AN ANALYSIS OF THE MSHSAA COMPETITIVE BALANCE POLICY OF 2020: HAS EQUITY BEEN ACHIEVED?

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In Partial Fulfillment
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Doctor of Educational Leadership and Policy Analysis

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by

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The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

AN ANALYSIS OF THE MSHSAA COMPETITIVE BALANCE POLICY OF 2020:

HAS EQUITY BEEN ACHIEVED?

presented by Alan W. Hull,

a candidate for the degree of Doctor of Education,

and hereby certify that, in their opinion, it is worthy of acceptance.

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Dedication

To my family Gwen, Tanner, Amanda, Natalie, and William: you are my most important things. You are my strength and my pride and joy. Thank you for expecting only the best from me. You guys are my world

Acknowledgments

It is with humility and heartfelt gratitude that I give thanks to those of you who made this mission possible. Thank you for not giving up on me.

To my mom — You were right: I CAN do anything I put my mind to. Your strength and determination in raising us has always been a great example and standard for me to follow. You did a great job. This is for you.

To my lovely wife Gwen — Thank you for pushing me to take this chance. Thank you for motivating me. Thank you for ALWAYS supporting me. We are a great team.

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Abstract

The proliferation of private schools' success in interscholastic athletics has led many state activities governing bodies to develop policies that help to ensure competitive balance (Johnson, Maxwell & Scott, 2019). The biggest single factor in interscholastic competitive balance is whether a high school is public or private (Cohen, 1997: Epstien, 2008: Johnson et al., 2015: Popke, 2012). Private and public schools have distinct differences that are paramount in the competitive balance problem. School boundary limitations, student recruitment, student body demographics, and tuition assistance are all pieces of the equation. In the State of Missouri, differences in public and private schools' postseason success are apparent in sports and activities. The purpose of this study was to examine proportions of non-MSIP schools (private) success in post season championships. Research implications and scholarly context were presented by looking at the available historical data. A majority of the statistical tests for the research questions revealed statistically nonsignificant differences in pre- and post-policy proportions of non-MSIP schools in the top-four of the state championship series. Two tests revealed a difference in proportion, men's track and field with a decrease in proportion and baseball with an increase in proportion. The null hypothesis is accepted in all cases except for baseball and men's track and field.

SECTION ONE

INTRODUCTION TO DISSERTATION-IN-PRACTICE

Introduction

The proliferation of private schools' success in interscholastic athletics has led many state activities governing bodies to develop policies that help to ensure competitive balance (Johnson, Maxwell, & Scott, 2019). State activities associations have developed many different solutions to this problem (Johnson et al., 2015). These solutions include different postseason classifications for private schools, enrollment multipliers, and success factors. Each of these policies has strengths and weaknesses. Ultimately, the goal of these policies is to give each school in the state a fair shot at success in postseason championship events. This is a rather lofty goal given all the elements needed to ensure success.

The biggest single factor in interscholastic competitive balance is whether a high school is public or private (Cohen, 1997: Epstien, 2008: Johnson et al., 2015: Popke, 2012). Private and public schools have distinct differences that are paramount in the competitive balance problem. School boundary limitations, student recruitment, student body demographics, and tuition assistance are all pieces of the equation. In Missouri, the distinction between public and private secondary schools lies in whether the schools are required to follow The Missouri School Improvement Program guidelines (MSHSAA, 2020).

The Missouri State High Schools Activities Association (MSHSAA) considers schools that can have a direct effect on their enrollment as private, non-MSIP schools (MSHSAA, 2020). The Missouri School Improvement Program (MSIP 5) works to prepare every child for success in school and life. MSIP 5 is the state's school accountability system for reviewing and accrediting public school districts in Missouri.

MSIP began in 1990 and entered its fifth version in 2013 (dese.mo.gov, 2021). Non-MSIP distinction extends to charter schools, private religious schools, and private prep academies (MSHSAA, 2020). Although charter schools have had some effect on MSHSAA policy through their appearances in championship event series, the major issue revolves around tuition-driven private schools.

MSHSAA has tried different solutions to the competitive balance issue. Before the 2020-2021 school year, non-MSIP schools were assessed a 1.35 multiplier across the board. The multiplier added to non-MSIP schools' raw enrollment numbers (MSHSAA.org). The raw enrollment and enrollment multiplier number were used to divide schools into postseason championship classifications. Beginning in the 2021-2022 school year, the association created a new policy, a championship success factor for non-MSIP schools (MSHSAA.org). The success factor will move individual sports in high achieving non-MSIP schools to a higher enrollment classification if they have shown continued success in the postseason championship series. This policy is specific and would affect only sports that reached the threshold for movement and not the entire school (MSHSAA.org). This distinction is a big difference between the 2021 policy and the old multiplier that was instituted in 1995.

Background of the Study

The earliest schools in Missouri were formed around the turn of the 19th century. St. Louis was incorporated into a school district by Congress in 1817. Early schools were mostly religiously affiliated and financed by parents paying a fee. The first major step in public education funding came with the Act of 1839. This Act established the State Superintendent of Common Schools. By 1850, there were 204 academies in Missouri

(Floyd, 1943). The first public high school opened in 1853 in St. Louis while Kansas City's first high school opened in 1867.

In the early days of education in Missouri, athletic events were organized and administered mostly by students (Forsythe, 1950). This organizational structure created a very chaotic environment and led educational leaders to assume more responsibility and control (Keller, 1979). Around 1910, a few schools began to employ adults as coaches of teams. Schools gradually became more responsible for their students' athletic endeavors. In 1918, the Report of the Committee on Resolutions presented at the Missouri Teachers Association Meeting recommended that a committee be formed to investigate the conditions in interschool athletics (Bulletin of State Teachers Association, 1918). This became one of the first moves to officially organize and control athletics at the high school level.

Slowly, conference affiliations and geographic associations began to develop rules and procedures to govern interscholastic play. The first proposal to unify the state and have an overarching association of schools was made in 1925 by Uel Lamkin, President of the Northwest Missouri State Teachers College. A committee was to be organized to draft a constitution. Participating schools voted on the Constitution on December 12th, 1925, and it was ratified by a vote of superintendents in February of 1926 (Keller, 1979).

From the beginning, MSHSAA was hoping to standardize sportsmanship, eligibility, and rules for competition. The Missouri High School Athletic Association Constitution, January 1926 stated:

Article II. PURPOSE:

Section 1. The purpose of this organization shall be:

To promote sportsmanship in teams and spectators.

To standardize eligibility requirements.

To protect the interests of the Association.

To promote as well as govern contests between schools. (Keller, 1979, p. 27)

Today, the Missouri High State School Activities Association has 732 member secondary schools, 592 of which are secondary schools (MSHSAA.org). Each of the membership schools has voting power on annual ballot measures that amend or introduce policy (MSHSAA, 2020). The administrative branch of the organization consists of a board of directors that has a president and representatives from different geographic regions in the state. These representatives are superintendents, principals, and activities directors from one of the member schools in each of the different regions. The day-to-day operations team consists of a director and associate director and six assistant directors (MSHSAA, 2020).

The most important research in high school competitive balance was conducted by James E. Johnson of Ball State University. In his article on competitive balance in interscholastic football, he explained that competitive balance is either a study of parity or an investigation using the Uncertainty of Outcome Hypothesis (Rottenberg, 1956). The Uncertainty of Outcome Hypothesis (UOH) postulates that if the outcome of a game is unknown with the resources being evenly distributed, then fans will enjoy the game more and attend more games (Rottenberg, 1956). However, if teams have more resources and are located in wealthier markets that allow them an advantage, the uncertainty of outcome

is eliminated or diminished, and fan interest will decrease (Rottenberg, 1956). The UOH principles have been used to study professional sports extensively and have provided information that reveals that resources play a major role in team success. At the interscholastic level, the resources will not be examined in terms of finances or geography but rather in acquisition of student athletes.

There are already policies in place covering all schools and sports that try to ensure some fairness and balance (Porter, 2019). There are weight classes in wrestling at the interscholastic level. Schools have boundary limitations; practice dates and times and off-season training are all limited (MSHSAA, 2020). These policies are in place for various factors such as safety and resource management. However, it is also easy to see that they help ensure, in at least some ways, that the uncertainty of contest outcomes remains more certain.

Acquisition of students and, in turn, student athletes is the epicenter of the high school competitive balance debate. Given that the UOH requires that resources must be even to ensure fan interest (Rottenberg, 1956), it is possible to see that student athletes are a big piece of the resource pie. The difference between public and private high schools' student acquisition and retention is vast (James, 2007). At the center of this difference is the need for private schools to attract students to pay tuition. Private schools receive very little, if any, state or federal funding, and most are purely tuition-driven in terms of finances (James, 2007).

Recruiting and retaining students whose families are financially able to pay thousands of dollars per year in tuition creates a school demographic that some schools are seeking to diversify (Ee, Orfield, & Teitell, 2018). Private schools offer tuition

assistance to help obtain a more diverse student body. The diversity is not only analyzed in terms of race but also in terms of financial ability and religious affiliation (James, 2007). Many state activities associations recognize this problem and have instituted policies to help rectify the perceived imbalance. Missouri is in a unique position because they have recently moved from an enrollment multiplier for private schools to a success factor (MSHSAA, 2020). There are, however, limitations and environmental considerations that need to be discussed.

There was a pandemic in the 2020-2021 school year, and the format of the state championship series changed. Teams and individuals were excluded from postseason events because of quarantines and public health concerns (MSHSAA.org). MSHSAA modified calendars to allow for more time between district, sectional, and state championship dates (MSHSAA, 2020). Consequently, the numbers of qualifiers in individual sports were limited and changed.

Statement of the Problem

The current atmosphere presents problems for interscholastic competition because of the danger of dissension among activities association members. Conflict can be a healthy resolution and can lead to positive change (Toegel & Barsoux, 2016). Concepts of fairness and utilitarianism are dominant in policy decisions. The theoretical framework of distributive justice is a central philosophy of state activities organizations (Johnson et al., 2015). The context from which policy decisions are shaped is an important factor in these competitive balance situations (Johnson et al., 2015). There are social, historical, and political forces that contribute to these decisions. These forces influence how fair and

equal competitions are conducted in each state, making each state an interesting case study (Johnson, 2016).

It is important to describe why sport is important to our society. Peter Arnold, in the QUEST journal in 1999, stated that the purpose of sport, when considered as a valued human practice, is helping to cultivate virtues that constitute what it means to be morally educated (Arnold, 1999). These ideals echo back through our history, as building a virtuous society is reflected in our approach to sport. Because of this, "fairness" is important (Archer, 2016).

In ancient Greece, the cardinal virtues were wisdom, courage, temperance, and justice with other qualities such as valor, skill, and strength also mentioned. Christianity later added faith, hope, love, and charity. Ideals of fairness, honesty, and truthfulness have been around since ancient times (Arnold, 1999). Mileander (1984) suggested that these virtues are "obligations which we owe to each other" (p.7). Without virtues such as honesty and fairness, relationships would be flawed in many ways, as there would be no trust between people or organizations. Trust is essential to the problem of competitive balance. "To preserve the integrity of practice so that participants uphold and pursue internal goals and standards of excellence that characterize it, qualities such as justice, honesty and courage must be fostered and encouraged" (Arnold, 1999, p. 39).

The problem lies in the quest for ethical and competitive play in high school sport. Words such as honesty and integrity litter the literature of sport ethics (Archer 2016). The target of fairness is so complex that the policies around it are changed to try to address different facets of the same problem (Folger & Cropanzano, 2001). The problem of practice presented here is the creation of a new competitive balance policy in the state

of Missouri's interscholastic athletics environment. If the ideals of fairness and integrity are to be promoted through the implementation of these policies, then they deserve critical examination.

Purpose of the Study

The impact of policy on competition needs to be measured and communicated to maintain trust. Trust is critical in leadership and, thus, organizational change. Because of the need for a new policy in the competitive balance arena in Missouri, there was a need for change. As evidenced by the need for a new policy, there needs to be an ongoing inquiry to help further advance development of policy in this area. MSHSAA developing and instituting new procedures to ensure competitive balance in Missouri interscholastic athletics has produced an opportunity to analyze a competitive balance policy and compare it to a policy that has been in place for decades. Therefore, the purpose of this study is to analyze the 2021-2022 competitive balance policy.

Research Questions

The following research questions will guide this study.

1. Was there a change in the proportion of non-MSIP schools appearing in the MSHSAA State Championship series as a top four placer after the implementation of the new MSHSAA competitive balance policy?
2. Was there a change in the proportion of non-MSIP schools appearing in the MSHSAA State Championship series as a top four placer after the implementation of the new MSHSAA competitive balance policy, when considering gender separately?

3. Was there a change in the proportion of non-MSIP schools appearing in the MSHSAA State Championship series as a top four placer after the implementation of the new MSHSAA competitive balance policy, when considering each sport separately?

Finally, the null hypothesis is assuming that proportions of both pre-policy and post-policy change will remain statistically equal, and the alternative hypothesis will be one of non-equality.

Conceptual Underpinnings for the Study

Justice theory, and more importantly distributive justice, is the underlying theory behind competitive balance discussions (Johnson et al., 2017). Distributive justice is based on egalitarian theory and is a system that is used to neutralize unequal resources (Rawls, 1967). Rawls maintained that the job of distributive justice is to limit the influence of luck so that goods are distributed more fairly and to everyone's advantage (Rawls, 1967). The aim of distributive justice is to strike a balance in the socio-economic structure of the society and bring balance between the conflicting interests of individual citizens (Rawls, 1967). In doing so in the realm of interscholastic sport, it is necessary to look for ways to evenly distribute a finite resource (student athletes). The focus of this study will be the two most recent policies enacted by MSHSAA to help ensure competitive balance.

Distributive justice is the foundation on which competitive balance theory is built. Competitive balance is an important factor in people’s interest in the sport (Brosnan, 2017). Competitive balance theory is closely related to justice theory in that both are seeking to maintain a fair distribution of resources. Much of what has been done in the

past concerning competitive balance comes from studies involving professional sports (Fort & Maxey, 2003). Competitive balance is one of the most researched topics in sports economic literature. Although this has been constructive, it has been shown that one measurement does not encapsulate the whole problem (Fort & Maxey, 2003). To date, there have not been many studies conducted in the interscholastic competitive environment.

Design of the Study

Competitive balance was studied in this research by examining the proportion of success in the state championship series by non-MSIP schools in MSHSAA. The study tested for proportionality across classes, sports, and genders using a z-test. The z-test tested the Null Hypothesis of equal percentages of non-MSIP teams having success in MSHSAA championship series from pre-success factor years compared to the first full year under the new policy. Assumptions for the z-test are that the observations are independent and that there is a sufficient sample size. Under the new competitive balance policy, non-MSIP schools may be moved in classification based on postseason success (MSHSAA, 2020). This measurement of proportion was chosen because of the format of the new competitive balance policy, and it responds to the research questions.

Postseason points are sport and gender specific and are accumulated for a six-year period for classification (MSHSAA, 2020). To study the policy change the researcher examined the events that triggered an addition to a school's point accumulation: District Championships, State 3rd or 4th place finishes, and State Championships (MSHSAA, 2020). The 2020-2021 school year was the first year of the new competitive balance policy. Different categories were examined and compared between new policy results

and those of the previous six years. Because this new policy is effective for the whole MSHSAA non-MSIP membership, the proportion of all classes and all sports in the four determining factors across these four years were studied.

The new MSHSAA classification policy also includes the addition of new classes (MSHSAA, 2020). For example, men's basketball went from five postseason classifications to six, meaning that instead of five eventual state champions, men's basketball now will have six (MSHSAA.org). The threshold of addition of new classes is accomplished by dividing the enrollment number of the largest school in the class by the enrollment of the smallest school in the class. The goal is for the dividend of that quotient to be near 2.0. Because of the large disparity in very small schools, Class 1 is removed from the calculation process. If all classes above Class 1 have a quotient of 2.0 or less, then the number of postseason classes will remain the same (MSHSAA, 2020). This new policy of classification breaks adds an interesting twist to the competitive balance measurement dilemma. Therefore, a system must be chosen that will allow for this new creation of classifications to be quantified, and a test for proportionality was used.

Data Analysis

Policy outcome data was examined through quantitative analysis using a test for proportionality to help better understand the relationship between the past and present policy. A database was created using the six years prior to the implementation of the championship success factor, and descriptive statistics were compiled to help build a portrait of what the previous policy's outcomes were. Those distilled numbers were compared to the final numbers of the first year of the success factor using the test for proportionality. This study was exclusively quantitative. By using the test for

proportionality, data were produced to communicate and describe the effectiveness of the MSHSAA classification system for the 2021-2022 seasons. Quantitative studies are conducted with the goal of taking measurements and finding numbers that will answer the proposed research questions (Creswell, 2013).

The time frame of the prior six years was chosen because of its significance in determining the placement of non-MSIP schools in the new classification system. This should provide an understanding of what has happened in the past and what new information can be gained by studying the newly implemented policy and its resulting data. Data was collected using the same database that MSHSAA uses for their actual classification purposes. The researcher used a test for proportionality across classes, sports, and genders using a z-test. The z-test was used to test the Null Hypothesis of equal percentages of non-MSIP teams having success in MSHSAA championship series from pre-success factor years compared to the first full year under the new policy.

Limitations and Assumptions

There are limitations and assumptions in this study. It is important to consider the biases that this researcher has developed in his time as an activities director. The researcher has spent five years as an activities director and administrator, and his children have attended non-MSIP schools for their entire elementary and secondary educations. However, he has also spent the last five years as an activities director in a public school. He has had a large investment in both types of schools studied in this research. He is a public school graduate, and his wife is a graduate of a private Catholic school. To minimize the bias that may be present, this research was completely quantitative and did

not draw assumptions as to the why or how but whether the policy instituted made a quantifiable statistically significant difference in its first year of existence.

A final limitation is that this study was conducted during a pandemic. Schools across the state were approaching classroom learning and day-to-day instruction much differently (McGuine et al., 2021). Virtual learning, social distancing, and local municipal protocols could influence which schools or athletes were competing in postseason play (McGuine et al., 2021). Even the structure and protocols in most sports were changed for postseason play. For instance, wrestling allowed only 12 state qualifiers across 14 weights and four classes. The pre-pandemic norm was 16 state qualifiers per weight across classes (MSHSAA.org). This was a reduction of possible point scorers by 25% of what would normally have been seen.

A sport-specific change that also could affect outcome is that the number of district tournaments was increased in each class for wrestling to allow for social distancing. This doubled the number of district champions. Also, the state tournament in wrestling was a one-day only event. This was a change from a three-day event where athletes were required to make weight each day. The element of weight control over the period of three days was removed from the state tournament for the first time in modern history (MSHSAA.org).

Sports such as basketball also saw their district formats change. Pre-pandemic, district basketball tournaments were all played at a single location for each assigned district. In 2020-2021, that format changed to allow for the higher seeded team to host each individual game. The better teams in this instance had a home field advantage. The

format change affected nearly all sports to allow for social distancing and minimal contact between players, fans, coaches, and officials (MSHSAA.org).

Definition of Key Terms

Championship Factor. The Championship Factor is the newly instituted MSHSAA policy that outlines procedures to classify schools for postseason championships.

Classification. Schools are assigned a classification to compete in postseason play. The classification is derived using the Championship Factor and raw enrollment.

Competitive Balance. For this study, Competitive Balance is based in justice theory and the UOH. The UOH, Uncertainty of Outcome Hypothesis, states that the more uncertain the outcome of a contest is, the greater fan interest will be. The equal division of resources helps to maintain the UOH (Rottenberg, 1956). The resources in this research are based on the acquisition of student athletes.

Distributive Justice. Distributive justice is an egalitarian theory and is used to neutralize unequal resources (Rawls, 1967). In his work concerning justice, Rawls claimed that one's place of birth, social status, and family influences are matters of luck that should not unduly influence the number of benefits a person receives in life. He maintains the job of distributive justice is to limit the influence of luck so that goods might be distributed more fairly and to everyone's advantage (Rawls, 1967). For this study, distributive justice was concerned with the equitable distribution of resources. These resources are student athletes.

Missouri State High School Activities Association (MSHSAA). MSHSAA is a voluntary nonprofit educational association of secondary schools established for the

purpose of working collaboratively to develop standards of supervision and administration to regulate interscholastic activities and contests in Missouri (MSHSAA, 2020).

Non-MSIP School. This term refers to schools that are not required to follow DESE's Missouri School Improvement Program. For this study, it should be noted that this term will be used to describe schools that are subject to MSHSAA's success factor. These schools are subject to movement in postseason classification based on past postseason successes.

Postseason Championship Series. Each year, MSHSAA classifies schools by their enrollment for postseason championship series events. These events culminate in state championships for different sports and activities.

Raw Enrollment. Raw enrollment is a number used for classification and is reported to MSHSAA by each member school each spring.

Significance of the Study

The present study will provide a quantitative analysis of practice related to competitive balance and classification procedures in MSHSAA. The new 2020-2021 policy's effect will be quantified and compared to previous years. This information will be shared with current MSHSAA members to assist in expanding knowledge and the effectiveness of the policy. Additionally, findings will help the MSHSAA executive board better assess the new policy and lead in adjusting procedures for competitive balance. Finally, these results are meant to enhance how governing schools and agencies approach policy development and implementation.

Summary

Most competitive balance inquiry revolves around the Uncertainty of Outcome Hypothesis (Rottenberg, 1956). The principles of this theory have been examined thoroughly in the professional sports arena; however, it has not been examined as extensively in interscholastic sports. The basic tenet of this philosophy is if the outcome of a game is unknown because of the resources being evenly distributed, then fans will enjoy the game more and attend more games. Conversely, if teams have more resources and reside in wealthier markets, the uncertainty of outcome is eliminated or diminished, and fan interest will wane (Rottenberg, 1956). Many policies have been enacted in sports across all levels (Johnson et al., 2017). Examples of some of these policies are weight classes, postseason classification, and student athlete acquisition.

Distributive justice is based on egalitarian theory and is a system that is used to neutralize unequal resources (Rawls, 1967). Rawls claimed that one's place of birth, social status, and family influences are matters of luck that should not unduly influence the number of benefits a person receives in life. He maintains that the job of distributive justice is to limit the influence of luck so that goods might be distributed more fairly and to everyone's advantage (Rawls, 1967). Distributive justice provides a framework to examine variables such as school attended, available resources, and access to resources.

To better serve its constituency, MSHSAA has recently implemented a championship factor (MSHSAA, 2020). Nearly every state has a policy that tries to address competitive balance (Johnson et al., 2017). All these policies are based on some form of justice theory. Although there have been many attempts to address this issue, the resulting policies are widely varied (Porter, 2019). This research project evaluated the

new policy through data analysis and used past proportionality to compare to the new policy proportionality results.

