportunity to obtain an unimpeded education (McCarter, 2017). After President John F. Kennedy declared war on poverty in 1965, Title I was enacted to address resource and opportunity deficiencies encountered by low-income students (DuFour et al., 2018; Jennings, 2000, "The Birth of Title I" section, para. 1; Office of Education, 1969; Paul, 2016; USDOE, 2016b). Alongside resource and opportunity deficiencies, children who reside in poverty often encounter traumatic situations which affect brain development and hinder the ability to reach academic potential (Baker & Coley, 2013; Black, 2016; Gibson & Gibson, 2019; Jensen, 2019; Payne, 2019).

Other student risk factors associated with opportunity gaps and trauma are special education status, race, and gender (Aguilar, 2019; Dill, 2015; Henderson & Guy, 2017;

McCarter, 2017; Sparks, 2016; Sullivan et al., 2013). Students who experience trauma often display an inability to self-regulate or behave appropriately, which can lead to exclusionary discipline, loss of instructional opportunities, increased dropout rates, and future involvement with the justice system (Bailey, 2015; Bellibas, 2016; Black, 2016; Crosby et al., 2018; Green et al., 2018; Jones, 2018; Mallett, 2016; McCarter, 2017; Palomar-Lever & Victorio-Estrada, 2017; Sullivan et al., 2013). The purpose of this study was to examine the relationship between student risk factors and exclusionary discipline rates, and a portion of this study was written to explore alternatives to exclusionary discipline that could improve the success of students.

In Chapter Five, findings were highlighted, and conclusions of the study were presented. A significant relationship was discovered between student meal status and exclusionary discipline outcomes for the entire district elementary population; however, a significant relationship was not discovered at either of the case study buildings, Building A and Building B. A significant relationship was discovered between disability and exclusionary discipline outcomes for the entire district elementary population and at Building B; however, a significant relationship was not discovered at Building A.

A significant relationship was discovered between race and number of exclusionary discipline outcomes for the entire district elementary population and at Building B; however, a significant relationship was not discovered at Building A. The results for research question four revealed no significant relationship between gender and exclusionary discipline outcomes for the district or for either case study building. A focus on the two case study schools in research question five revealed a significant difference in student exclusionary outcomes between Building A and Building B.

Implications for practice were provided for educators at all levels, from classroom teachers to district administration to higher education. Based upon the findings of this study, policies, procedures, interventions, and professional learning to reduce exclusionary discipline outcomes and decrease the opportunity gap for students could be created. Future research considerations could be utilized by teachers and administrators in addressing the needs of students who have experienced trauma. The considerations could also be used when determining structures and discipline alternatives conducive to a supportive, trauma-informed school culture. In conclusion, it is imperative all educators are equipped with knowledge of student development and the impact of risk factors on students obtaining an unimpeded education.