SECTION TWO

PRACTITIONER SETTING FOR THE STUDY

Introduction

Leveling of the playing field in sports is a topic that has been studied extensively in professional sports. Professional sports leagues have a unique desire to prevent teams from becoming too dominant. They have enacted policies and procedures that limit teams from stockpiling resources, thus creating advantages on the field of play. Salary caps, player drafts, and revenue sharing are all examples of professional sports leagues attempting to achieve competitive balance. Competitive balance for professional sports is grounded in the uncertainty of outcome theory (Rottenberg, 1956). This theory explains that the more uncertain the outcome of an event is, the more interest fans will have in the event. For professional sports, having fan interest at the highest possible level helps to promote a healthy financial position. Professional team research has focused on specific competitive balance policies such as revenue sharing and salary caps (Caporale & Collier, 2015: Sanderson & Siegfried, 2003).

Recently, these same types of ideas and policies have been introduced into interscholastic sports. However, unlike professional sports, these policies are put forth because dynasties have occurred in state championship series. Acquisition of student athletes is where most policies are seated. The variables that are often used in studying competitive balance in interscholastic activities are public/private status and rural/urban location (Johnson, Manwell & Scott, 2019), with the single biggest factor in success being whether a school is public or private. Private schools often have a much different ability to attract their students than their public school counterparts.

The Missouri State High School Activities Association (MSHSAA) has recently changed their policy regarding school postseason classification, moving to a

championship factor and away from an enrollment multiplier (MSHSAA, 2020). There is a need to compare the policies both new and old through quantitative analysis, comparing frequencies for past years' results with results under the new system. Competitive balance policies are widely varied from state to state and are often scrutinized by stakeholders (Johnson et al., 2015).

Media coverage and interest in high school sports have created an environment where individual teams and athletes are often seen as the face of their school (Fritch, 1999). A school's reputation and public perception of that school can, at times, be traced back to the demeanor and success of its athletic teams. This is an important issue for schools, as parents and public loyalty can be affected if their image is tarnished (Skallerud, 2011). A comparison of policies, new and old, will help to shed new light on how MSHSAA is moving toward balancing the playing field in postseason competition.

History of the Missouri High School Activities Association

The Missouri High School Activities Association was "borne out of necessity in 1926" (Keller, 1979. p.14). The earliest schools in Missouri were formed around the turn of the 19th century, and St. Louis was incorporated into a school district by Congress in 1817. These early schools were mostly religiously affiliated and were financed by parents paying a fee. The first major step in public education funding came with the Act of 1839. This Act established the State Superintendent of Common Schools. By 1850, there were 204 academies in Missouri (Floyd, 1943). The first public high school opened in 1853 in St. Louis. Kansas City's first high school opened in 1867.

In the early days of education, athletic events were organized and administered mostly by students (Forsythe, 1950). This created a very chaotic environment and led

educational leaders to assume more responsibility and control (Keller, 1979). A few schools began to employ adults as coaches of teams around 1910. Schools gradually became more responsible for their students' athletic endeavors. In 1918, the Report of The Committee on Resolutions presented at the Missouri Teachers Association meeting recommended that a committee be formed to investigate the conditions in interschool athletics (Bulletin of State Teachers Association, 1918).

This was one of the first moves to officially organize and control athletics at the high school level. Slowly, conference and geographic associations began to develop rules and procedures to govern interscholastic play. The first proposal to unify the state and have an overarching association of schools was made in 1925 by Uel Lamkin, President of the Northwest Missouri State Teachers College. A committee was to be organized to draft a constitution. On December 12, 1926, the constitution was voted on by the participating schools and ratified by a vote of superintendents in February of 1926 (Keller, 1979). It was not until much later that MSHSAA became the unifying organization.

From the Missouri High School Athletic Association Constitution, January,1926:

Article II. PURPOSE:

Section 1. The purpose of this organization shall be:

(a) To promote sportsmanship in teams and spectators.

(b) To standardize eligibility requirements.

(c) To protect the interests of the Association.

(d) To promote as well as govern contests between schools.

Today, the Missouri State High School Activities Association has a membership body of 732 secondary schools, both public and private (MSHSAA.org). Each of the membership schools has voting power on annual ballot measures that amend or introduce policy. The administrative branch of the organization consists of a board of directors that has a president and representatives from different geographic regions in the state. These representatives are superintendents, principals, and activities directors from one of the member schools in each of the different regions. The day-to-day operations team consists of a director and associate director and six assistant directors (MSHSAA,2020).

MSHSAA considers schools that have a direct effect on their enrollment as private, non-MSIP schools. The Missouri School Improvement Program (MSIP) 5 works to prepare every child for success in school and life. MSIP 5 is the state's school accountability system for reviewing and accrediting public school districts in Missouri. MSIP began in 1990 and entered its fifth version in 2013. This non-MSIP distinction includes charter schools, private religious schools, and private prep academies (MSHSAA, 2020).

The issue facing MSHSAA and other state activities associations is how to represent their constituency while maintaining fairness and equality. MSHSAA has chosen to apply a multiplier to private school enrollment. The institution of the enrollment multiplier has resulted in smaller schools moving up in classification, so they are competing against schools with higher enrollment. However, this solution has its limitations because large private schools are not affected. Their enrollment is often large enough to keep them in the largest classification without the addition of the multiplier to their enrollment.

On the other hand, very small private schools are, at times, forced into a classification that includes schools with many times their enrollment (MSHSAA.org). It is clear to see that there are inequities between public and private schools in the Missouri State High School Activities Association. There have been rules and policies enacted that have attempted to rectify the situation or at the least create competitive balance. Yet tuition-driven private schools continue to show up disproportionately in MSHSAA championship events (MSHSAA.org).

Organizational Analysis

MSHSAA is an organization that has been around for decades and from the beginning served as an organization of member schools working together to create rules and procedures that ensure safe and fair competition. It has geographic representation on its Board of Directors. Through work aligning with its mission statement, it promotes values for fair play and citizenship. It works to resolve conflict through committees and voting power for each school. Finally, MSHSAA works through its staff to communicate to its constituency the by-laws, board policy, and organizational focus.

Most roles and responsibilities are clearly assigned in MSHSAA. Directors and assistant directors are charged with overseeing different activities, sports, and officials (MSHSAA, 2020). Coaches and athletic directors comprise advisory committees, including a group tasked with public/private issues. There is a definite hierarchy and assigned roles within the organization. The competitive balance equation has been addressed through each level of the organization. This begins with the development of survey questions that are sent through the membership schools and culminates in by-laws being passed (MSHSAA, 2020).

MSHSAA's prior competitive balance policy consisted of an enrollment multiplier for private schools. In many instances, schools were categorized as non-MSIP and put at a large competitive disadvantage. In 2019, MSHSAA created a policy to govern enrollment classification more equitably for postseason championships. Administrators on both sides of this issue created a new policy that was presented before the entire constituency and ratified in 2019 (MSHSAA, 2020).

Organizational Leadership

Upon becoming the Executive Director of MSHSAA, Dr. Kerwin Urhan spoke publicly about how he wanted to lead the organization, saying, "I want to see MHSHAA as a user-friendly and approachable organization by its membership. I want schools to know that we are here for them to assist in advancing programs at the local level, that we provide service to assist them" ("Urhahn to be," 2005, p.1).

Urhahn's leadership has helped MSHSAA become more of a service to its membership body and less of a policing and regulatory agency. Today, the Association is open and freely accepts questions and extends themselves to their membership.

A team of Assistant Executive Directors assists the Executive Director. Each of these Assistant Directors has responsibilities in different sports and activities. Many of the Assistant Directors have previously served as administrators in MSHSAA member schools, and some have coached in sports that they now oversee. These Assistant Directors also manage officials, music, speech and debate, theater, sports medicine, and all other ancillary areas of competition within MSHSAA.

Significance of the Study

The authority to set rules and policies for high school sports lies in individual

state high school athletic associations (Wong, 1994). Across the nation, there are some states that consider data such as free and reduced lunch eligibility, while other states simply look at whether a school is a state-funded institution to help in determining their competitive balance policy. These state associations have implemented a variety of solutions to lessen the disproportional success of private schools in the state championship series.

Competitive balance policies often come because of endorsing recommendations by a committee of coaches and/or administrators of MSHSAA member schools. In states without such committees, proposals generated by individuals, coaches' associations, and other stakeholders such as school districts are sent to the state athletic association for a vote. By most accounts, many of these attempts to achieve competitive balance have failed (Johnson, 2014). This study attempted to quantify the results of a success factor that was implemented in Missouri. This study has the potential to impact high school athletics not only in Missouri but nationwide.

Conclusion

Leveling of the playing field in sports is a topic that has been studied in professional sports. Recently, these same policies have been introduced into interscholastic sports. The Missouri State High School Activities Association (MSHSAA) has changed their policy regarding school postseason classification, moving to a championship factor and away from an enrollment multiplier (MSHSAA, 2020). This change provides for an environment where the old policy and new policy can be compared. This evaluation can be useful in guiding future policy decisions.

SECTION THREE

SCHOLARLY REVIEW

Introduction

Developing policy is a difficult and arduous process. If done correctly, it consists of research, analysis, and stakeholder input. In their book *Shaping Education Policy, Power and Process,* Mitchell, Crowson, and Shipps (2012) stated that policy development is a social and political activity. Educational policy decisions do not stop with curriculum, buildings, and human resource decisions, but they also include athletics and activities. High school (interscholastic) athletics policies are centralized through state activities associations or state legislative bodies. Policies are constructed to maintain the safety of the student athletes and to provide a safe environment for competition.

High school activities associations are tasked with developing rules and regulations for every facet of the activities programs. Policies determine how many games teams can play, when schools can start practice, and which equipment can be used. Policy also regulates postseason championship series classification. One of the policy issues facing activities associations today is the disproportional success that private high schools have in state championship series. Competitive balance is critical to maintaining integrity and equal opportunity in sport organizations (Johnson, Manwell & Scott, 2019).

State activity associations are governing bodies that establish policy and guidelines for high school athletics. These associations regularly consist of member schools that are represented through voting power. In some instances, state legislatures are involved in overseeing high school athletics. Competitive balance policies vary widely from state to state and are often scrutinized by stakeholders (Johnson et al., 2015). Enrollment and classification policies also differ from state to state and mostly address geographic boundaries and athlete recruitment. In Missouri, the governing body that is

responsible for policy development is the Missouri State High School Activities Association.

The Missouri State High School Activities Association (MSHSAA) is a membership organization that has both public and private schools as members. MSHSAA considers schools that can control their enrollment or have no defined geographic limits on their enrollment area as private, non-MSIP schools. These schools include charter schools, private religious schools, and private prep academies (MSHSAA, 2020). Each school that is considered non-MSIP has, until recently, been assessed a 1.35 multiplier to their enrollment. This multiplier increased the school's enrollment by 1.35, often forcing schools up a classification. Beginning with the 2020-2021 school year, this policy was changed, and MSHSAA instituted a performance factor to help in postseason classification. This new policy is used to move schools that consistently perform well in state championship series up to a classification where they would compete against schools with larger enrollment (MSHSAA, 2021).

Public and private secondary schools have different methods and strategies to attract the students that they enroll. The philosophical difference lies in the financial structure of private schools, as they need to attract tuition-paying students because of a lack of public funding. This can create a student body that is not very demographically diverse. Many private schools, however, strive to be inclusive and to help promote diversity in their student body. This is often accomplished through structured tuition aid programs that offset much, if not all, of the tuition for students (MSHSAA, 2020). Financial aid policies and procedures are required to be sent to the state activities office

and approved on an annual basis. Schools are then expected to stay within their approved financial aid plan.

To ensure competitive balance and to address the ways that schools attract students, many state activities associations have developed policies that either restrict private schools or adjust their enrollments for postseason classification purposes (Popke, 2012). Associations have also used many different performance factors to help level the playing field. States, including Missouri, have enacted a success factor that moves schools with consistent success in the postseason state championship series to a higher enrollment classification, thereby causing them to compete against schools with much larger enrollments than themselves. This is done to obtain competitive balance for all schools (Johnson et al., 2017).

Background and Prior Research

The scholarly context and research for this problem will introduce existing research that will be examined to determine what has been investigated in the past. An ongoing inquiry will guide the research toward an analysis of policy. The scholarly context for this problem will include an examination of the gaps in the literature as related to this competitive balance problem of practice. This will be followed by the existing scholarship surrounding the problem. The focus of this literature review will be to examine studies that have been conducted and will be used to provide a framework for additional analysis. Distributive justice theory will be used as the theoretical framework.

Competitive balance policies are important for state activities associations. Competitive balance is an issue because of the large numbers of private high schools having disproportionate success in state championship series across the nation. Striving to

attain competitive balance is integral to maintaining integrity and equal opportunity for success (Johnson, Manwell, & Scott, 2019) in high school sports. Competitive balance is characterized by a relatively equal opportunity to be competitive with teams that have similar characteristics (Johnson, Giannoulakis, & Scott, 2017; Johnson, Pierce, Tracy, & Haworth, 2014; Johnson, Tracy, & Pierce, 2015). One of the facets of competitive balance in high school sports is the way schools obtain their students.

The most salient variable in competitive balance in the interscholastic athletic environment is whether a high school is public or private (Cohen, 1997; Epstein, 2008; Johnson et al., 2015; Johnson et al., 2017; Popke, 2012). High school activities constitute a large piece of students' co-curricular education. Research points to evidence that students not only receive physical benefits from participating in sports, but they also receive social and psychological benefits. Kendellen and Camire (2015) proposed that participation can lead to the development of various essential life skills, such as coping with stress, self-control, and social responsibility.

Involvement in school sports during adolescence is a statistically significant predictor of lower depression symptoms, lower perceived stress, and higher self-rated mental health in young adulthood (Jewett et al., 2014). Media coverage and interest in high school sports have created an environment where individual teams and athletes are often seen as the face of their school (Fritch, 1999). A school's reputation and public perception of a school can, at times, be traced back to the demeanor and success of its athletic teams. This is an important issue for schools, as parents and public loyalty can be affected if a school's image is tarnished (Skallerud, 2011).

Most competitive balance inquiry revolves around the uncertainty of outcome hypothesis (UOH) (Rottenberg, 1956). The principles of this theory have been examined thoroughly in the professional sports arena. Professional team research has focused on specific competitive balance policies such as revenue sharing and salary caps (Caporale & Collier, 2015: Sanderson & Siegfried, 2003). The variables that are often used in studying competitive balance in interscholastic activities are public/private status and rural/urban location (Johnson, Manwell, & Scott, 2019).

Competitive Balance in High School Sports: A Look at the Numbers

In 2019, 7.7 million students participated in high school sports programs (NFHS, 2019). This number is more than college and professional sports combined. According to the United States Center of Educational Statistics, in the 2019 school year, there were 132,853 K-12 schools in the United States, with 34,576 of those schools considered private schools (US Department of Education, 2019). Eight percent of all secondary students in the United States are private school students (NFHS, 2019). MSHSAA has 961 schools registered as members of the activities association (MSHSAA.org); 736 of those schools are secondary schools, grades nine through twelve. In Missouri, 17% of secondary school students attend private schools. There are 794 public schools and 167 private schools, grades eight through twelve (https://high-schools.com/directory/mo/).

Cohen (1997) completed one of the first studies of public versus private school athletic success at the national level. The results revealed that private schools won 18.4% of state championships in all sports, despite accounting for only 13.1% of all schools nationwide (Cohen, 1997). Private school athletic success is seen in national high school rankings. National rankings show that the top six boys' basketball teams in the nation are

private schools, and nine of the 25 highest ranked high school football programs in the nation are private schools (MaxPreps, 2020). This number is up from 2013 when there were six private schools in the national top 25 rankings in basketball, and seven private schools made the football list (MaxPreps, 2013). This disproportionate success has led state high school activities associations to develop various competitive balance solutions meant to nullify private school advantages (Johnson, Pierce, Tracy, & Hawthorne, 2014).

Private schools, which can include religiously affiliated parochial schools, independent schools, and charter schools, have several distinct advantages (Cohen, 1997). In most instances, private schools do not have geographic boundaries for recruitment of their students (Cohen, 1997). This freedom allows students to attend schools that are located outside of their public school district boundaries, often crossing many districts' boundaries to attend a private school. Boundary limitations in public schools are defined by their district's geographic footprint. Private schools in Missouri have boundaries that extend in a 25-mile radius from the school (MSHSAA, 2020). Public secondary institutions, however, are restricted by strict school district boundary lines. Many times, the private school radius extends well past that of a normal public school.

The ability of private schools to control admissions has been a cornerstone of the competitive balance problem. This advantage can lead private schools to be more selective in academia and in athletics. Public schools have much less control over their admissions and enrollment. Few public school districts have open enrollment policies that extend past intra-district students. Consequently, private schools can attract their students from a much larger geographic area, which is a significant advantage (Cohen, 1997).

Private school students often come from more affluent socioeconomic backgrounds, resulting in better facilities, coaching, and parental involvement (Epstein, 2008). This wealth advantage could allow students more access to resources such as private coaching, off campus facilities, and private lessons (Cohen, 1997). Additionally, private schools generally have greater parental involvement (Epstein, 2008) and the advantage of greater social and economic resources, allowing private schools to further assist athletes. Financial tools such as need-based scholarships are regularly available in private schools. This practice helps private schools in reaching a goal of a student body that is both demographically and financially diverse (Epstein, 2008).

The financial flexibility and open boundary environments make private and public schools much different in terms of student recruitment (Johnson, Price, & Tracy, 2014). Differences in boundary and recruitment flexibility, coupled with the high proportion of private schools in championship series, give rise to allegations of recruiting and improper student athlete enticement. Furthermore, these perceived advantages are part of the push to examine the success of private schools in state championship series (Johnson, Price, & Tracy, 2014).

Defining the Problem

An increasingly large number of schools are now becoming "perennial powers," winning titles in their sports year after year. Surprisingly, many of these power teams are not large public schools but rather smaller private institutions. *Athletic Business Journal* (2017) attempted to quantify just how much of an advantage parochial and private schools held over public schools.

Although the problem is one that is visible nationally, the Missouri State High School Activities Association will be used to study the effectiveness of a competitive balance solution. Policy implementation to solve the competitive balance issue has come with mixed reviews and relatively small successes (James, 2013). State high school activities associations have attempted to address the competitive balance issue in their championship series but, as of yet, there are no consistent policies or unified solutions to rectify the issue. One issue is a lack of a clear definition of the problem.

Researchers such as Johnson (2015), Cohen (1997), Epstein (2015), and Tracey (2015) shed light on some of the less familiar aspects associated with the topic, but they did not offer suggestions to help policymakers. Case studies, including the investigation of Indiana's Tournament Success Factor by Johnson, Pierce, Tracy, and Haworth (2014), which indirectly had a huge impact on the competitive balance issues in the state, offered a glimpse into the unintended effects of policy (Johnson et al., 2014).

According to the MSHSAA web site (mshsaa.org), both individual and team sports have seen examples of disproportionate private school success. These incidents of disproportionate success led to the examination of the competitive balance issue. In Missouri, the state volleyball championship indicates evidence of this disparity. In 2017, 10 of the 16 top-four team awards went to non-MSIP, private, tuition-driven institutions. That same year, each of the four classifications had a private school crowned as the champion. In women's soccer during the five years from 2015-2019, there were four classifications, and private schools have won 17 of the last 20 MSHSAA state championships.

These two sports provide a quick example of the disproportionality that exists in team sports between public and private schools in Missouri. Individual sports such as tennis and golf also show that there is a competitive balance issue. MSHSAA's official website (mshsaa.org) indicates the individual state championship in boy's tennis has had only one person from a public school win a state championship since 2014. Girl's golf showed similar numbers. In the years from 2015 to 2019, private schools won all possible team championships in tennis, and in 2016-2019 an athlete from a private school has won the individual championship in that same sport (MSHSAA.org).

Three main factors that are often cited as "unfair" in high school competitive balance rhetoric are boundary limitations, number of at-risk students, and recruiting (Johnson et al., 2017). Each of these factors has a common underlying theme of enrollment manipulation. Private schools are much more equipped to control their enrollments. They have an easier time capping enrollment numbers at their schools, and they also have control over the attributes of the students they accept into their schools. Many private schools have entrance examinations that have set scoring parameters for acceptance, thereby controlling the academic profile of their student population (Johnson, Pierce & Tracy, 2015).

Boundary limitations in public schools are defined by their district's geographic footprint. Private schools in Missouri have boundaries that extend in a 25-mile radius from their school address (MSHSAA, 2020). The ability of private schools to control admissions has also been an issue in this debate. Conversely, the philosophy of many private schools is to be as inclusive as possible and to help promote diversity in their student body. Economic diversity is accomplished through structured tuition aid

programs that offset much, if not all, of the tuition for students (MSHSAA, 2020). These awards are based on financial need or other specific qualifications set by donors and school administration. Financial aid policies and procedures are required to be submitted to the MSHSAA office on an annual basis. Many states have enacted policies that either restrict private schools or multiply their enrollments for classification purposes, resulting in a perceived leveling of the playing field (Cohen, 1997; Johnson et al., 2014).

Different Solutions to the Private vs. Public Problem

States have instituted different and creative ideas to combat the disproportionate appearance of private schools in championship series events (Popke, 2012). In Missouri, for instance, there has been an enrollment multiplier, but there are still large numbers of private schools and private school students advancing to the state championship series (MSHSAA, 2020). In 2020, Missouri instituted a success factor to help with classification. Therefore, an investigation into the proportionality statistics of private and public school athletics will need to be conducted to see if the new classification policy has leveled the disparity between private, non-MSIP and public schools.

There are some flagstone pieces of scholarly work that have been published since 1997 (Cohen, 1997; Johnson et al., 2014). Most of this work was case studies. Empirical inquiries or critical quantitative research information on the subject is rare. Murnane, Newstead, and Olsen (1985) explored whether private schools are more selective than public schools. Hoffer, Greeley, and Coleman (1985) examined the effects of public and private schools on achievement in their work entitled *Achievement Growth in Public and Catholic Schools.* These research inquiries provide insight into the variances between the different types of educational settings, but they never broach the topic of athletic success.

Humphreys (2002) was philosophically concerned with looking at the gap between the best teams and the worst teams. In this philosophical framework, achieving competitive balance would mean that the gap between the best teams and the worst was small during any given season. The ideal situation would be close games throughout the entire season and continuing into the championship series (Humphreys, 2002).

There have been many different solutions to the problem of private school dominance in state high school championship series, including an enrollment multiplier, separate classification, and achievement penalties (James, 2007). Until 2020, Missouri had instituted a 1.35 multiplier (MSHSAA, 2020) and now has a success factor policy. Illinois has instituted a 1.65 enrollment multiplier for private schools (James, 2007). States such as Georgia and Tennessee have separate classes of public and private schools for classification purposes (James, 2007). Indiana instituted a performance penalty/success factor, meaning that if schools do well in the state championships of a sport for a series of two years, they would be required to move up a classification for the next year's playoff series (James, 2007) All of these measures were instituted to help provide competitive balance through implementation of policy. Currently, only 19 of 50 states are without a policy or measure to deal with the competitive balance issue in high school sports (NFHS.org). The states that do have a competitive balance measure have varied solutions and results.