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Appendix A

Figure 1

Income Eligibility Guidelines

INCOME ELIGIBILITY GUIDELINES

Effective from July 1, 2017 to June 30, 2018

HOUSEHOLD SIZE	FEDERAL POVERTY GUIDELINES	REDUCED PRICE MEALS - 185 %					FREE MEALS - 130 %				
	ANNUAL	ANNUAL	MONTHLY	TWICE PER MONTH	EVERY TWO WEEKS	WEEKLY	ANNUAL	MONTHLY	TWICE PER MONTH	EVERY TWO WEEKS	WEEKLY
48 CONTIGUOUS STATES, DISTRICT OF COLUMBIA, GUAM, AND TERRITORIES											
1	12,060	22,311	1,860	930	859	430	15,678	1,307	654	603	302
2	16,240	30,044	2,504	1,252	1,156	578	21,112	1,760	880	812	406
3	20,420	37,777	3,149	1,575	1,453	727	26,546	2,213	1,107	1,021	511
4	24,600	45,510	3,793	1,897	1,751	876	31,980	2,665	1,333	1,230	615
5	28,780	53,243	4,437	2,219	2,048	1,024	37,414	3,118	1,559	1,439	720
6	32,960	60,976	5,082	2,541	2,346	1,173	42,848	3,571	1,786	1,648	824
7	37,140	68,709	5,726	2,863	2,643	1,322	48,282	4,024	2,012	1,857	929
8	41,320	76,442	6,371	3,186	2,941	1,471	53,716	4,477	2,239	2,066	1,033
For each add'l family member, add	4,180	7,733	645	323	298	149	5,434	453	227	209	105
ALASKA											
1	15,060	27,861	2,322	1,161	1,072	536	19,578	1,632	816	753	377
2	20,290	37,537	3,129	1,565	1,444	722	26,377	2,199	1,100	1,015	508
3	25,520	47,212	3,935	1,968	1,816	908	33,176	2,765	1,383	1,276	638
4	30,750	56,888	4,741	2,371	2,188	1,094	39,975	3,332	1,666	1,538	769
5	35,980	66,563	5,547	2,774	2,561	1,281	46,774	3,898	1,949	1,799	900
6	41,210	76,239	6,354	3,177	2,933	1,467	53,573	4,465	2,233	2,061	1,031
7	46,440	85,914	7,160	3,580	3,305	1,653	60,372	5,031	2,516	2,322	1,161
8	51,670	95,590	7,966	3,983	3,677	1,839	67,171	5,598	2,799	2,584	1,292
For each add'l family member, add	5,230	9,676	807	404	373	187	6,799	567	284	262	131
HAWAII											
1	13,860	25,641	2,137	1,069	987	494	18,018	1,502	751	693	347
2	18,670	34,540	2,879	1,440	1,329	665	24,271	2,023	1,012	934	467
3	23,480	43,438	3,620	1,810	1,671	836	30,524	2,544	1,272	1,174	587
4	28,290	52,337	4,362	2,181	2,013	1,007	36,777	3,065	1,533	1,415	708
5	33,100	61,235	5,103	2,552	2,356	1,178	43,030	3,586	1,793	1,655	828
6	37,910	70,134	5,845	2,923	2,696	1,349	49,283	4,107	2,054	1,896	948
7	42,720	79,032	6,586	3,293	3,040	1,520	55,536	4,628	2,314	2,136	1,068
8	47,530	87,931	7,328	3,664	3,382	1,691	61,789	5,150	2,575	2,377	1,189
For each add'l family member, add	4,810	8,899	742	371	343	172	6,253	522	261	241	121

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Appendix B

Lindenwood Institutional Review Board Approval Letter

Nov 19, 2020 10:15:16 AM CST

RE:
IRB-21-60: Initial - A Tale of Two Schools: A Study of Student Risk Factors and Out-of-School Suspension Incidents

Dear Brandy Williamson,

The study, A Tale of Two Schools: A Study of Student Risk Factors and Out-of-School Suspension Incidents, has been Approved as Exempt.

Category: Category 1. Research, conducted in established or commonly accepted educational settings, that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

The submission was approved on November 19, 2020.

Here are the findings:

Regulatory Determinations

- For the purposes of this research, the PI is only obtaining deidentified secondary data from district education records, with the support of an honest broker provided by the facility.
- This study has been determined to be minimal risk because the research is not obtaining data considered sensitive information or performing interventions posing harm greater than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests.

Sincerely,

Lindenwood University (lindenwood) Institutional Review Board

Vita

Brandy Williamson currently serves as an elementary teacher at Horace Mann Elementary School in Springfield, Missouri. She graduated from Missouri State University with a Bachelor of Arts degree in English/Creative Writing in 1997. Brandy then returned to Missouri State University in 1999 to begin a degree in Elementary Education. She later continued her coursework in elementary education at the University of Missouri-Kansas City in 2002, and she transferred back to Missouri State University to complete the program and obtain her teacher certification in 2006. Brandy continued her education at Missouri State University and earned a Master of Science in Education in Curriculum and Instruction degree in 2012 and a Master of Science in Education in Elementary Educational Administration degree in 2014. She holds administration certification in grades K–12.

Brandy taught first grade at Reeds Spring Primary School; fourth grade at The Summit Preparatory School; fifth and second grades at York Elementary; fourth and fifth grades at Bingham Elementary; and fifth grade at Mann Elementary. She has served as a building principal for the summer learning program every summer since 2016. Brandy also served as the assistant to the principal at McGregor Elementary for two years prior to serving as a fifth-grade teacher at Horace Mann Elementary.