Organizational Background

MSHSAA was "borne out of necessity in 1926" (Keller, 1979). The earliest schools in Missouri formed around the turn of the 19th century, and St. Louis schools were incorporated into a school district by Congress in 1817. These early schools were

mostly religiously affiliated and financed by parents paying a fee. The first major step in public education funding came with the Act of 1839. The Act established the State Superintendent of Common Schools. By 1850, there were 204 academies in Missouri (Floyd, 1943). The first public high school opened in 1853 in St. Louis. Kansas City's first high school opened in 1867.

In the early days of education in Missouri, athletic events were organized and administered mostly by students (Forsythe, 1950). This created a very chaotic environment and led educational leaders of the time to assume more responsibility and control (Keller, 1979). Around 1910, a few schools began to employ adults as coaches of teams. Schools gradually became more responsible for their students' athletic endeavors. In 1918, the Report of The Committee on Resolutions made at the Missouri Teachers Association meeting recommended that a committee be formed to investigate the conditions in interschool athletics (Bulletin of State Teachers Association, 1918).

This action was one of the first moves to officially organize and control athletics at the high school level. Conference affiliation and geographic associations slowly began to develop rules and procedures to govern interscholastic play. The first proposal to unify the state and have an overarching association of schools was made in 1925 by Uel Lamkin, President of the Northwest Missouri State Teachers College. A committee was organized to draft a constitution. The Constitution was approved on December 12, 1925, by the participating schools and ratified by a vote of superintendents in February of 1926 (Keller, 1979). From the beginning, MSHSAA was hoping to standardize sportsmanship, eligibility, and rules for competition.

From the Missouri High School Athletic Association Constitution, January,1926:

Article II. PURPOSE:

Section 1. The purpose of this organization shall be:

(e) To promote sportsmanship in teams and spectators.

(f) To standardize eligibility requirements.

(g) To protect the interests of the Association.

(h) To promote as well as govern contests between schools.

Today, the Missouri State High School Activities Association has a membership body of 732 member secondary schools. Each of the membership schools possesses voting power on annual ballot measures that amend or introduce policy. The administrative branch of the organization consists of a board of directors that includes a President and representatives from different geographic regions in the state. These representatives are superintendents, principals, and activities directors from one of the member schools in each of the different regions. The day-to-day operations team consists of a director, an associate director, and six assistant directors (MSHSAA, 2022).

MSHSAA is a membership organization that has both public and private schools as members. MSHSAA considers schools that have a direct effect on their enrollment as private, non-MSIP schools (MSHSAA, 2020). The Missouri School Improvement Program (MSIP) 5 works to prepare every child for success in school and in life. MSIP 5 is the state's school accountability system for reviewing and accrediting public school districts in Missouri. MSIP began in 1990 and entered its fifth version in 2013. The non-MSIP distinction includes charter schools, private religious schools, and private prep academies (MSHSAA, 2020). Although charter schools have had some effect on

MSHSAA policy through their appearances in championship event series, the major issue revolves around tuition-driven private schools.

The issue that faces MSHSAA and other state activities associations is how to represent their constituency while maintaining fairness and equality. MSHSAA has approached this through assigning a multiplier to private school enrollment numbers, resulting in smaller schools moving up in classification so that they are competing against schools with higher enrollment. However, this solution has its limitations because large private schools are not affected by the move in classification. Their enrollment is often large enough to keep them in the largest classification without the addition of the multiplication of their attendance numbers. On the other hand, very small private schools are, at times, forced into a classification that includes schools with many times their enrollment.

The Missouri State High School Activities Association (MSHSAA) is an organization made up of member schools that oversees operation and policy for high school activities and athletics in the State of Missouri. The organization was formed in 1926 by both public and private schools to oversee championship tournaments (Keller, 1979). MSHSAA is governed by a 10-member Board of Directors elected by the organization's membership. The board members represent eight geographic regions of the state ("About MSHSAA"). The standing executive director is Dr. Kerwin Urhahn. Dr. Urhahn was hired in 2005 and is the sixth executive director in the history of MSHSAA ("Urhahn to be," 2005).

As Dr. Urhahn assumed the position of executive director, he spoke publicly about how he wanted to lead the organization, saying, "I want to see MSHSAA as a user-

friendly and approachable organization by its membership. I want schools to know that we are here for them to assist in advancing programs at the local level, that we provide service to assist them" ("Urhahn to be," 2005, p.3). By the very nature of his remarks in his first press release, Urhahn was pointing the direction of his leadership toward a servant leader model (Northouse, 2013). He has remained a servant leader and transformational in terms of the organization's mission to become more "user friendly." These attributes have put Dr. Urhahn at the center of the competitive balance debate.

Justice Theory

Justice theory best fits the examination of competitive balance in this scenario. Many believe that John Rawls was the developer of modern justice theory. Wenar (2012) argued John Rawls was the preeminent justice theorist as he developed the concept of justice as fairness. In Rawls's theory, it was crucial that a fair society would be one without any preconceived notions or prejudices (Wenar, 2012). Travis (2010) noted that Rawls envisioned a society of free citizens holding equal rights and cooperating with each other. Justice theory is described as fairness and a form of social contract (Kay, 1997). The rational choice of fundamental principles of society would be those that provide for the highest minimum standards of justice for all people (Konow, 2003). Within justice theory lies the idea of fair division of resources.

Distributive justice is a system that neutralizes unequal resources (Rawls, 1967). In his work on justice, Rawls claimed that one's place of birth, social status, and family influences are matters of luck that should not unduly influence the number of benefits received in life. He maintained that the job of distributive justice is to limit the influence

of luck so that goods are distributed more fairly and to everyone's advantage (Rawls, 1967).

Nozick (1973), on the other hand, believed that distributive justice is a matter of setting down rules that people should follow in acquiring and transferring resources and benefits. The aim of distributive justice is not to achieve any particular outcome of distribution but rather to ensure a fair process of exchange (Nozick, 1973). Nozick used the term “holdings” to describe the goods, money, and property of all kinds that people have. The issue, then, is what holdings people would have in a just society, and even more interesting is deciphering how they came about acquiring the holdings that they possess.

When looking at the division of resources and the ideals of fairness and process, it is necessary to look deeper into the procedures by which the principles are instituted. Maiese (2004) suggested procedural justice is concerned with making and implementing decisions according to fair processes. People feel affirmed if the procedure treats them with respect and dignity, making it easier to accept outcomes they do not like (Maiese, 2004). Consequently, procedural justice is the theory that rules and regulations should help ensure fairness in the distribution of resources (Maiese, 1996).

In this study, justice theory was used to guide the determination of the design of the inquiry. Justice theory was used because of the desired outcome of the MSHSAA policy. By assessing a success factor, MSHSAA attempts to create an environment where there is competitive balance. The aim of distributive justice is not to achieve any particular outcome of distribution but rather to ensure a fair process of exchange (Nozick,

1973). This study used proportionality as a measure of fairness and, in turn, how successful the policy has been.

Extant Literature

There are significant pieces of scholarly work that have been published (Cohen, 1997; Johnson et al., 2014). There are also several internet resources that discuss this subject. Conversely, empirical inquiries or critical quantitative research information on the subject is rare. Murnane, Newstead, and Olsen (1985) explored whether private schools are more selective than public schools. Hoffer, Greeley, and Coleman (1985) examined the effects of public and private schools on achievement in their work entitled *Achievement Growth in Public and Catholic Schools.* They expressed a notion that Catholic schools may account for as much as a one-grade acceleration for students with an average background. This research helps to provide insight into the variances between the different types of educational settings.

There appears to be a significant amount of qualitative data available concerning this topic, although few statistical findings. However, there is an abundance of descriptive data and numerical resources that are readily available. The Missouri State High School Activities Association has provided a list of member schools that are "non-MSIP." There are also data available from before and after the success factor implementation. Examining the number of championship teams and the proportionality of private and public schools before and after the current competitive balance policy should yield data to demonstrate whether enrollment manipulation is an effective plan. In-season balance refers to the variation between teams for any given season. Between-season balance looks at the champions across time. This approach would be concerned with

variations in crowning a champion from year to year. Looking at competitive balance between seasons would also be largely based on proportion exploration. For this study, between-season proportions were examined.

Conclusion

In the State of Missouri, differences in public and private schools' postseason successes are apparent in sports and activities. Research implications and scholarly context were presented by looking at the available historical data. Justice theories provide a context to examine the problem. A plan for data collection and research focused on definition and statistical analysis. These elements should provide a clearer understanding of the problem and its context, history, and organizational setting.

SECTION FOUR

CONTRIBUTION TO PRACTICE

Plan for Dissemination of Practitioner Contribution

The importance of the stakeholder cannot be overlooked in the research process. The evaluation and analysis of this new MSHSAA competitive balance policy will be important information for MSHSAA member schools. Brady, McDavid, Huse, and Hawthorn (2013) said that "All evaluations are affected by the interest of the stakeholders" (p.28). More specifically, the stakeholders are the school boards, building administrators, and policy makers whom this policy touches. Both public and private, non-MSIP secondary schools will see the ramifications of the new classification by-law. The purpose of this study was to look at what had happened in the past and compare it to this new future to analyze the effectiveness of the new policy. Data analysis will add to information currently available about the issue of competitive balance and will assist in molding policy in the future for MSHSAA.

Once the research was completed and the dissertation committee had provided approval, the researcher arranged for a meeting with the Executive Director of MSHSAA to share the results of the research. Once approval was given by the IRB, full disclosure was made to the MSHSAA executive board and a request for database access was made. Because of some of the procedures needed to analyze the data, collaboration and education between the researcher and the database manager took place to ensure trust on both the research side and the management side. This process brought the researcher together with the stakeholders, allowing the stakeholders to find the results valuable (Brady et al., 2013).

Types of Documents

An executive summary, including past and present data and quantitative analysis of proportion, was produced for the MSHSAA publication. Each sport and enrollment classification were examined individually and then examined across sport, gender, and classification categories. Statistical tables of each category analysis were presented. The documents contained the following: the method in which the data was collected and the steps taken to organize and code the information for analysis (Creswell, 2009). The data analysis and information gleaned helped guide policymakers in postseason classification for the future (Justen et al., 2014).

Rational for Contribution Type

The purpose of the executive summary was to shed light on how effective the new classification policy is for providing competitive balance to MSHSAA member schools. The report helped stakeholders better understand what parts of the policy quantitatively work best and if the policy is efficacious. In addition, the report helped policymakers understand which, if any, areas of the competitive balance problem need further attention. The methods used in balancing data and the choice of which data to analyze resulted in an understanding of how the policy was most effective. Stakeholders were able to view the results of the study, and recommendations were made based on information discovered during data collection and analysis (McDavid et al., 2013).

Outline of Proposed Content

The executive summary is a document that contains clear language and presents a clear picture of the research (McDavid, Huse, & Hawthorne, 2013). This report is a summation of results, conclusions, and outcomes. This section also answers the question

of why the research was important. The executive summary begins with identifying and explaining what target data was evaluated (McDavid et al., 2013). The research explained the questions and issues that led to the evaluation so that stakeholders could understand the meaning of the results (McDavid et al., 2013). Research questions were also shared with the stakeholders as it was important for the stakeholders to understand the procedure and logic of the researcher during the research process (McDavid et al., 2013). The purpose of the presentation of research questions was to detail the reasoning of the researcher into the problem of practice.

It was also important for the stakeholders to understand the methodology of the inquiry (Creswell, 2009). Explaining the methodology of the research allows for a better understanding of the research process (Creswell, 2009) and how it influences the problem of practice within the organization (McDavid et al., 2013). As with the other parts of the executive summary, this section will be clear and concise (McDavid et al., 2013).

The following section will be the outcomes of the research. This section will discuss the data collection, database procedures, and analysis. It will assist stakeholders in understanding what was observed in the data collection activity (McDavid et al., 2013). The researcher will share the data on the proportion of appearances of teams in championship series both before and after the implementation of the new classification system. The proportionality analysis will give stakeholders a before and after analysis of data to help in the policy analysis process. This data analysis presentation will provide a connection between the data and the questions (Creswell, 2009). Questions will be presented in order and answered individually so that the stakeholders can understand the significance of the evaluation (Creswell, 2009; McDavid et al., 2013).

SECTION FIVE

CONTRIBUTION TO SCHOLARSHIP

Target Journal

The following article will be submitted to *MSHSAA Annual Journal* and with the National Interscholastic Athletic Administrators Association (NIAAA) for publication in their quarterly journal publication *Interscholastic Athletic Administration*. The NIAAA describes their publication as a "blind- and peer-reviewed professional journal intended to meet the needs of interscholastic athletic administrators."

Methods

States have instituted different and creative ideas to combat the disproportionate appearance of private schools in championship series events (Popke, 2012). In Missouri, there was an enrollment multiplier from 1997- 2020, but there were still large numbers of private schools and individuals who attend private schools advancing to the state championship series (MSHSAA, 2020). In 2020, Missouri instituted a success factor to help with classification. Therefore, an investigation into the proportionality statistics of non-MSIP and public school athletics was conducted to see if the new classification policy has leveled the disparity between non-MSIP and public schools. Non-MSIP schools are those who do not have to follow the Department Secondary Education's Missouri School Improvement Plan, they are primarily private schools.

There are some flagstone pieces of scholarly work that have been published since 1997 (Cohen, 1997; Johnson et al., 2014). Most of this work was conducted through case studies. Empirical inquiries or critical quantitative research on the subject is rare. This study utilized quantitative methodology. The data were analyzed via a test of significance for proportions. Quantitative studies are conducted with the goal of taking measurements

and finding numbers that will answer research questions (Creswell, 2013). The test of proportions focused on the pre-policy proportion of non-MSIP schools winning a top-four place in a MSHSAA state championship series as compared to post-policy proportions. The goal of the research was to examine whether the policy had a significant effect on the proportions. The Following research questions guided the study.

Research Questions

The following research questions will guide this study.

1. Was there a change in the proportion of non-MSIP schools appearing in the MSHSAA State Championship series as a top four placer after the implementation of the new MSHSAA competitive balance policy?
2. Was there a change in the proportion of non-MSIP schools appearing in the MSHSAA State Championship series as a top four placer after the implementation of the new MSHSAA competitive balance policy, when considering gender separately?
3. Was there a change in the proportion of non-MSIP schools appearing in the MSHSAA State Championship series as a top four placer after the implementation of the new MSHSAA competitive balance policy, when considering each sport separately?

Finally, the null hypothesis is assuming that proportions of both pre-policy and post-policy change will remain statistically equal, and the alternative hypothesis will be one of non-equality.

Population

Analysis was completed using existing, published Missouri State Activities Association data. The data chosen was for the two years post-policy (the 2019-2020 and 2020-2021 school years) and the six years prior to the new policy (the 2013-2014 school year through the 2018-2019 school year). This timeline was chosen because a significant element of the new policy used success from the prior six years for classification. The timeline encapsulated all years used to determine classification.

Data Analysis

The data set for this project included all 2,520 possible opportunities for schools to attain a top-four state championship series finish in all MSHSAA-sponsored sports from 2013 through the spring of 2022. A database for each sport was built using Microsoft Excel and then separated by class and by year. The first step in coding the data was to assign a quantity of one in each cell that would indicate that a non-MSIP school won a top-four place in that sport for that year. After each sport was completed, all data were aggregated in one large sheet to more readily access overall proportions. A test of significance was used to determine if the difference in proportions of data were statistically significant. A z-test for independent proportions was used because of the variance in the number of non-MSIP schools across the designated time frame. A test of proportion was more appropriate than using raw numbers of schools due to this issue.

Variables with missing data were removed on a case-wide basis because they did not offer the opportunity for schools to meet the criteria of winning a top-four place in the championship series. There are pieces of data that are missing because of the COVID-19

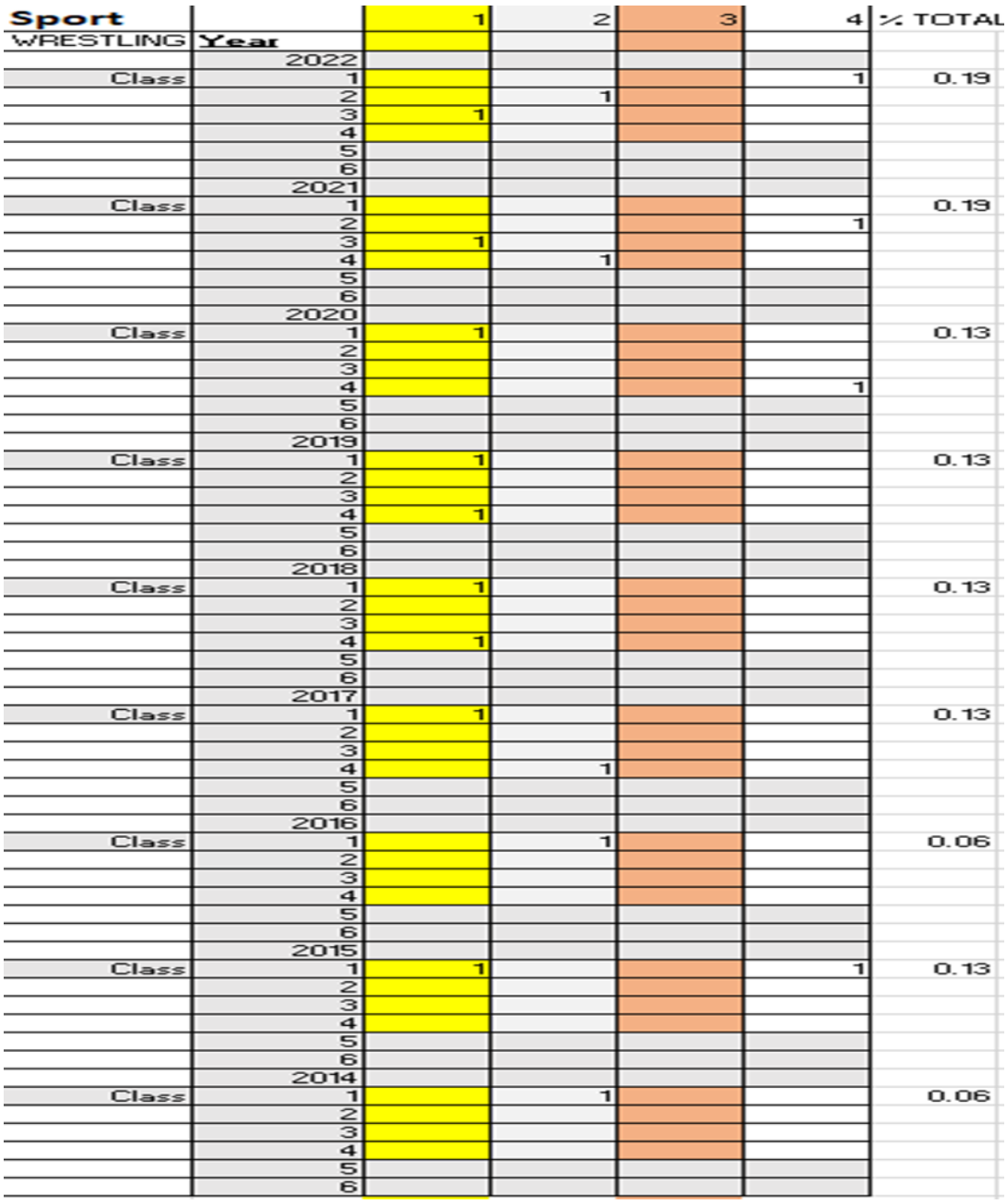
pandemic. Part of the winter and spring seasons of 2019 were canceled throughout the entirety of MSHSAA. In rare cases, other unreported results were found; that was a very small piece of the overall data and was entirely omitted. These instances were not used in calculations for this study.

Findings

Each sport had a database created for it that organized data to be manipulated to conduct testing. The data were collected from the MSHSAA championships for the years 2014 through 2022. This period of time was chosen because the new policy takes into consideration only success from the previous six years. These six years plus the first two years of policy implementation were the focus of the research and, hence, the information collected for the database for each sport. This choice of duration encapsulated all years included in reclassification for the first two years of the new MSHSAA competitive balance policy.

The far-left column of Image 1 indicates the year in which the data were collected. Under each year is the number of postseason classifications available for that year. For example, in 2022, there were four classifications for wrestling; the shaded areas in class five and six indicate that those were not classifications for this sport. Other sports, such as football, compete in six postseason championship classifications. The same format was use for each sheet in data collection with the final calculations of proportion considering each sport and their classification number separately.

Image 1. Example database



Sport		1	2	3	4	% TOTAL
WRESTLING	Year					
	2022					
Class	1				1	0.19
	2		1			
	3	1				
	4					
	5					
	6					
	2021					
Class	1					0.19
	2				1	
	3	1				
	4		1			
	5					
	6					
	2020					
Class	1	1				0.13
	2					
	3					
	4				1	
	5					
	6					
	2019					
Class	1	1				0.13
	2					
	3					
	4	1				
	5					
	6					
	2018					
Class	1	1				0.13
	2					
	3					
	4	1				
	5					
	6					
	2017					
Class	1	1				0.13
	2					
	3					
	4		1			
	5					
	6					
	2016					
Class	1		1			0.06
	2					
	3					
	4					
	5					
	6					
	2015					
Class	1	1			1	0.13
	2					
	3					
	4					
	5					
	6					
	2014					
Class	1		1			0.06
	2					
	3					
	4					
	5					
	6					

The columns numbered one through four indicate each of the possible four state finishes. In this research, a state championship is accounted for at the same value as a fourth-place finish. Each cell represents a possibility in that given year to achieve a top four finish. Each time that a non-MSIP school achieved a placing in the top four, a

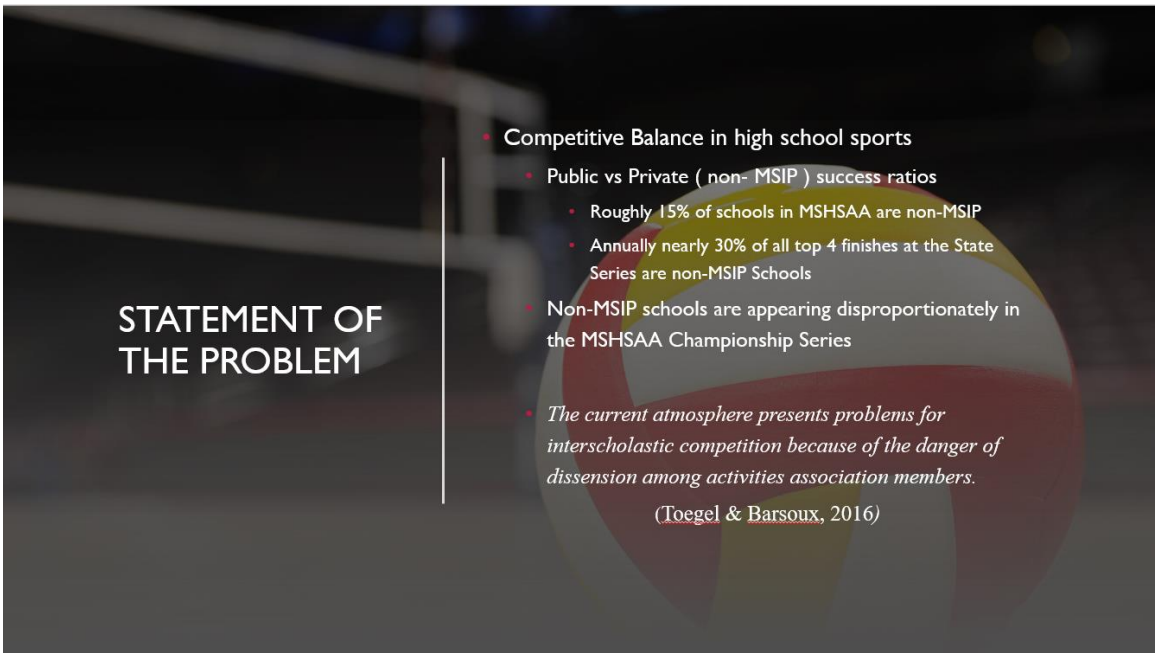
number 1 was entered in the corresponding cell. For example: In this sport in 2022, a non-MSIP school won a state title in class three, was a runner up team in class two, and placed fourth in class one.

Structuring the Excel spreadsheet in this way allowed for the totaling of incidents of a non-MSIP top four finish across years. The far-left column gives a proportion each year of non-MSIP schools achieving a top four finish. In this example, in the 2022 school year, 19% of possible top four places were won by non-MSIP schools. Figure 5 indicates each sport proportion both pre- and post- policy, as well as each sports' sample size. It indicates the z score and p-value when testing to determine if the proportion had changed after the implementation of the new MSHSAA balance policy. As displayed in Figure 5, only two sports revealed a z-test that indicated that the pre- and post-proportions were significantly different. The same tests were run on sports grouped by sex.

Dissertation defense presentation

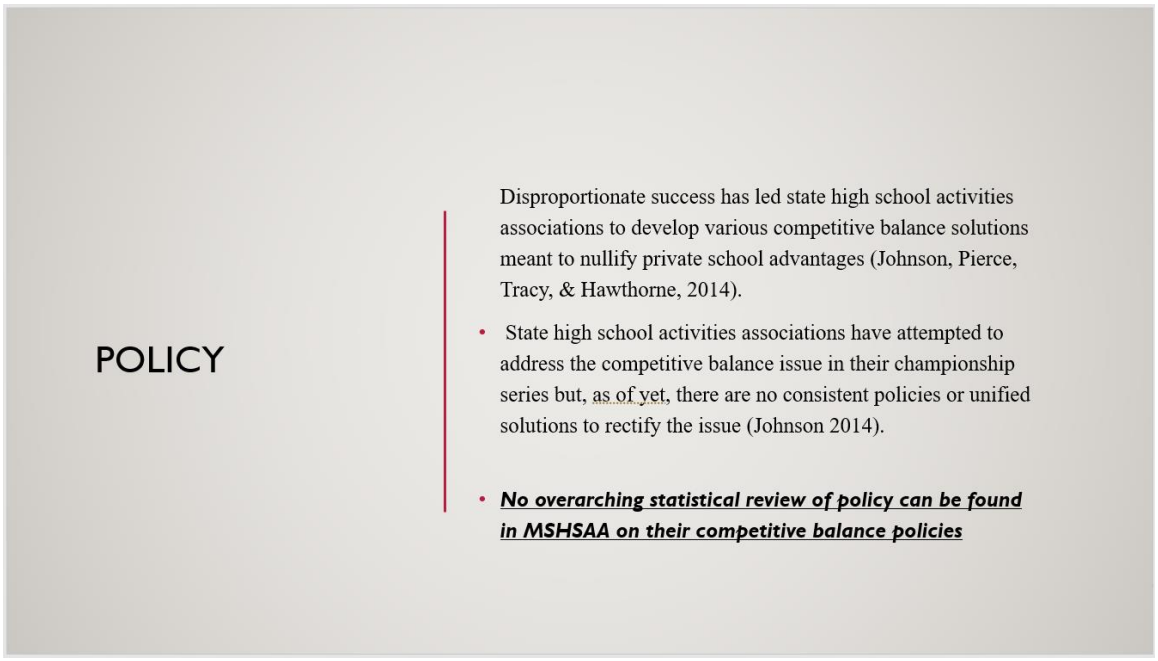
The study looked at the pre and post proportions of non-MSIP schools' success as a top four placer in the MSHSAA Championship series.

Statement of the problem



There is a disproportionate number of non-MSIP schools showing up as a top four placer in MSHSAA's Championship series. Roughly 15% of schools in MSHSAA are non-MSIP. Annually nearly 30% of all top 4 finishes at the State Series are non-MSIP Schools

Policy

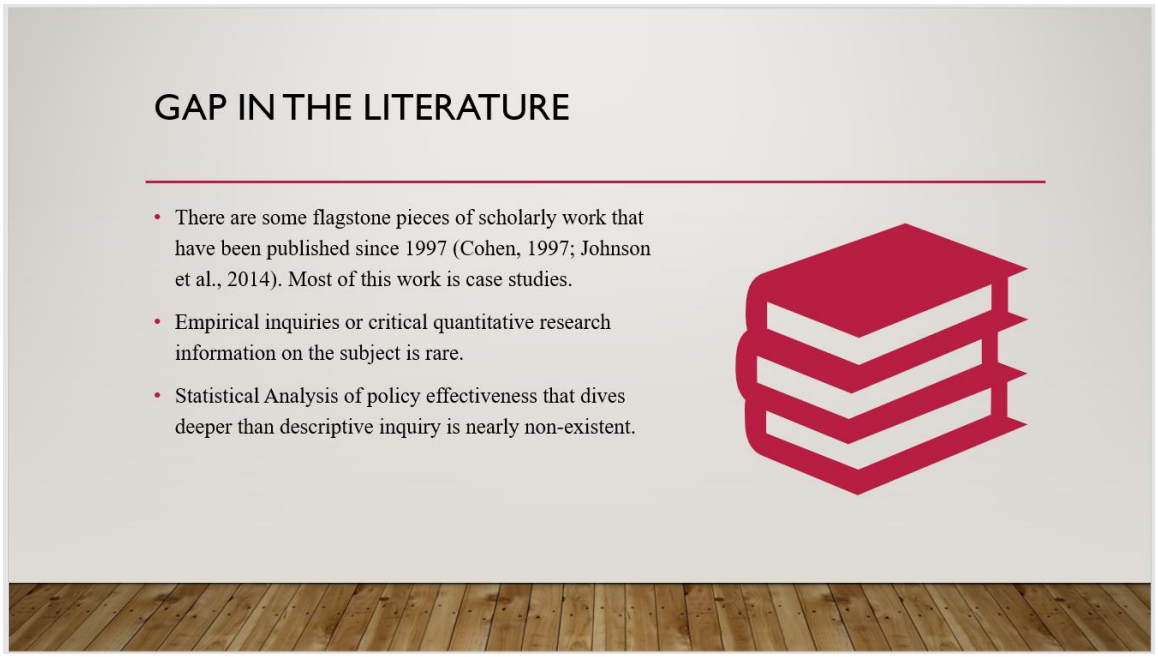


Disproportionate success by private schools has led many state associations to develop various competitive balance solutions meant to nullify this advantage. There are no overarching studies that have been conducted that would assess the policies effectiveness.

The Championship Factor

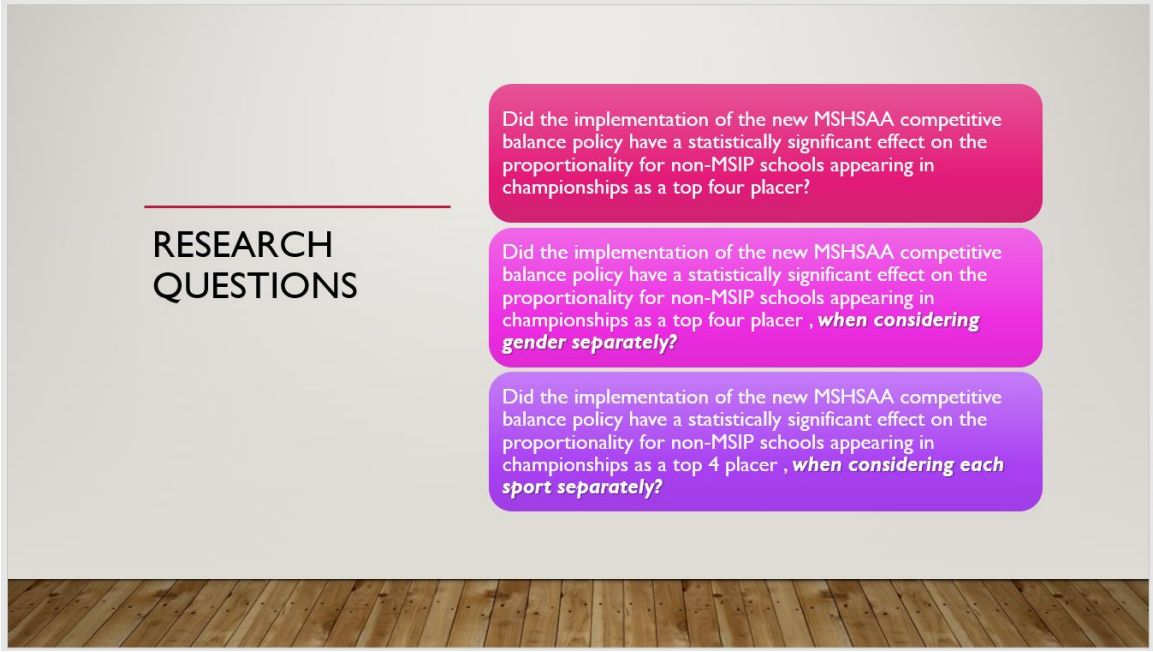
MSHSAA enacted a new policy based on success. The points accumulate over six years and can move non-MSIP schools up in classification if they have continued success.

Gap In the Literature



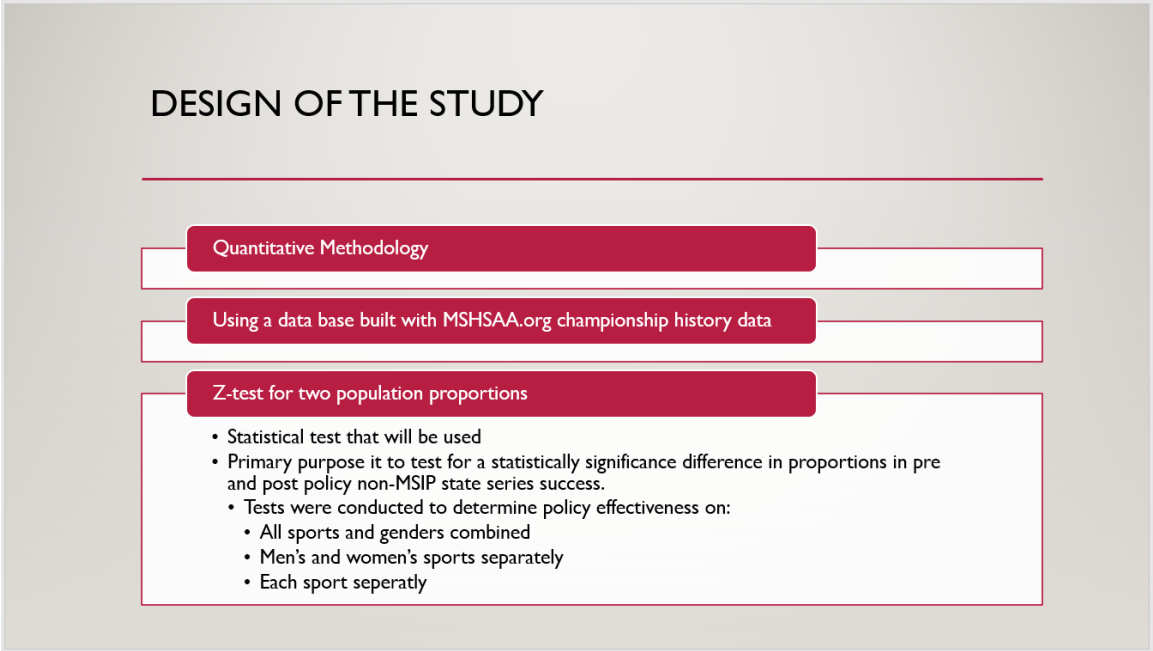
Although, there are many case studies and descriptive data is available, statistical analysis of policy effectiveness is nearly non-existent.

Research Questions



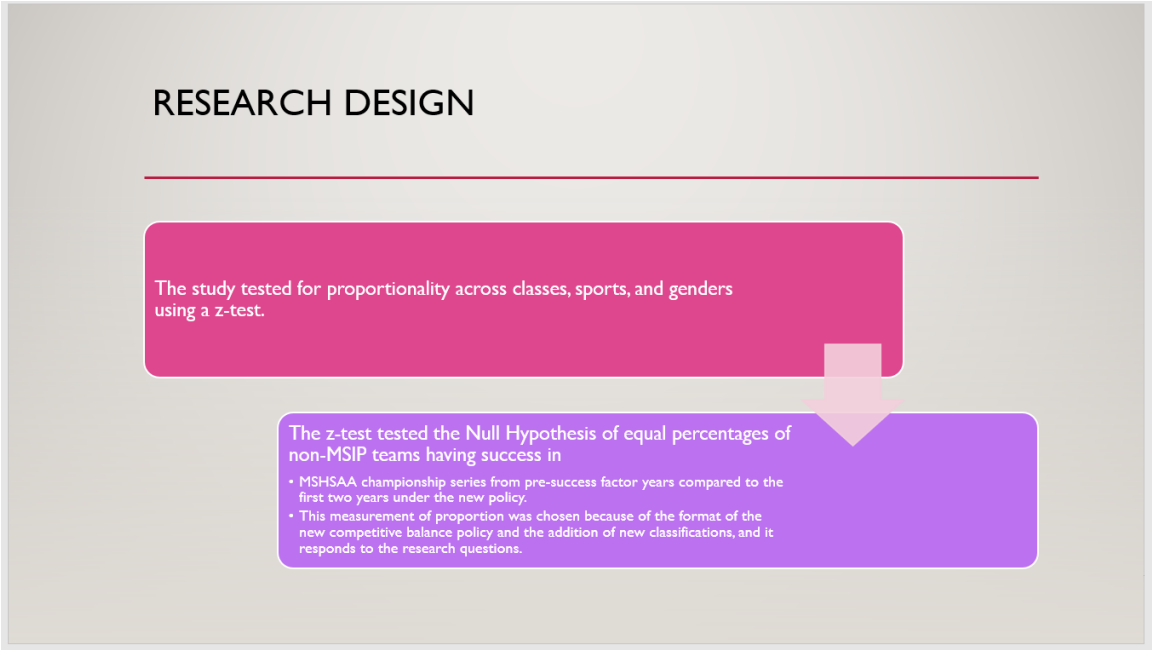
Research questions were developed to evaluate the policy effectiveness. The questions looked at the data as a whole and then by gender and by sport.

Design of the Study



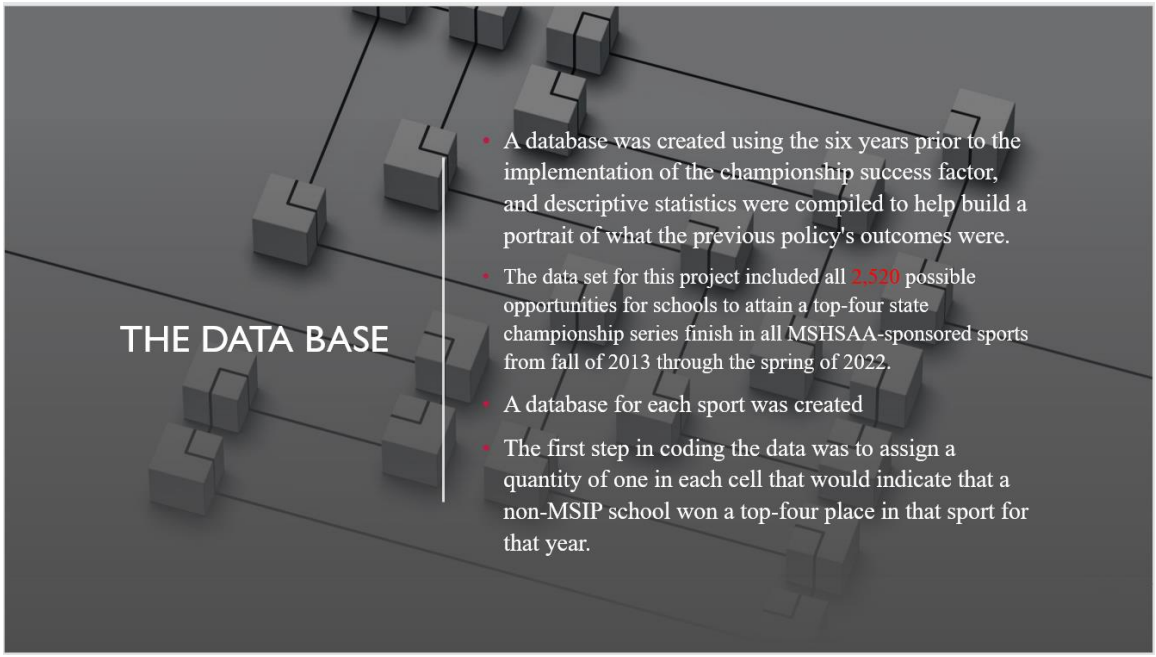
The study design employed quantitative methodology using a data base developed through data retrieved from MSHSAA championship history.

Research Design



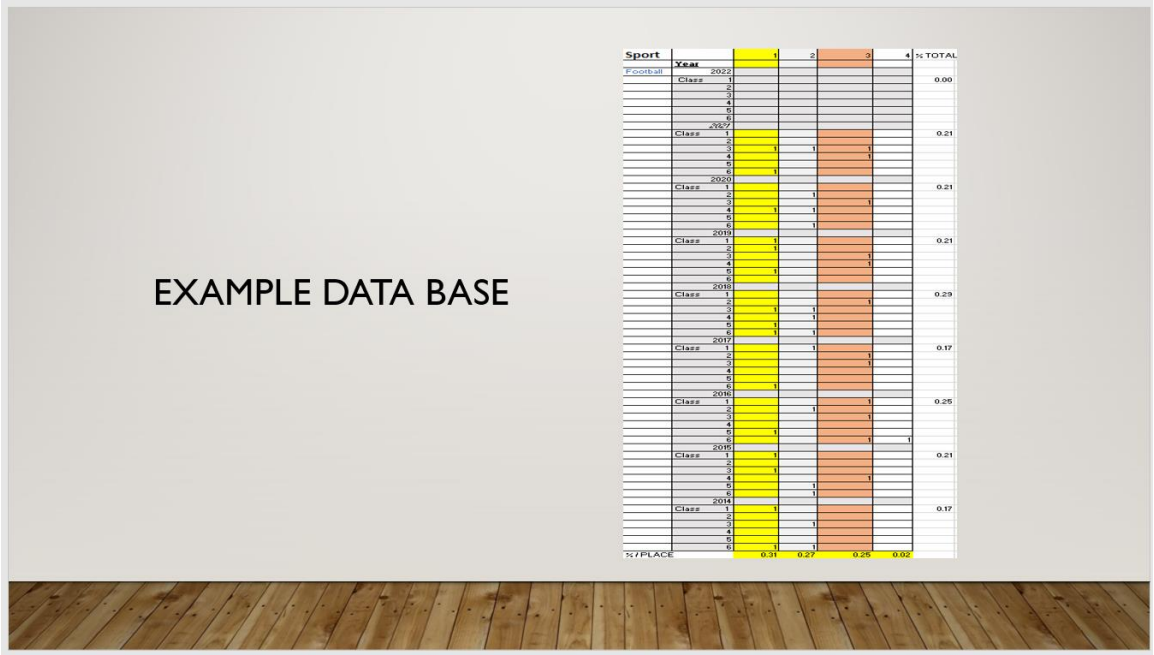
The z-test tested the Null Hypothesis of equal percentages of non-MSIP teams having success in MSHSAA championship series from pre-success factor years compared to the first two years under the new policy. This measurement of proportion was chosen because of the format of the new competitive balance policy and the addition of new classifications, and it responds to the research questions.

The Data Base



A database was created using the six years prior to the implementation of the championship success factor. A database was created using the six years prior to the implementation of the championship success factor.

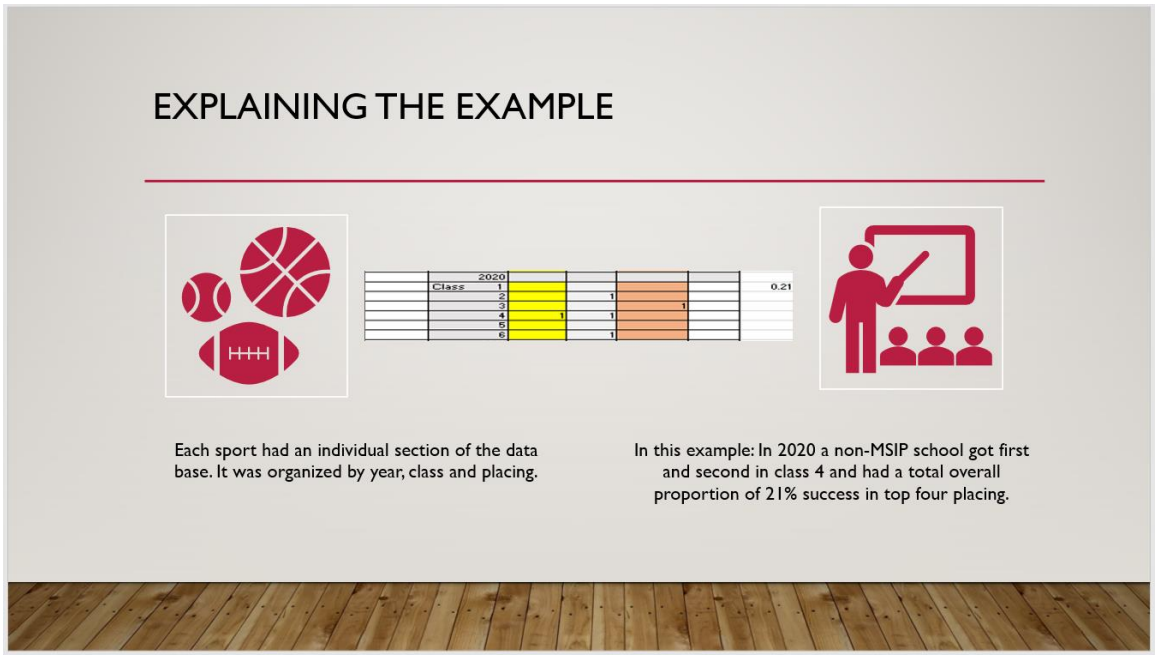
Example Data Base



Sport		1	2	3	4	% TOTAL
Year						
Football	2022					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2021					
	Class 1					0.21
	2					
	3	1	1	1		
	4			1		
	5					
	6	1				
	2020					
	Class 1					0.21
	2		1			
	3			1		
	4	1	1			
	5					
	6		1			
	2019					
	Class 1	1				0.21
	2	1				
	3			1		
	4			1		
	5	1				
	6					
	2018					
	Class 1					0.29
	2			1		
	3	1	1			
	4		1			
	5	1				
	6	1	1			
	2017					
	Class 1		1			0.17
	2			1		
	3			1		
	4					
	5					
	6	1				
	2016					
	Class 1			1		0.25
	2		1			
	3			1		
	4					
	5	1				
	6			1	1	
	2015					
	Class 1	1				0.21
	2					
	3	1				
	4			1		
	5		1			
	6		1			
	2014					
	Class 1	1				0.17
	2					
	3		1			
	4					
	5					
	6	1	1			
% / PLACE		0.31	0.27	0.25	0.02	

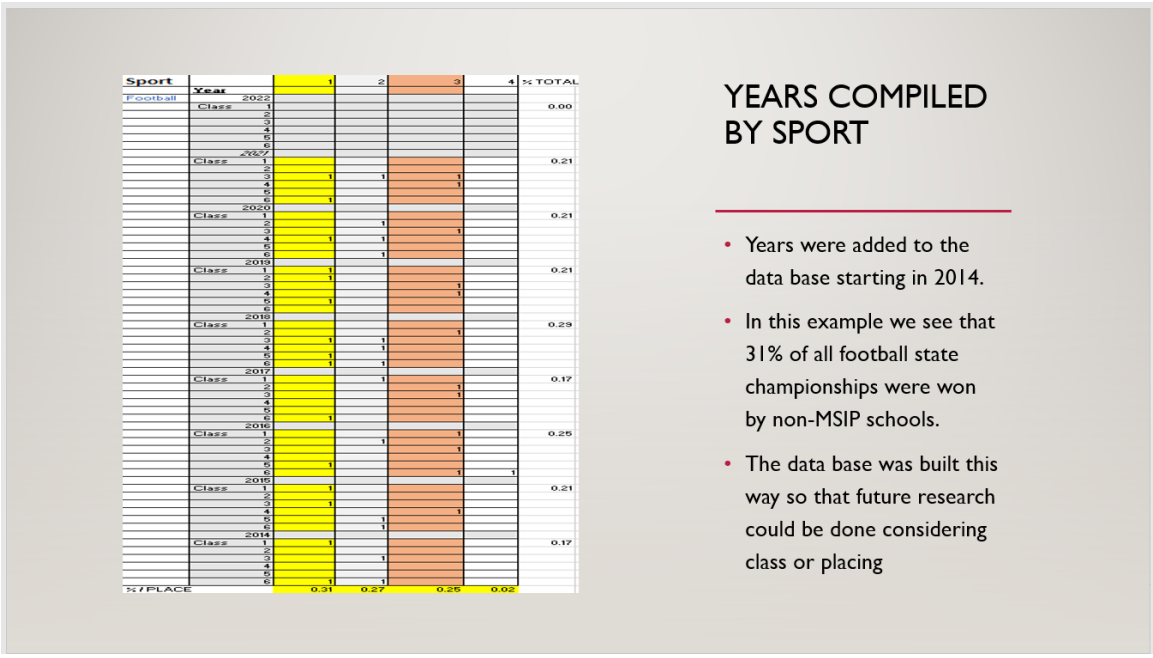
Building the data base began by creating a table for each sport. The table was divided by year, classification and placing. It was built this way to allow for future research and to answer the current research questions.

Explanation of the Example



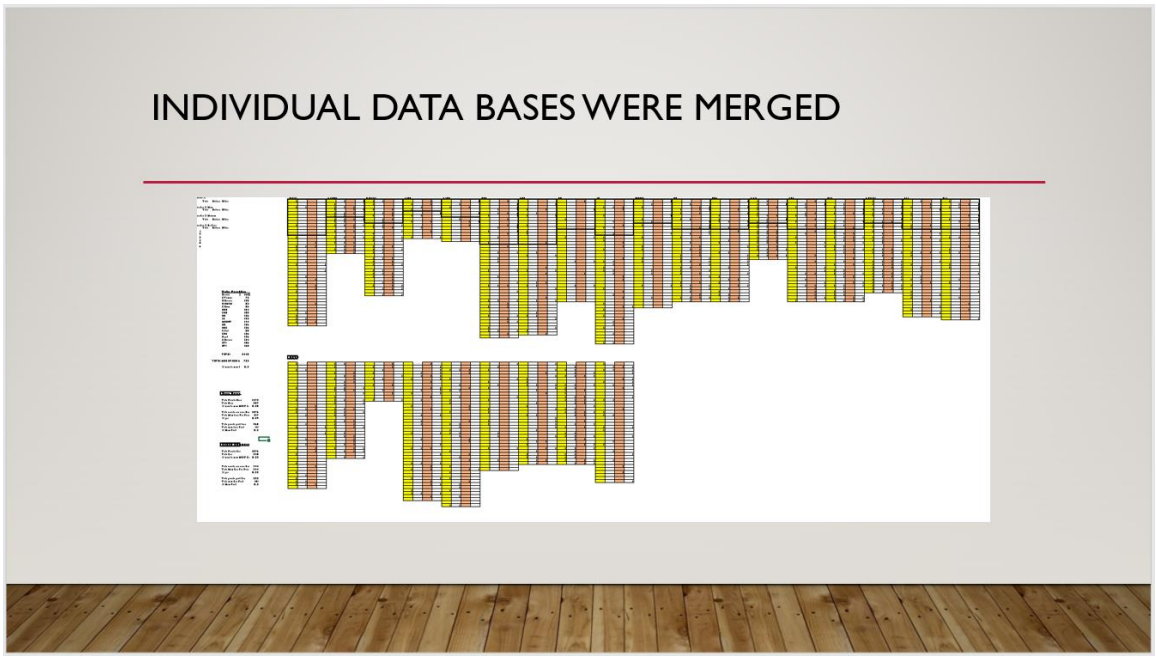
In this example: In 2020 a non-MSIP school got first and second in class 4 and had a total overall proportion of 21% success in top four placing. Each sport had a data base built.

Compiled by Sport



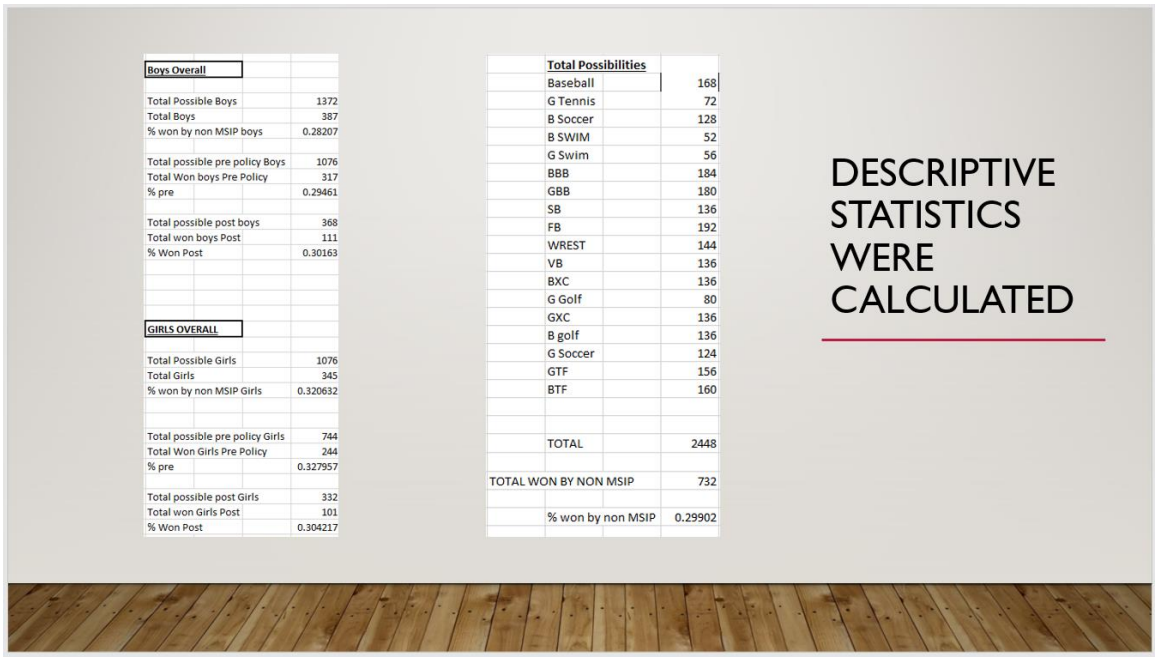
Years were added to the data base starting in 2014. All years were combined for each sport. In this example we see that 31% of all football state championships were won by non-MSIP schools.

Merged Data



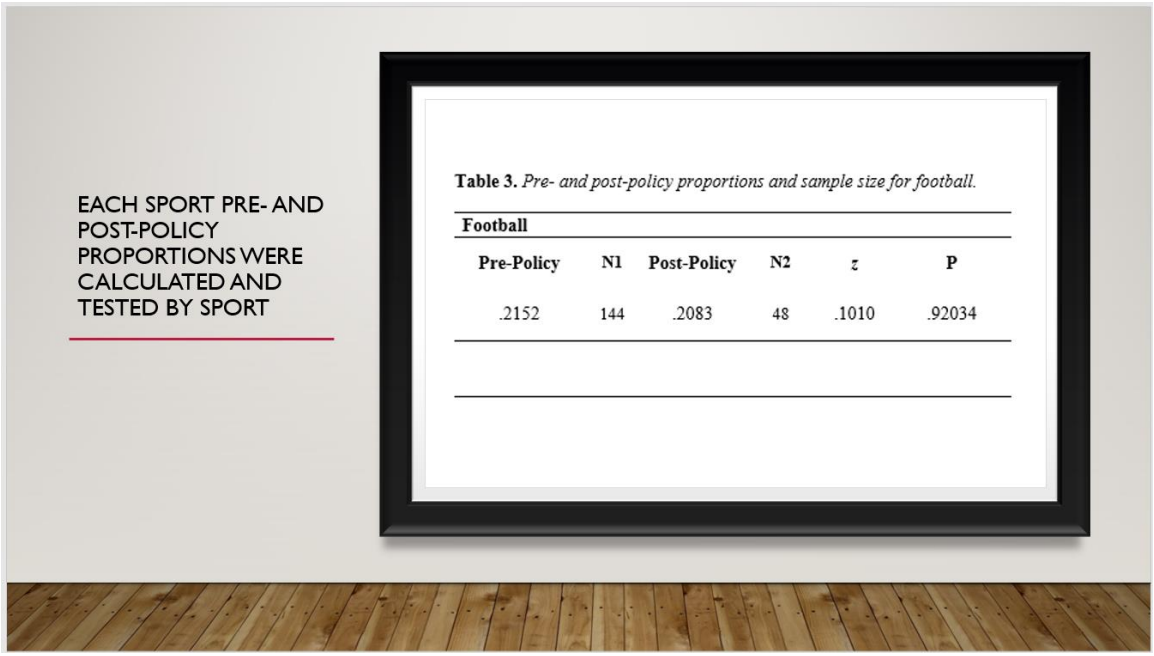
All individual sport data bases were merged to create an all-inclusive data base. In the example we can see that sports with a smaller individual data base are represented by the shorter columns.

Descriptive Statistics



Descriptive statistics were calculated using the large data base to prepare for testing.

Testing



Each sport was first tested separately for pre- and post-policy proportions.

Testing by Gender

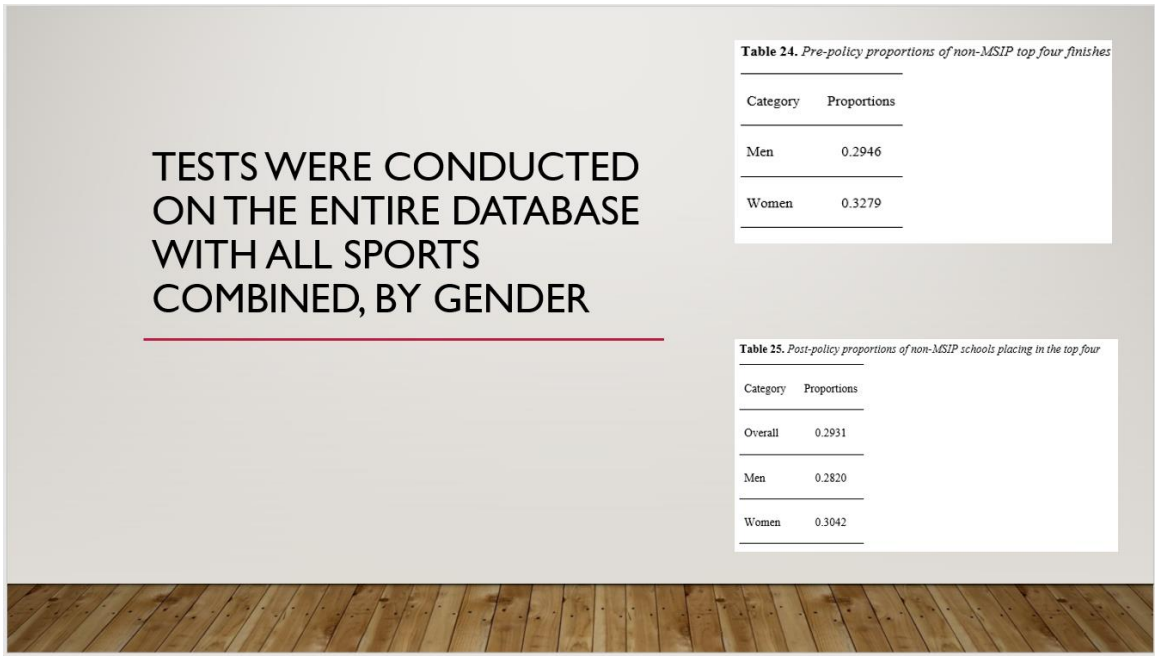


Table 24. *Pre-policy proportions of non-MSIP top four finishes*

Category	Proportions
Men	0.2946
Women	0.3279

Table 25. *Post-policy proportions of non-MSIP schools placing in the top four*

Category	Proportions
Overall	0.2931
Men	0.2820
Women	0.3042

Testing was then conducted on the entire data base, all sports combined by gender.

Test Results

Table 26. *Test of significance for difference between proportions*

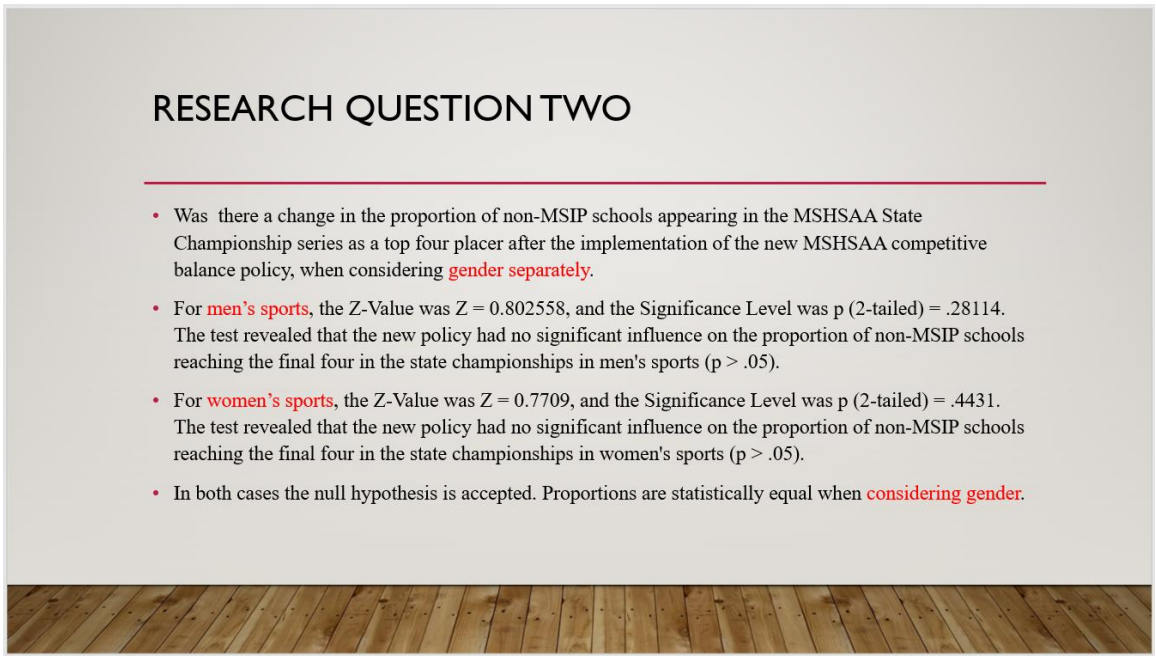
Category	Sample 1 %	N1	Sample 2 %	N2	Z	P	Result
All	.31128	1820	.29600	700	0.7488	.4593	-
Men	.29461	1076	.24850	368	.80258	.28914	-
Women	.32796	744	.30422	332	.7707	.4431	-

A table was constructed with all of the testing information included. A results column was added to help identify proportion changes. The table included all sample sizes and proportions as well as z-test results.

Research Question One

The first research question asked "Was there a change in the proportion of non-MSIP schools appearing in the MSHSAA State Championship series as a top four placer after the implementation of the new MSHSAA competitive balance policy?" All the possible top-four places in the championship series were examined before and after policy implementation. The z-test showed that the differences were not significant when looking at the entire database.

Research Question Two

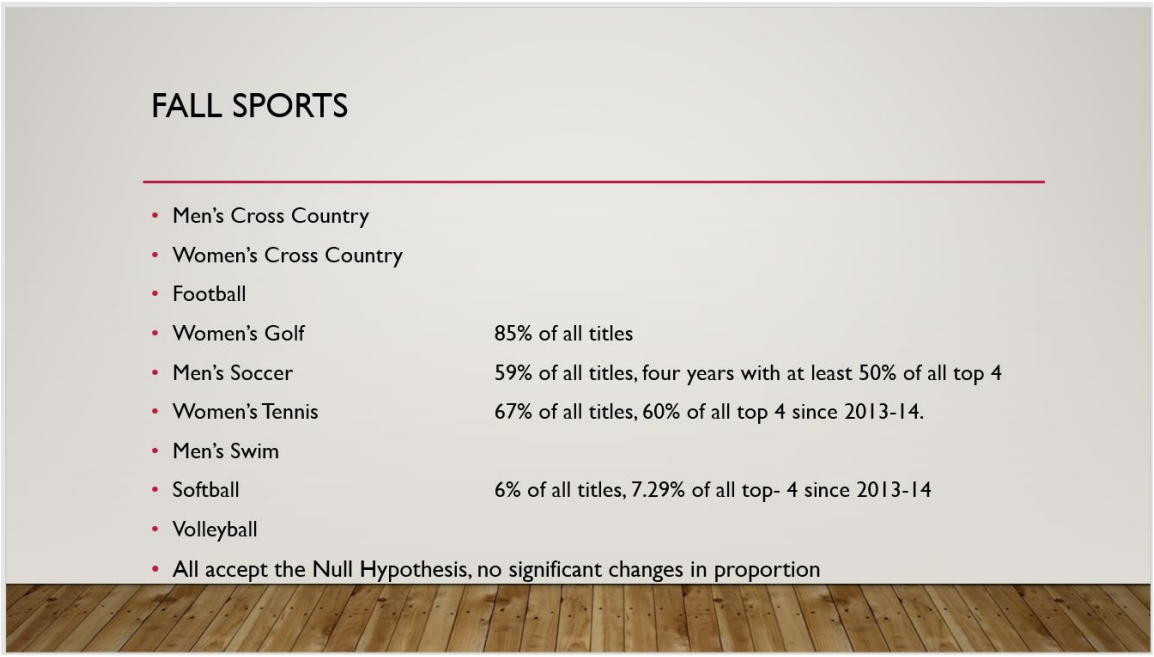


Research question two asked "Was there a change in the proportion of non-MSIP schools appearing in the MSHSAA State Championship series as a top four placer after the implementation of the new MSHSAA competitive balance policy, when considering gender separately?" In both cases the null hypothesis is accepted. Proportions are statistically equal when considering gender.

Research Question Three

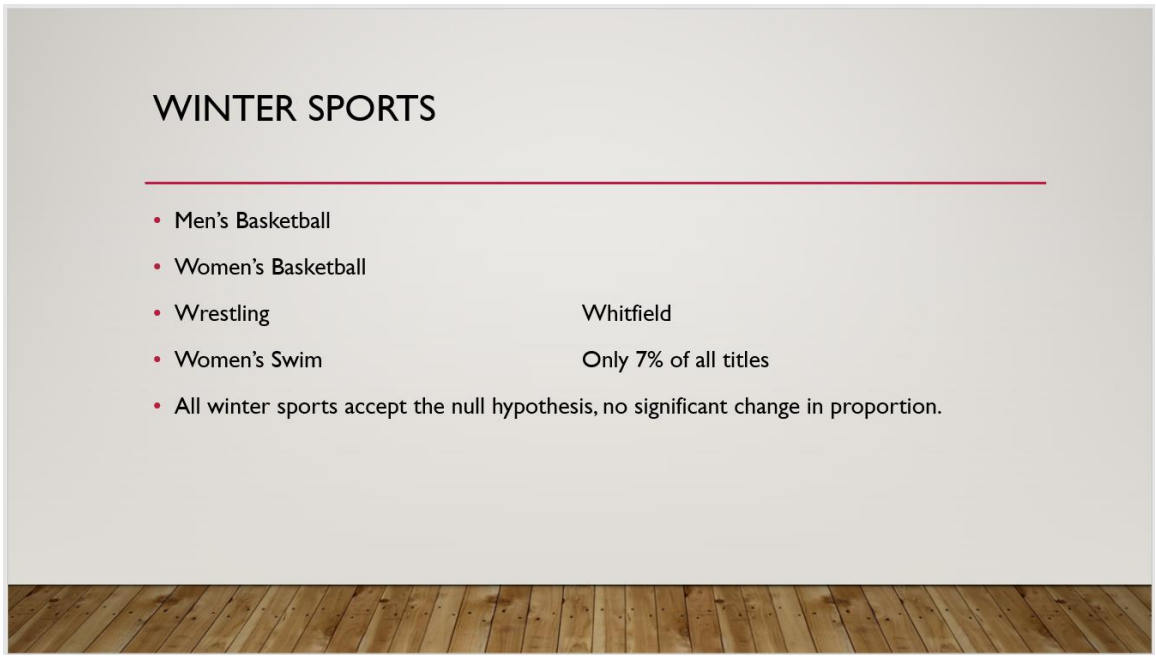
- Research Question three asked "Did the implementation of new MSHSAA competitive balance policy have a statistically significant effect on proportionality of non-MSIP schools appearing in championships as a top-four placer, when considering each sport separately?"

Fall Sports



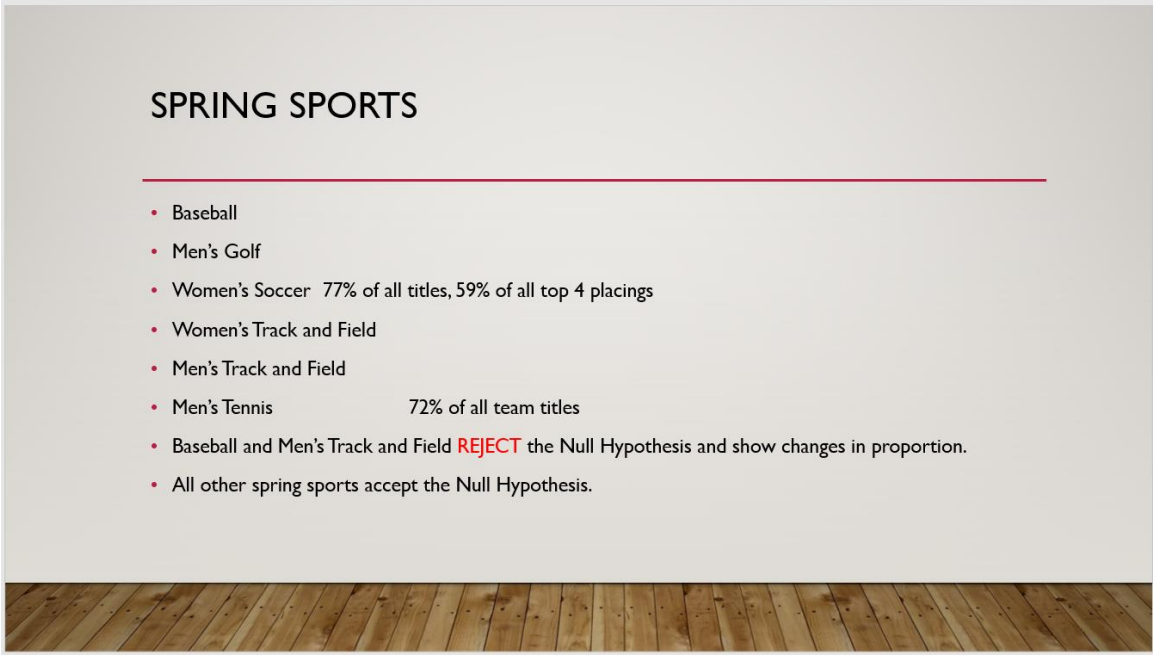
All of the sports offered in the fall by MSHSAA showed no statistically different proportions in non-MSIP success. All accept the Null Hypothesis. There are some interesting descriptive statistics in the fall sports group. Women's golf, men's soccer and women's tennis all show high proportions of non-MSIP success. Softball show a uncharacteristically low proportion of non-MSIP success.

Winter Sports



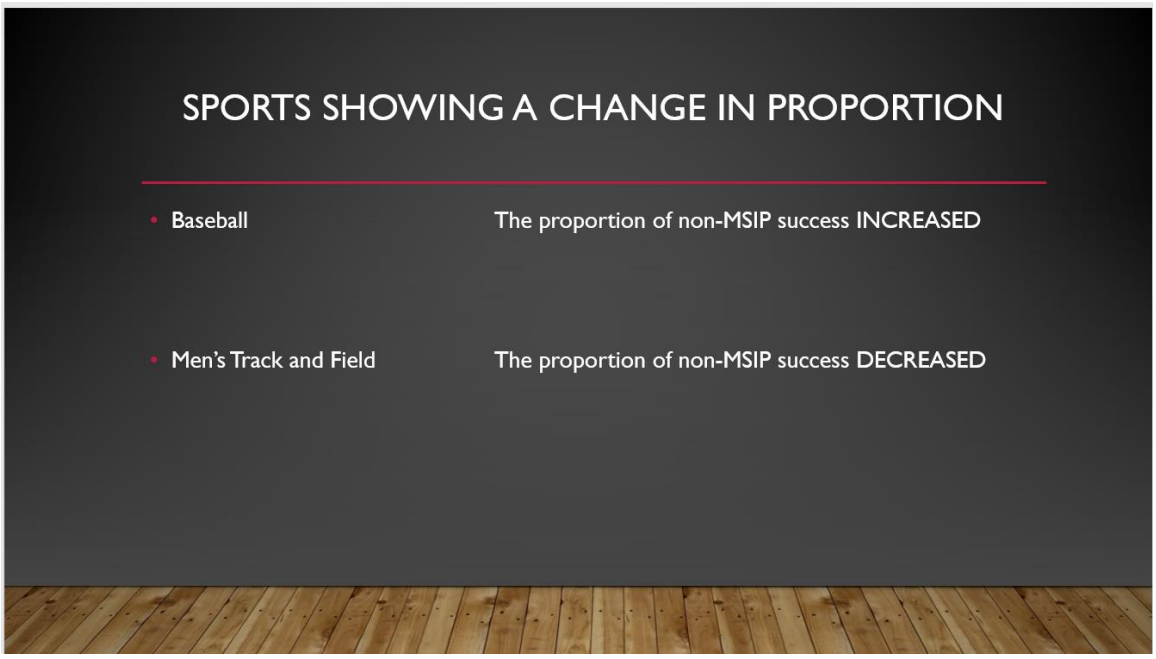
All winter sports so no significant change in proportion. Winter sports have two interesting items to mention. Women's swim has a low proportion of non-MSIP school success. In wrestling Whitfield, a non-MSIP school was moved up two classifications because of success under the new policy and still was a state champion in 2022.

Spring Sports



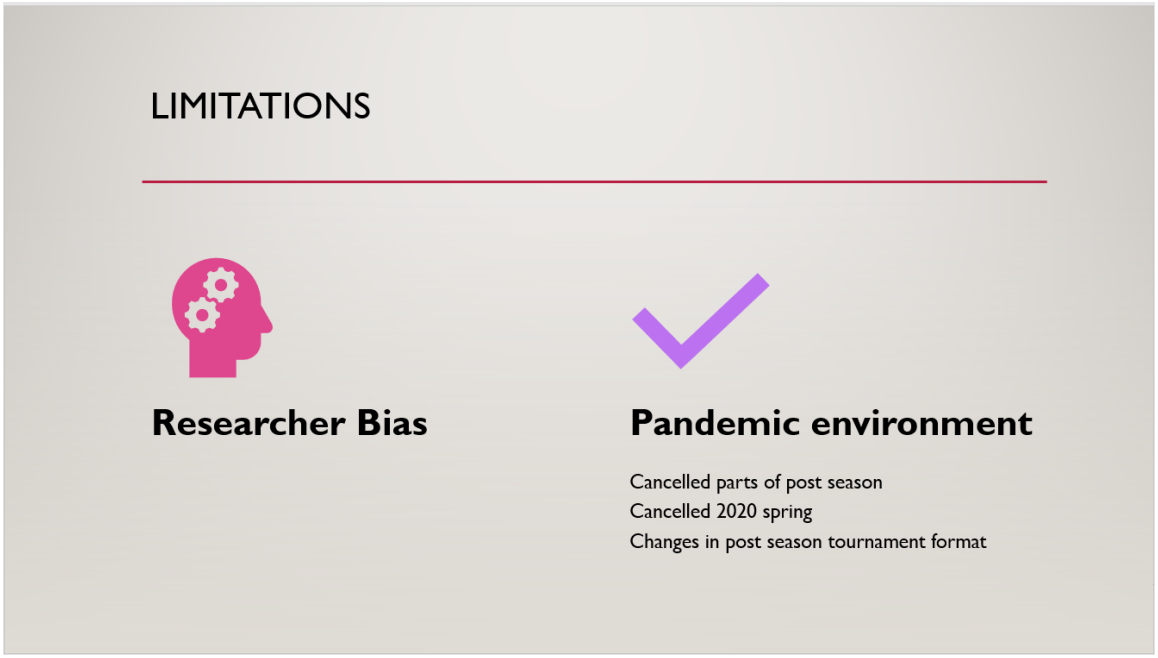
Spring sports had two sports that rejected the Null Hypothesis. They were men's Track and Baseball. All other sports showed no significant change in proportionality. Two sports showed interesting high proportions of non-MSIP success. Women's Soccer and Men's Tennis seem to be dominated by non-MSIP schools when looking at team titles.

Sports Showing Change



Baseball and Men's track and Field showed statistically significant changes in proportion after policy implementation. What is interesting is that the proportions changed differently. Baseball proportions increased while Men's Track decreased in proportion.

Limitations



The limitations of this study include researcher bias. The researcher has a vested interest in both non-MSIP and public-school success. The researcher's children have all competed and been named all-state for non-MSIP schools and his current position is as an administrator in a large public school. It must also be taken into consideration that this study was conducted in a pandemic environment.

Recommendations

Recommendations include testing the current data base using different research questions concerning class, season, and team verses individual sport proportions. A qualitative component also needs examined as well as research in the question of why these schools continue to have success.

Additional Research

Additional research that can be examined include access to resources, enrollment guidelines, geographic footprint, and school economic demographics.

Findings by Sport

Sports are grouped by season. All original data bases by sport are shown in the appendix. The data was organized so that future inquiry could be performed by updating the existing tables. Individual sport findings are listed with proportions sample sizes for both pre- and post-policy time frames.

Fall Sports

Men's Cross Country

The men's cross-country database indicates that 26% of all titles won since 2014 have been by non-MSIP schools. In 2020, there was an addition of one classification, raising the number of classifications to five. The years of 2014 and 2015 were the years in which the highest proportion of top four finishes were achieved by non-MSIP schools with the total reaching 38%. Pre-policy overall proportions were 26.04% with a sample size of 96. Post-policy proportions sit at 27.5% with a sample size of 40. The z-value for men's cross country was -0.1759. Testing revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in men's cross country ($p > .05$).

Table 1. *Pre- and post-policy proportions and sample size for men's cross country.*

Men's XC					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
0.2604	96	0.275	40	-0.1759	0.85716

Women's Cross Country

The women's cross country database indicates that 21% of all titles won since 2014 have been by non-MSIP schools. In 2020, there was an addition of one classification, raising the number of classifications to five. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 27.61%. The year 2015 was the year in which the highest proportion of top four finishes were achieved by non-MSIP schools, with the total reaching 38%. Pre-policy overall proportions were 25% with a sample size of 96. Post-policy proportions sit at 32.5% with a sample size of 40. The z-value for women's cross country was -0.8955. Testing revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in women's cross country ($p > .05$).

Table 2. *Pre- and post-policy proportions and sample size for women's cross country.*

Women's XC					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
0.2500	96	0.3250	40	-0.8955	0. 36821

Football

The football database indicates that 31% of all titles won since 2014 have been by non-MSIP schools. There has not been an added classification during the years examined in this research. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 21.35%. The year 2018 was the year in which the highest proportion of top four finishes were achieved by non-MSIP schools, with the total reaching 29%. Pre-policy overall proportions were 21.52% with a sample size of 144. Post-policy proportions sit at 20.83% with a sample size of 48. The z-value for football is 0.92034. Testing revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in football ($p > .05$).

Table 3. *Pre- and post-policy proportions and sample size for football.*

Football					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.2152	144	.2083	48	.1010	.92034

Women's Golf

The women's golf database indicates that 85% of all titles won since 2014 have been by non-MSIP schools. This is the highest proportion of championships by sport in the research time frame. In 2020, there was an addition of two classifications, raising the number of classifications to four. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 58.75%. The year 2017 was the year in which the highest proportion of top four finishes were achieved by non-MSIP schools, with the total reaching 75%. Pre-policy overall proportions were 50% with a sample size of 32. Post-policy proportions sit at 64.58% with a sample size of 48. The z-value for women's golf is -1.2977. Testing revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in women's golf ($p > .05$).

Table 4. *Pre- and post-policy proportions and sample size for women's golf.*

Women's golf					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.5000	32	.6458	48	-1.2977	.19360

Men's Soccer

The men's soccer database indicates that 59% of all titles won since 2014 have been by non-MSIP schools. There was not an increase in the number of classifications during the time focused on in this research. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 46.09%. In 2014, 2015, 2017, 2018, and 2019, 50% of all top four places in men's soccer were non-MSIP schools. Pre-policy overall proportions were 48.9% with a sample size of 96. Post-policy proportions sit at 37.5% with a sample size of 32. The z-value for men's soccer is 1.1253. Testing revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in men's soccer ($p > .05$).

Table 5. *Pre- and post-policy proportions and sample size for men's soccer.*

Men's soccer					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.4895	96	.3750	32	1.1253	.25848

Softball

The women's softball database indicates that 6% of all titles won since 2014 have been by non-MSIP schools. In 2020, there was an addition of one classification, raising the number of classifications to five. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 7.35%. This is one of the lowest scores in the research. In 2014 and 2018, there were no non-MSIP school top four finishes in any of the classifications. The years 2015 and 2017 were the years in which the highest proportion of top four finishes were achieved by non-MSIP schools, with the total reaching 13%. Pre-policy overall proportions were 7.29% with a sample size of 96. Post-policy proportions sit at 7.5% with a sample size of 40. The z-value for women's softball is 0.0428. Testing revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in women's softball ($p > .05$).

Table 6. *Pre- and post-policy proportions and sample size for softball.*

Softball					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.5000	32	.6458	48	-1.2977	.19360

Men's Swimming

The men's swimming database indicates that 38% of all titles won since 2014 have been by non-MSIP schools. In 2017, there was an addition of one classification, raising the number of classifications to two. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 26.92%. The year 2014 was the year in which the highest proportion of top four finishes were achieved by non-MSIP schools, with the total reaching 50%. Pre-policy overall proportions were 25% with a sample size of 36. Post-policy proportions sit at 31.25% with a sample size of 16. The z-value for men's swimming was -0.4690. Testing revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in men's swimming ($p > .05$).

Table 7. *Pre- and post-policy proportions and sample size for men's swimming.*

Men's swim					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.2500	36	.3125	16	-.04690	.63830

Women's Tennis

The women's tennis database indicates that 67% of all titles won since 2014 have been by non-MSIP schools. In 2020, there was an addition of one classification, raising the number of classifications to three. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 59.72%. The year 2019 was the year in which the highest proportion of top four finishes were achieved by non-MSIP schools, with the total reaching 75%. This is one of the highest proportions in this study. Pre-policy overall proportions were 60.42% with a sample size of 48. Post-policy proportions sit at 58.33% with a sample size of 24. The z-value for women's tennis is 0.1696. Testing revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in women's tennis ($p > .05$).

Table 8. *Pre- and post-policy proportions and sample size for women's tennis.*

Women's Tennis					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.5000	32	.6458	48	-1.2977	.19360

Volleyball

The volleyball database indicates that 38% of all titles won since 2014 have been by non-MSIP schools. In 2020, there was an addition of one classification, raising the number of classifications to five. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 39.71%. The year 2017 was the year in which the highest proportion of top four finishes were achieved by non-MSIP schools, with the total reaching 56%. Pre-policy overall proportions were 41.67% with a sample size of 96. Post-policy proportions sit at 35% with a sample size of 40. The z-value for volleyball is 0.7244. Testing revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in volleyball ($p > .05$).

Table 9. *Pre- and post-policy proportions and sample size for volleyball.*

Volleyball					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.4167	96	.3500	40	.7244	.47152

Winter Sports

Women's basketball

The women's basketball database indicates that 22% of all titles won since 2014 have been by non-MSIP schools. In 2021, there was an addition of one classification, raising the number of classifications to six. An anomaly that appears in women's basketball occurred in the 2019-2020 year. Classes one through three completed their seasons and had data available for this study. Classes four through six had seasons cut short due to the COVID-19 pandemic. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 17.78%. The year 2017 was the year in which the highest proportion of top four finishes were achieved by non-MSIP schools, with the total reaching 25%. Pre-policy overall proportions were 18.33% with a sample size of 120. Post-policy proportions sit at 16.66% with a sample size of 60. The z-value for women's basketball is 0.77948. Testing revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in women's basketball ($p > .05$).

Table 10. *Pre- and post-policy proportions and sample size for women's basketball.*

Women's Basketball					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.1883	120	.1666	60	.2763	.77948

Men's basketball

The men's basketball database indicates that 22% of all titles won since 2014 have been by non-MSIP schools. In 2021, there was an addition of one classification, raising the number of classifications to six. An anomaly that appears in men's basketball occurs in the 2019-2020 year. Classes one through three completed their seasons and had data available for this study. Classes four through six had seasons cut short due to the COVID-19 pandemic. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 26.63%. The year 2022 was the year in which the highest proportion of top four finishes were achieved by non-MSIP schools, with the total reaching 42%. Pre-policy overall proportions were 23.33% with a sample size of 124. Post-policy proportions sit at 33.33% with a sample size of 60. The z-value for men's basketball is -1.4315. Testing revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in men's basketball ($p > .05$).

Table 11. *Pre- and post-policy proportions and sample size for men's basketball.*

Men's basketball					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.2338	124	.3333	60	-1.4315	.15272

Wrestling

The wrestling database indicates that 25% of all titles won since 2014 have been by non-MSIP schools. There have been no additions of classifications since 2014. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 12.5%. The years 2021 and 2022 were the years in which the highest proportion of top four finishes were achieved by non-MSIP schools, with the total reaching 19%. Pre-policy overall proportions were 12.5% with a sample size of 112. Post-policy proportions sit at 18.75% with a sample size of 32. The z-value for wrestling is -1.2130. Testing revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in wrestling ($p > .05$).

Table 12. *Pre- and post-policy proportions and sample size for wrestling.*

Wrestling					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.1071	112	.1875	3	-1.2130	.22628

Women's swimming

The women's swimming database indicates that 7% of all titles won since 2014 have been by non-MSIP schools. In 2018, one classification was added, bringing the total to two. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 16.07%. The year 2019 was the year in which the highest proportion of top four finishes was achieved by non-MSIP schools, with the total reaching 19%. Pre-policy overall proportions were 12.5% with a sample size of 32. Post-policy proportions sit at 20.83% with a sample size of 24. The z-value for women's swim was -0.8400. Testing revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in women's swimming ($p > .05$).

Table 13. *Pre- and post-policy proportions and sample size for women's swimming.*

Women's Swim					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.1250	32	.2083	24	-0.8400	.40090

Spring Sports

Baseball

The baseball database indicates that 33% of all titles won since 2014 have been by non-MSIP schools. In 2021, one classification was added, bringing the total to six. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 19.05%. The year 2014 was the year in which the highest proportion of top four finishes was achieved by non-MSIP schools, with the total reaching 35%. Pre-policy overall proportions were 23.33% with a sample size of 120. Post-policy proportions sit at 8.3% with a sample size of 48. The z-value for baseball is 2.2417. Testing revealed that the new policy had a significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in baseball ($p > .05$). This is one of two sports where there was a difference in proportion after policy implementation.

Table 14. *Pre- and post-policy proportions and sample size for baseball.*

Baseball					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.2333	120	.0833	48	2.2417	.02510

Men's golf

The men's golf database indicates that 50% of all titles won since 2014 have been by non-MSIP schools. In 2021, one classification was added, bringing the total to five. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 46.32%. The year 2019 was the year in which the highest proportion of top four finishes was achieved by non-MSIP schools, with the total reaching 63%. Pre-policy overall proportions were 48.95% with a sample size of 96. Post-policy proportions sit at 40% with a sample size of 40. The z-value for men's golf is .9537. Testing revealed that the new policy did not have a significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in men's golf ($p > .05$).

Table 15. *Pre- and post-policy proportions and sample size for men's golf.*

Men's golf					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.4895	96	.4000	40	0.953	.34212

Women's soccer

The women's soccer database indicates that 77% of all titles won since 2014 have been by non-MSIP schools. This is one of the highest proportions in the research data. In 2015, one classification was added, bringing the total to four. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 58.87%. The years 2014 and 2015 were the years in which the highest proportion of top four finishes was achieved by non-MSIP schools, with the total reaching 75%. Pre-policy overall proportions were 63.04% with a sample size of 92. Post-policy proportions sit at 46.87% with a sample size of 32. The z-value for women's soccer is 1.6007. Testing revealed that the new policy did not have a significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in women's soccer ($p > .05$).

Table 16. *Pre- and post-policy proportions and sample size for women's soccer.*

Women's soccer					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.6304	92	.4687	32	1.6007	.10960

Women's track and field

The women's track and field database indicates that 33% of all titles won since 2014 have been by non-MSIP schools. In 2015, one classification was added, bringing the total to five. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 20.23%. The years 2016 and 2022 were the years in which the highest proportion of top four finishes was achieved by non-MSIP schools, with the total reaching 30%. Pre-policy overall proportions were 25% with a sample size of 116. Post-policy proportions sit at 27.5% with a sample size of 40. The z-value for women's track and field is -0.3212. Testing revealed that the new policy did not have a significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in women's track and field ($p > .05$).

Table 17. *Pre- and post-policy proportions and sample size for women's track and field.*

Women's track					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.2500	116	.2750	40	-0.3212	.75656

Men's track and field

The men's track and field database indicates that 23% of all titles won since 2014 have been by non-MSIP schools. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 20.24%. The year 2022 was the year in which the highest proportion of top four finishes was achieved by non-MSIP schools, with the total reaching 40%. Pre-policy overall proportions were 15.83% with a sample size of 116. Post-policy proportions sit at 31.25% with a sample size of 48. The z-value for men's track and field is -2.2469. Testing revealed that the new policy did have a significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in men's track and field ($p > .05$). This is one of two sports where there was a difference in proportion after policy implementation.

Table 20. *Pre- and post-policy proportions and sample size for men's track and field.*

Men's track					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.15833	120	.3125	48	-2.2469	.02444

Men's tennis

The men's tennis database indicates that 72% of all titles won since 2014 have been by non-MSIP schools. In 2020, there was an addition of one classification, raising the number of classifications to three. The overall proportion of non-MSIP schools achieving a top four finish since 2014 is 54.72%. The years 2014 and 2019 were the years in which the highest proportion of top four finishes were achieved by non-MSIP schools, with the total reaching 63%. Pre-policy overall proportions were 60.42% with a sample size of 48. Post-policy proportions sit at 50% with a sample size of 24. The z-value for men's tennis is 0.8418. Testing revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in men's tennis ($p > .05$).

Table 22. *Pre- and post-policy proportions and sample size for men's tennis.*

Men's tennis					
Pre-Policy	**N1**	**Post-Policy**	**N2**	***z***	**P**
.6042	48	.5000	24	0.8418	.40090

Findings

Prior to completing the statistical analyses, population proportions were calculated and evaluated. Descriptive statistics were used to evaluate outliers. When examined as a whole, the data were viable. It was interesting, however, that if looking individually at separate sports, there seemed to be a marked difference in proportionality. The largest proportion of non-MSIP top-four finishes was in the sport of women's tennis, with a proportion of .5972. The smallest was in another woman's sport, softball, with a proportionality of .073. This disparity would be interesting to examine in future studies. Table 23 indicates the proportion of non-MSIP top-four places of all populations within the given time frame. It indicates proportions for all years from 2013-2022 and does not look at pre- and post-policy numbers.

Table 23. *Overall proportions of non-MSIP top four finishes 2013-2022*

Category	Proportions
Overall	0.2990
Men	0.2821
Women	0.3206

As mentioned earlier, the descriptive statistics revealed that women's sports showed a slightly higher proportion than men's sports. In developing the database, it

became apparent that it was important to look not only at the overall picture of proportionality but also to look at the policy effectiveness across men's and women's sports. Table 24 indicates the proportions of pre-policy for men and women. Again, the women's proportionality was denser than the men's.

Table 24. *Pre-policy proportions of non-MSIP top four finishes by sex*

Category	Proportions
Men	0.2946
Women	0.3279

Table 25 indicates data for post-policy proportions. Although only a calculation of percentage, these numbers seemed to indicate that the gap between the men's and women's proportionality numbers may have lessened. It is an interesting observation that could lead to future study.

Table 25. *Post-policy proportions of non-MSIP schools placing in the top four*

Category	Proportions
Overall	0.2931
Men	0.2820
Women	0.3042

To investigate if statistically significant differences existed between pre- and post-policy proportions in overall men's and women's selected data, a two-tailed test of significance was conducted to compare the groups. Table 26 indicates a test for significance in proportionality results for all sports individually over the selected time frame.

Table 26. *Test of significance for difference between proportions*

Category	Sample 1 %	N1	Sample 2 %	N2	Z	P	Result
All	.31128	1820	.29600	700	0.7488	.4593	-
Men	.29461	1076	.24850	368	.80258	.28914	-
Women	.32796	744	.30422	332	.7707	.4431	-

Research Question One asked if there was a change in the proportion of non-MSIP schools appearing in the MSHSAA State Championship series as a top four placer after the implementation of the new MSHSAA competitive balance policy. Building on the findings of the descriptive statistics, a two-tailed z-test for two population proportions was conducted. All of the possible top-four places in the championship series were examined before and after policy implementation. The z-test showed that the differences

were not significant when looking at the entire database; sex and sport-specific data were not examined in this test. The Z-value was Z = 0.7488, and the Significance Level was p (2-tailed) = 0.4593, (p > .05). These values indicate that the policy implementation had no statistically significant effect on proportionality for all possibilities for the first two years of its existence.

Research Question Two asked if as there a was change in the proportion of non-MSIP schools appearing in the MSHSAA State Championship series as a top four placer after the implementation of the new MSHSAA competitive balance policy, when considering gender separately. For men's sports, the Z-value was Z = 0.802558, and the Significance Level was p (2-tailed) = .28114. The test revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in men's sports (p > .05). For women's sports, the Z-value was Z = 0.7709, and the Significance Level was p (2-tailed) = .4431. The test revealed that the new policy had no significant influence on the proportion of non-MSIP schools reaching the final four in the state championships in women's sports (p > .05).

Research Question Three asked if the implementation of new MSHSAA competitive balance policy had a statistically significant effect on proportionality of non-MSIP schools appearing in championships as a top-four placer, when considering each sport separately. As displayed in Table 27, only two sports (men's track and baseball) revealed a z-test that indicated that the pre- and post-proportions were significantly and statistically different. The two sports are baseball and men's track and field. Interestingly, the proportion increased in track and field and decreased in baseball after implementation

of the policy. All other sports data revealed test results that indicated no statistical significance in change.

Table 27. *Test of difference between proportions by sport*

Sport	Pre-Policy /N1	Post-Policy/N2	Z	P	+/-
Men's XC	.2604 / 96	.2750 / 40	-0.1759	.85716	-
Women's XC	.2500 / 96	.3250 / 40	-0.8955	.36821	-
Football	.2152 / 144	.2083 / 48	0.1010	.92034	-
Women's Golf	.5000 / 32	.6458 / 48	-1.2977	.19360	-
Men's Soccer	.4895 / 96	.3750 / 32	1.1253	.25848	-
Women's Softball	.0729 / 96	.0750 / 40	0.0428	.96180	-
Men's Swim	.2500 / 36	.3125 / 16	-0.4690	.63830	-
Women's Tennis	.0641 / 48	.5833 / 24	0.1696	.86502	-
Volleyball	.4167 / 96	.3500 / 40	0.7244	.47152	-

Women's BB	.1833 / 120	.1666 / 60	0.2763	.77948	-
Men's BB	.2338 / 124	.3333 / 60	-1.4315	.15272	-
Women's Swim	.1250 / 32	.2083 / 24	-0.8400	.40090	-
Wrestling	.1071 / 112	.1875 / 32	-1.2130	.22628	-
Baseball	.2333 / 120	.0833 / 48	2.2417	.02510	+
Men's Golf	.4895 / 96	.4000 / 40	0.9537	.34212	-
Women's Soccer	.6304 / 92	.4687 / 32	1.6007	.10960	-
Women's TF	.2500 / 116	.2750 / 40	-0.3212	.75656	-
Men's TF	.15833 / 120	.3125 / 48	-2.2469	.02444	+
Men's Tennis	.6042 / 48	.5000 / 24	0.8418	.40090	-

Findings and Results Summary

A majority of the statistical tests for the research questions revealed statistically nonsignificant differences in pre- and post-policy proportions of non-MSIP schools in the top-four of the state championship series. Two tests revealed a difference in proportion: men's track and field, with a decrease in proportion, and baseball, with an increase in proportion. The null hypothesis is not rejected in all cases except for baseball and men's track and field. Non-MSIP schools have achieved state championship series top-four finishes proportionally the same both before and after policy implementation when examining data from all sports and sexes tested together, for men's sports tested separately, and for women's sports tested separately. Testing 17 sports also showed the same results; however, baseball and men's track and field would reject the null hypothesis.

Limitations

Efforts were made to ensure that the research design was sound. However, the research did present a couple of constraints. There were limitations and assumptions in this study. It is important to consider the biases that this researcher has developed in his time as an activities director. The researcher spent five years as an activities director and administrator at a non-MSIP school, and his children attended non-MSIP schools for their entire elementary and secondary educations. However, he has also spent the last five years as an activities director in a public school. He has had a large investment in both types of schools studied in this research. He is a public-school graduate, and his wife is a graduate of a private Catholic school. To minimize the bias that may have been present, the research was completely quantitative and did not make assumptions as to the why or

how but whether the policy instituted made a quantifiable statistically significant difference in its first year of existence.

Another limitation was that this study was conducted during a pandemic. Schools across the state were approaching classroom learning and day-to-day instruction much differently (McGuine et al., 2021). Virtual learning, social distancing, and local municipal protocols could influence which schools or athletes were competing in postseason play (McGuine et al., 2021). Even the structure and protocols in most sports were changed for postseason play. For instance, wrestling allowed only 12 state qualifiers across 14 weights and four classes. The pre-pandemic norm was 16 state qualifiers per weight across classes (MSHSAA.org). This was a reduction of possible point scorers by 25% of what would normally have been seen.

A sport-specific change that also could affect the outcome was that the number of district tournaments was increased in each class for wrestling to allow for social distancing. This doubled the number of district champions. Also, the state tournament in wrestling was a one-day only event. This was a change from a three-day event where athletes were required to make weight each day. The element of weight control over the period of three days was removed from the state tournament for the first time in modern history (MSHSAA.org).

Sports such as basketball also saw their district formats change. Pre-pandemic, district basketball tournaments were all played at a single location for each assigned district. In 2020-2021, that format changed to allow for the higher seeded team to host each individual game. In this instance, the better teams had a home field advantage. The

format change affected nearly all sports to allow for social distancing and minimal contact between players, fans, coaches, and officials (MSHSAA.org).

One of the biggest limiting factors was that the research spanned a season with incomplete data due to the COVID-19 pandemic. The Spring of 2020 was halted by MSHSAA, and data for that time were not included. Secondly, the new policy added new classifications which, in turn, added more opportunity for all schools. Potential future researchers could lengthen the time frame to include more of the new policy environment, possibly canceling the effect of the pandemic shut down and the addition of more classifications.

Another limitation was the existence of sample sizes that may not have captured an effect measure. When testing sports individually, the research included some post-policy sample sizes that were below 20. Future research will have a deeper pool of data that may assist in increasing postseason sample sizes.

The pandemic also created an environment where student athletes and teams were disqualified at different points during or just before the postseason because of quarantine rules. This may have kept a team from making the final four that they should have and may have allowed another team access that they would not have had otherwise. Because of this confounding factor, the initial data produced in the first two years of the new policy may not indicate the same data that a non-pandemic environment would. Allowing for the policy to produce more years of data could produce more accurate data for future research.

Conclusion, Implications, and Future Research

There are many articles and case studies citing inequities in competitive balance between public and private schools in the high school sporting environment. Because these studies are primarily descriptive, qualitative, and anecdotal, a statistical inquiry has been needed. The purpose of this research was to create a data-driven statistical study to examine the first two years of a new high school competitive balance policy. The goal was to examine the policy through the lens of all sports grouped together first and then to distill the information even further by examining each sport individually and, finally, to examine sports grouped by sex.

Through the use of z-tests and descriptive statistics, the study revealed that in the first two years of the new MSHSAA policy, there was no statistically significant change in the proportion of non-MSIP schools placing in the top four of the state championship series, overall, by sex and in most sports. The two sports that showed a significant change in proportion showed changes in opposite directions.

For continued research, it is suggested that a qualitative component be included. It would be beneficial to know how members of the subcategories, each sport and by sex, feels about the policy's effectiveness. Additionally, it would be beneficial to examine the high density of non-MSIP schools' success in some sports but not in others, their difference in team as opposed to individual sports, and the difference between classification densities. It would be beneficial to examine data from more years subsequent to the initiation of the success factor to include more years that were not impacted by COVID-19.

Summary

The goal of the research was to compare pre- and post-policy effectiveness through an examination of proportionality. The 2019-2020 and 2020-2021 championship seasons were compared to the prior six years in an effort to judge policy effectiveness. A majority of the statistical tests for the research questions revealed statistically nonsignificant differences in pre- and post-policy proportions of non-MSIP schools in the top-four of the state championship series. Two tests revealed a difference in proportion: men's track and field, with a decrease in proportion, and baseball, with an increase in proportion. The null hypothesis is not rejected in all cases except for baseball and men's track and field. Non-MSIP schools have achieved state championship series top-four finishes proportionally the same both before and after policy implementation when examining data from all sports and sexes tested together, for men's sports tested separately, and for women's sports tested separately.

SECTION SIX

PRACTITIONER REFLECTION

Leadership Reflection

Dr. James Redd encouraged me to enroll in this program a long time ago. He was a principal at the school where I worked. I have the utmost respect for Dr. Redd because he is one of the best leaders I have met. He did not go through the program, but he heard about it through some of his colleagues at Northwest Missouri State University. What a gift his suggestion was! Learning about leadership from a scholarly perspective has deepened my understanding of how to serve an organization. This program has sharpened my awareness and focus as a leader. The coursework section of this program introduced me to vast new ways to approach leadership and to many people I will consider lifelong friends.

The dissertation process has been daunting. It almost made me quit, I felt as though I was failing. It did not come naturally. How could I lead through tough times if I was not able to clear this dissertation hurdle? It changed the way I look at relationships, trust, and stewardship. The dissertation process became a tempering process for me as a leader. It was through the grace and kindness of others that I made it through. It is the single biggest lesson about leadership that I learned. Everyone from the program leaders at The University of Missouri to my advisor and fellow candidates led me through to the end with grace and mercy. I am blessed.

I am a keenly self-aware person. I know where I am strong, and I know where I have shortcomings. I knew in accepting this challenge that I would be forced to reorder my priorities. I am very good at putting myself aside for work, family, and friends. This tendency to put others first became a weakness along the dissertation journey. To complete this dissertation task, I had to make it a priority. It constantly nagged me to pay

attention to it. I had to put my desire to finish at the top of my list. I knew there were people watching my progress. To be a good leader in my family and in my profession, I knew that I could not ignore the goal of finishing. At the very least, I have been persistent. I also had some very fantastic people such as Dr. Hutchinson who recognized and honored my struggle.

The dissertation process has also been enlightening for me. It has given me a language to explain and better understand what I encounter as part of a large educational organization. Researching leadership practices and dissecting policy has allowed me to become more insightful and cautious. It has also made me confront and evaluate my own leadership, both philosophically and in practice. The dissertation process provided a mirror for me to reflect on my own leadership. It provided a road map for me to become the kind of leader I want to be. The process of the dissertation and self-reflection was uncomfortable and affirming at the same time. The dissertation has also given me a better understanding of policy and its origins. I became more astute at asking why, when looking at policy. The process has made me a more knowledgeable and mature investigator.

The cohort model fit me well. As I stated earlier, it is easy for me to put others first. I could not let people down, so I always made sure that I upheld my end of writing or research. I became a much more proficient writer and researcher during this time. I gained invaluable insight into what other leaders were doing to be successful and also what their struggles were. In our cohort of satellite class, we had individuals from all different professions. We tackled hot topic subjects and gained new insight through the

research lessons being taught. We also learned about each other's professions and cultures.

In the time since the cohort ended, life has been interesting. COVID-19 has changed education. No matter what side of the aisle that you sit on, it cannot be denied that the last few years have been challenging for educators. I feel the best thing that I can do is to serve our teachers, coaches, students, and administrators. I need to be there to help when needed, to fill roles that are left open, and to calm those in times of stress. Servant leadership has fit me well. This is not what I would have said about my leadership style ten years ago. What I have learned has sharpened me and molded me into a more effective leader.

The two years of summer classes on campus were beneficial for me. They allowed me to see many different perspectives from educators around the state. It was here that I was able to become reacquainted with statistics. Dr. Tim Wall was fantastic in his instruction, and I grasped the content very quickly. In every project that we did over the summers, I was the first to jump at the statistics section. It kept me from the uncomfortable task of writing and allowed my group to stay away from what most felt was the uncomfortable part of statistics. That was a mistake on my part, however, because I was not ready to write on my own when it was time.

The reason I made it to this point in the program is the unyielding grace and mercy of so many people. It is humbling. When I interviewed for the program, a common theme that I heard was to build a diverse cohort. I met many principals, superintendents, teachers, managers, and seekers along the way. From my perspective, the aim of the ELPA program was met. I encounter professionals from the program constantly. They

exhibit the best characteristics: they are kind, thoughtful, and hard-working leaders. This exercise in determination, toil, and enlightenment has been well worth the time and effort. The program had a positive impact on me.

VITA

Alan Hull was born in Iowa City in 1962. He is the son of Mary Kay and Wayne Hull. Alan is a first-generation college graduate. He acquired his BA in Communications from the University of Iowa and a MS in Physical Education and Sport Science from The University of Central Missouri.

Hull spent his entire childhood in Iowa City and eventually attended The University of Iowa as a wrestling athlete. He worked various jobs in the construction industry to help pay for school and athletic endeavors. After college he began coaching wrestling in his hometown. He owned and operated a construction company for 20 years before devotion his time exclusively to education. He is currently an athletic administrator at a large suburban high school.

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Tables

Table 23. *Overall proportions of non-MSIP top four finishes 2013-2022*

Category	Proportions
Overall	0.2990
Men	0.2821
Women	0.3206

Table 24. *Pre-policy proportions of non-MSIP top four finishes by sex*

Category	Proportions
Men	0.2946
Women	0.3279

Table 25. *Post-policy proportions of non-MSIP schools placing in the top four*

Category	Proportions
Overall	0.2931
Men	0.2820
Women	0.3042

Table 26. *Test of significance for difference between proportions*

Category	Sample 1 %	N1	Sample 2 %	N2	Z	P	Result
All	.31128	1820	.29600	700	0.7488	.4593	-
Men	.29461	1076	.24850	368	.80258	.28914	-
Women	.32796	744	.30422	332	.7707	.4431	-

Table 27. *Test of significance for difference between proportions by sport*

Sport	Pre-Policy /N1	Post-Policy/N2	Z	P	+/-
Men's XC	.2604 / 96	.2750 / 40	-0.1759	.85716	-
Women's XC	.2500 / 96	.3250 / 40	-0.8955	.36821	-
Football	.2152 / 144	.2083 / 48	0.1010	.92034	-
Women's Golf	.5000 / 32	.6458 / 48	-1.2977	.19360	-
Men's Soccer	.4895 / 96	.3750 / 32	1.1253	.25848	-
Women's Softball	.0729 / 96	.0750 / 40	0.0428	.96180	-
Men's Swim	.2500 / 36	.3125 / 16	-0.4690	.63830	-
Women's Tennis	.0641 / 48	.5833 / 24	0.1696	.86502	-
Volleyball	.4167 / 96	.3500 / 40	0.7244	.47152	-
Women's BB	.1833 / 120	.1666 / 60	0.2763	.77948	-
Men's BB	.2338 / 124	.3333 / 60	-1.4315	.15272	-
Women's Swim	.1250 / 32	.2083 / 24	-0.8400	.40090	-

Wrestling	.1071 / 112	.1875 / 32	-1.2130	.22628	-
Baseball	.2333 / 120	.0833 / 48	2.2417	.02510	+
Men’s Golf	.4895 / 96	.4000 / 40	0.9537	.34212	-
Women’s Soccer	.6304 / 92	.4687 / 32	1.6007	.10960	-
Women’s TF	.2500 / 116	.2750 / 40	-0.3212	.75656	-
Men’s TF	.15833 / 120	.3125 / 48	-2.2469	.02444	+
Men’s Tennis	.6042 / 48	.5000 / 24	0.8418	.40090	-

IMAGES

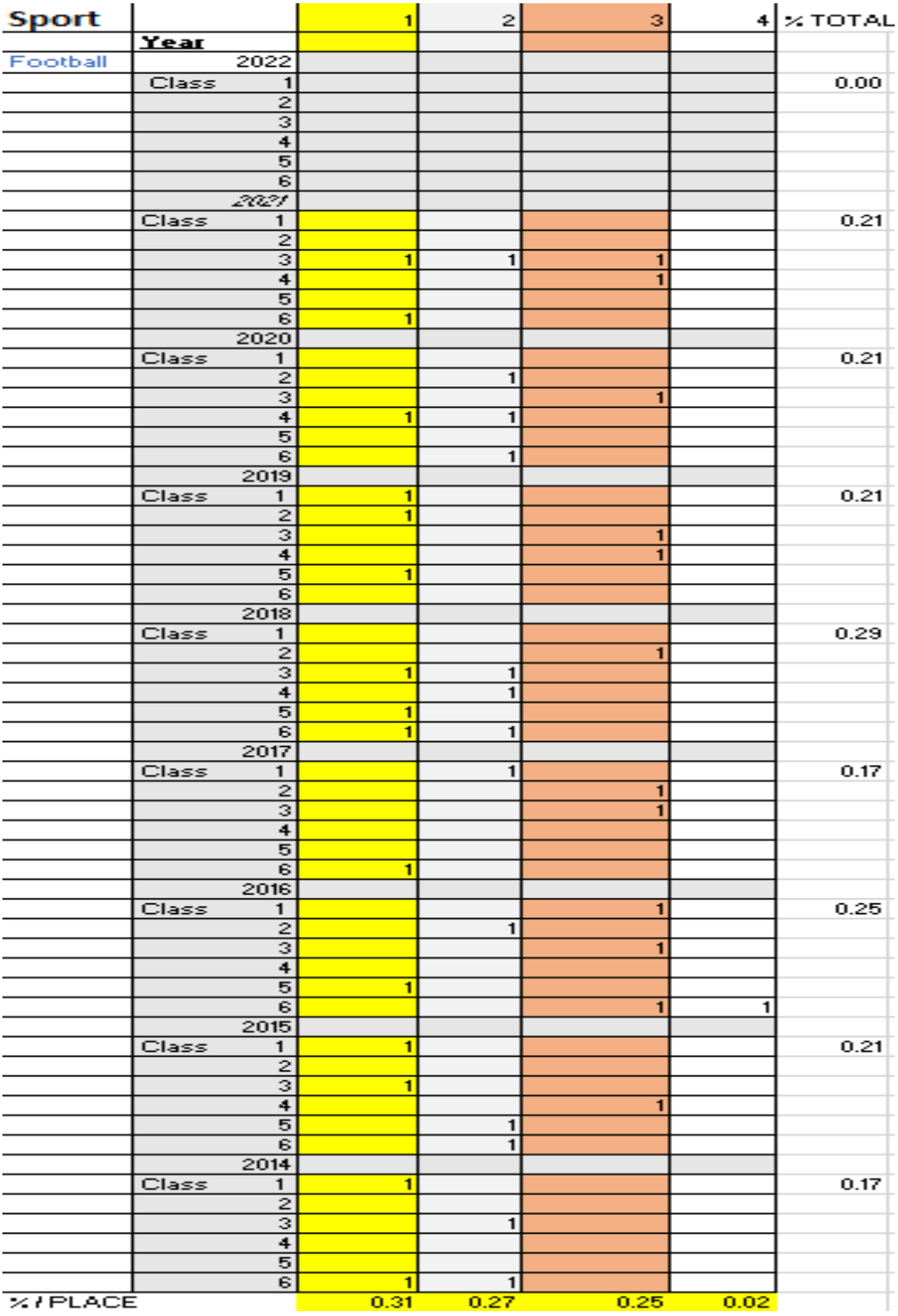
Image 2. Men's Cross Country

Sport		1	2	3	4	
	Year					
BXC	2022					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2021					
	Class 1				1	0.20
	2					
	3				1	
	4			1		
	5				1	
	6					
	2020					
	Class 1	1				0.35
	2	1				
	3	1	1		1	
	4				1	
	5		1			
	6					
	2019					
	Class 1			1		0.13
	2					
	3					
	4		1			
	5					
	6					
	2018					
	Class 1	1				0.25
	2				1	
	3					
	4	1	1			
	5					
	6					
	2017					
	Class 1				1	0.25
	2				1	
	3				1	
	4				1	
	5					
	6					
	2016					
	Class 1		1			0.19
	2					
	3				1	
	4	1				
	5					
	6					
	2015					
	Class 1		1	1		0.38
	2	1				
	3			1	1	
	4		1			
	5					
	6					
	2014					
	Class 1	1				0.38
	2	1	1			
	3		1	1		
	4		1			
	5					
	6					
% / PLACE		0.26	0.29	0.15	0.35	
all years						

Image 3. Women's Cross Country

Sport		1	2	3	4	
	Year					
GXC	2022					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2021					
	Class 1			1		0.35
	2		1		1	
	3	1	1			
	4					
	5		1	1		
	6					
	2020					
	Class 1	1	1			0.30
	2			1		
	3	1				
	4		1	1		
	5					
	6					
	2019					
	Class 1			1		0.19
	2		1			
	3	1				
	4					
	5					
	6					
	2018					
	Class 1	1			1	0.19
	2				1	
	3					
	4					
	5					
	6					
	2017					
	Class 1			1		0.13
	2					
	3			1		
	4					
	5					
	6					
	2016					
	Class 1	1			1	0.31
	2				1	
	3		1	1		
	4					
	5					
	6					
	2015					
	Class 1		1			0.38
	2				1	
	3		1	1	1	
	4			1		
	5					
	6					
	2014					
	Class 1			1		0.31
	2			1		
	3			1	1	
	4	1				
	5					
	6					
% / PLACE		0.21	0.26	0.38	0.24	

Image 4. Football



Sport		1	2	3	4	% TOTAL
	Year					
Football	2022					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2021					
	Class 1					0.21
	2					
	3	1	1	1		
	4			1		
	5					
	6	1				
	2020					
	Class 1					0.21
	2		1			
	3			1		
	4	1	1			
	5					
	6		1			
	2019					
	Class 1	1				0.21
	2	1				
	3			1		
	4			1		
	5	1				
	6					
	2018					
	Class 1					0.29
	2			1		
	3	1	1			
	4		1			
	5	1				
	6	1	1			
	2017					
	Class 1		1			0.17
	2			1		
	3			1		
	4					
	5					
	6	1				
	2016					
	Class 1			1		0.25
	2		1			
	3			1		
	4					
	5	1				
	6			1	1	
	2015					
	Class 1	1				0.21
	2					
	3	1				
	4			1		
	5		1			
	6		1			
	2014					
	Class 1	1				0.17
	2					
	3		1			
	4					
	5					
	6	1	1			
% / PLACE		0.31	0.27	0.25	0.02	

Image 5. Women's Golf

Sport		1	2	3	4	
	Year					
G Golf	2022					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2021					
	Class 1	1	1			0.50
	2	1	1		1	
	3	1		1		
	4	1				
	5					
	6					
	2020					
	Class 1	1				0.50
	2	1	1	1		
	3		1		1	
	4	1	1			
	5					
	6					
	2019					
	Class 1	1	1	1		0.63
	2	1	1			
	3					
	4					
	5					
	6					
	2018					
	Class 1	1	1	1		0.75
	2	1	1	1		
	3					
	4					
	5					
	6					
	2017					
	Class 1	1	1	1		0.75
	2	1	1	1		
	3					
	4					
	5					
	6					
	2016					
	Class 1	1	1	1		0.63
	2	1		1		
	3					
	4					
	5					
	6					
	2015					
	Class 1	1	1	1	1	0.63
	2		1			
	3					
	4					
	5					
	6					
	2014					
	Class 1	1	1	1	1	0.50
	2					
	3					
	4					
	5					
	6					
% / PLACE		0.85	0.75	0.55	0.20	
all years						

Image 6. Men's Soccer

Sport		1	2	3	4	% TOTAL
	Year					
B Soccer	2022					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2021					
	Class 1	1	1			0.31
	2	1				
	3					
	4	1		1		
	5					
	6					
	2020					
	Class 1		1	1		0.44
	2	1		1		
	3		1	1		
	4		1			
	5					
	6					
	2019					
	Class 1	1	1		1	0.50
	2	1	1	1		
	3				1	
	4	1				
	5					
	6					
	2018					
	Class 1	1	1		1	0.50
	2	1			1	
	3					
	4	1	1	1		
	5					
	6					
	2017					
	Class 1	1	1		1	0.50
	2	1	1			
	3					
	4	1	1	1		
	5					
	6					
	2016					
	Class 1	1		1		0.44
	2	1		1	1	
	3					
	4	1	1			
	5					
	6					
	2015					
	Class 1	1	1	1		0.50
	2	1		1		
	3			1		
	4		1	1		
	5					
	6					
	2014					
	Class 1	1		1	1	0.50
	2		1	1	1	
	3					
	4		1		1	
	5					
	6					
% / PLACE		0.59	0.50	0.47	0.28	

Image 7. Softball

Sport		1	2	3	4	% TOTAL
	Year					
SB	2022					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2021					
	Class 1			1		0.10
	2					
	3					
	4				1	
	5					
	6					
	2020					
	Class 1					0.05
	2	1				
	3					
	4					
	5					
	6					
	2019					
	Class 1					0.13
	2					
	3	1			1	
	4					
	5					
	6					
	2018					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2017					
	Class 1					0.13
	2					
	3		1		1	
	4					
	5					
	6					
	2016					
	Class 1					0.06
	2					
	3			1		
	4					
	5					
	6					
	2015					
	Class 1					0.13
	2					
	3		1		1	
	4					
	5					
	6					
	2014					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
% / PLACE		0.06	0.06	0.06	0.12	

Image 8. Men's Swim

Sport		1	2	3	4	% TOTAL
	Year					
BSWIM	2022					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2021					
	Class 1			1		0.38
	2	1		1		
	3					
	4					
	5					
	6					
	2020					
	Class 1		1			0.25
	2	1				
	3					
	4					
	5					
	6					
	2019					
	Class 1				1	0.38
	2	1	1			
	3					
	4					
	5					
	6					
	2018					
	Class 1					0.25
	2	1		1		
	3					
	4					
	5					
	6					
	2017					
	Class 1					0.13
	2		1			
	3					
	4					
	5					
	6					
	2016					
	Class 1			1		0.25
	2					
	3					
	4					
	5					
	6					
	2015					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2014					
	Class 1	1			1	0.50
	2					
	3					
	4					
	5					
	6					
% / PLACE		0.38	0.23	0.31	0.15	

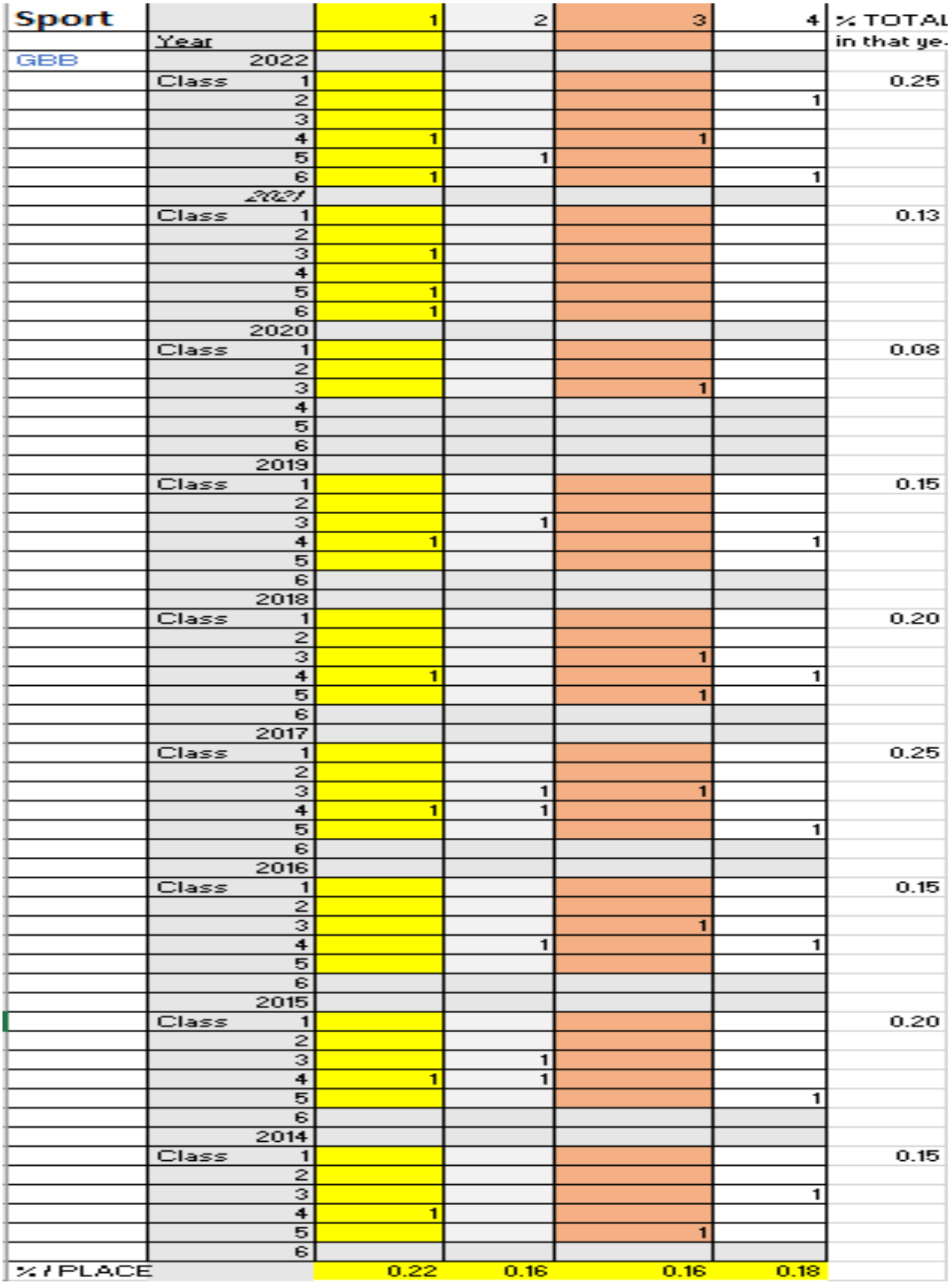
Image 9. Women's Tennis

Sport		1	2	3	4	% TOTAL
	Year					
G tennis	2022					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2021					
	Class 1		1		1	0.50
	2	1				
	3	1	1	1		
	4					
	5					
	6					
	2020					
	Class 1	1		1	1	0.67
	2	1	1	1		
	3	1	1			
	4					
	5					
	6					
	2019					
	Class 1	1	1	1	1	0.75
	2	1	1			
	3					
	4					
	5					
	6					
	2018					
	Class 1	1	1	1	1	0.63
	2			1		
	3					
	4					
	5					
	6					
	2017					
	Class 1	1	1	1	1	0.50
	2					
	3					
	4					
	5					
	6					
	2016					
	Class 1	1	1	1	1	0.50
	2					
	3					
	4					
	5					
	6					
	2015					
	Class 1	1	1	1		0.63
	2		1	1		
	3					
	4					
	5					
	6					
	2014					
	Class 1	1	1	1		0.63
	2		1	1		
	3					
	4					
	5					
	6					
% / PLACE		0.67	0.72	0.67	0.33	

Image 10. Volleyball

Sport		1	2	3	4	% TOTAL
	Year					
Volleyball	2022					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2021					
	Class 1					0.40
	2		1			
	3			1	1	
	4	1		1	1	
	5	1		1		
	6					
	2020					
	Class 1					0.30
	2	1	1			
	3				1	
	4				1	
	5			1	1	
	6					
	2019					
	Class 1				1	0.31
	2		1		1	
	3	1		1		
	4					
	5					
	6					
	2018					
	Class 1		1			0.31
	2			1		
	3		1	1		
	4			1		
	5					
	6					
	2017					
	Class 1	1		1		0.56
	2	1			1	
	3	1	1		1	
	4			1	1	
	5					
	6					
	2016					
	Class 1	1	1			0.44
	2	1			1	
	3	1		1		
	4				1	
	5					
	6					
	2015					
	Class 1					0.44
	2	1		1		
	3	1	1		1	
	4		1		1	
	5					
	6					
	2014					
	Class 1		1			0.44
	2			1		
	3	1	1	1	1	
	4		1			
	5					
	6					
% / PLACE		0.38	0.35	0.41	0.44	

Image 11. Women's basketball

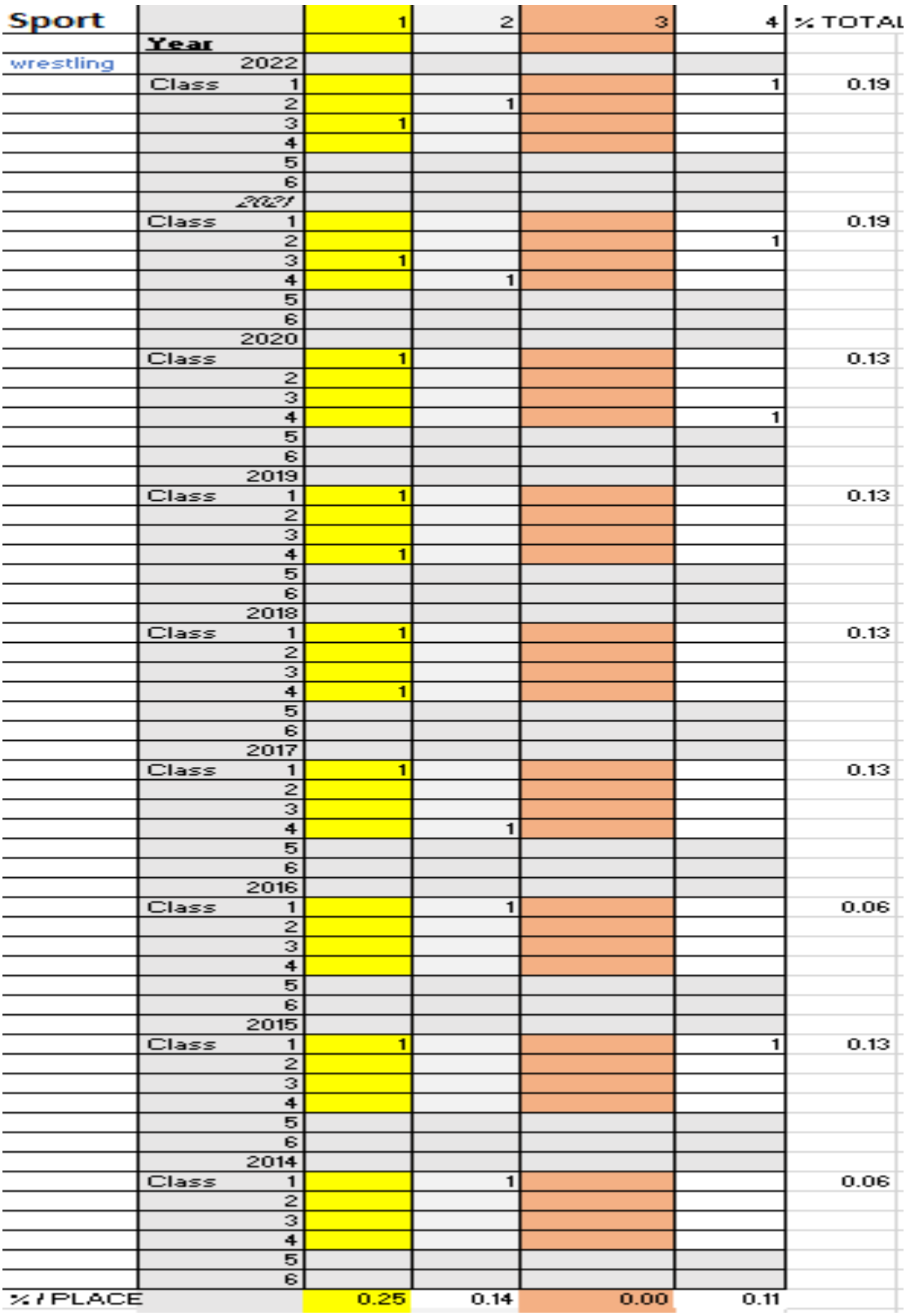


Sport		1	2	3	4	% TOTAL in that ye.
	Year					
GBB	2022					
	Class 1					0.25
	2				1	
	3					
	4	1		1		
	5		1			
	6	1			1	
	2021					
	Class 1					0.13
	2					
	3	1				
	4					
	5	1				
	6	1				
	2020					
	Class 1					0.08
	2					
	3			1		
	4					
	5					
	6					
	2019					
	Class 1					0.15
	2					
	3		1			
	4	1			1	
	5					
	6					
	2018					
	Class 1					0.20
	2					
	3			1		
	4	1			1	
	5			1		
	6					
	2017					
	Class 1					0.25
	2					
	3		1	1		
	4	1	1			
	5				1	
	6					
	2016					
	Class 1					0.15
	2					
	3			1		
	4		1		1	
	5					
	6					
	2015					
	Class 1					0.20
	2					
	3		1			
	4	1	1			
	5				1	
	6					
	2014					
	Class 1					0.15
	2					
	3				1	
	4	1				
	5			1		
	6					
% / PLACE		0.22	0.16	0.16	0.18	

Image 12. Men's basketball

Sport		1	2	3	4	% TOTAL
	Year					
BBB	2022					
	Class 1			1		0.42
	2				1	
	3				1	
	4		1		1	
	5		1	1	1	
	6	1			1	
	2021					
	Class 1			1		0.33
	2					
	3			1	1	
	4		1		1	
	5	1			1	
	6			1		
	2020					
	Class 1		1			0.17
	2					
	3	1				
	4					
	5					
	6					
	2019					
	Class 1			1		0.21
	2					
	3		1		1	
	4					
	5		1			
	6		1			
	2018					
	Class 1					0.15
	2					
	3	1			1	
	4					
	5		1			
	6					
	2017					
	Class 1					0.25
	2				1	
	3	1	1	1		
	4					
	5				1	
	6					
	2016					
	Class 1					0.30
	2					
	3	1	1		1	
	4			1		
	5	1		1		
	6					
	2015					
	Class 1					0.25
	2					
	3	1			1	
	4			1		
	5			1	1	
	6					
	2014					
	Class 1					0.25
	2	1				
	3	1	1		1	
	4			1		
	5					
	6					
% / PLACE		0.22	0.24	0.26	0.35	

Image 13. Wrestling



Sport		1	2	3	4	% TOTAL
	Year					
wrestling	2022					
	Class 1				1	0.19
	2		1			
	3	1				
	4					
	5					
	6					
	2021					
	Class 1					0.19
	2				1	
	3	1				
	4		1			
	5					
	6					
	2020					
	Class 1					0.13
	2					
	3					
	4				1	
	5					
	6					
	2019					
	Class 1	1				0.13
	2					
	3					
	4	1				
	5					
	6					
	2018					
	Class 1	1				0.13
	2					
	3					
	4	1				
	5					
	6					
	2017					
	Class 1	1				0.13
	2					
	3					
	4		1			
	5					
	6					
	2016					
	Class 1		1			0.06
	2					
	3					
	4					
	5					
	6					
	2015					
	Class 1	1			1	0.13
	2					
	3					
	4					
	5					
	6					
	2014					
	Class 1		1			0.06
	2					
	3					
	4					
	5					
	6					
% / PLACE		0.25	0.14	0.00	0.11	

Image 14. Women's swimming

Sport			1	2	3	4	% TOTAL
	Year						
GSWIM		2022					
	Class	1				1	0.25
		2		1			
		3					
		4					
		5					
		6					
		2021					
	Class	1	1		1		0.25
		2					
		3					
		4					
		5					
		6					
		2020					
	Class	1				1	0.13
		2					
		3					
		4					
		5					
		6					
		2019					
	Class	1		1			0.38
		2			1	1	
		3					
		4					
		5					
		6					
		2018					
	Class	1			1		0.13
		2					
		3					
		4					
		5					
		6					
		2017					
	Class	1					0.00
		2					
		3					
		4					
		5					
		6					
		2016					
	Class	1					0.00
		2					
		3					
		4					
		5					
		6					
		2015					
	Class	1					0.00
		2					
		3					
		4					
		5					
		6					
		2014					
	Class	1					0.00
		2					
		3					
		4					
		5					
		6					
% / PLACE			0.07	0.14	0.21	0.21	

Image 15. Baseball

Sport		1	2	3	4	% TOTAL
	Year					
Baseball	2022					
Class	1	1				0.13
	2					
	3	1	1			
	4					
	5					
	6					
	2021					
	Class	1				0.04
	2					
	3	1				
	4					
	5					
	6					
	2020					
	Class	1				0.00
	2					
	3					
	4					
	5					
	6					
	2019					
	Class	1				0.30
	2					
	3			1		
	4	1	1	1		
	5	1				
	6					
	2018					
	Class	1	1			0.20
	2					
	3					
	4		1			
	5	1			1	
	6					
	2017					
	Class	1				0.15
	2				1	
	3					
	4		1			
	5			1		
	6					
	2016					
	Class	1	1			0.25
	2	1		1		
	3			1		
	4	1				
	5					
	6					
	2015					
	Class	1				0.15
	2	1				
	3			1		
	4					
	5	1				
	6					
	2014					
	Class	1	1			0.35
	2	1				
	3	1	1			
	4	1	1	1		
	5					
	6					
% / PLACE		0.33	0.21	0.17	0.05	

Image 16. Men's golf

Sport		1	2	3	4	% TOTAL
	Year					
B Golf	2022					
	Class 1					0.45
	2		1			
	3	1	1			
	4		1		1	
	5	1	1	1	1	
	6					
	2021					
	Class 1					0.35
	2					
	3	1	1		1	
	4	1	1			
	5	1		1		
	6					
	2020					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2019					
	Class 1					0.63
	2	1	1	1		
	3	1	1	1	1	
	4		1	1		
	5					
	6					
	2018					
	Class 1				1	0.56
	2	1	1			
	3	1	1	1	1	
	4		1	1		
	5					
	6					
	2017					
	Class 1					0.31
	2			1		
	3		1		1	
	4	1		1		
	5					
	6					
	2016					
	Class 1					0.35
	2	1	1			
	3	1	1		1	
	4		1	1		
	5					
	6					
	2015					
	Class 1					0.38
	2			1	1	
	3	1	1		1	
	4		1			
	5					
	6					
	2014					
	Class	1	1			0.63
	2	1	1			
	3	1		1	1	
	4		1	1	1	
	5					
	6					
% / PLACE		0.50	0.62	0.38	0.35	

Image 17. Women's soccer

Sport		1	2	3	4	% TOTAL
	Year					
G Soccer	2022					
	Class 1	1	1			0.38
	2	1				
	3				1	
	4	1	1			
	5					
	6					
	2021					
	Class 1	1	1	1	1	0.56
	2	1				
	3				1	
	4	1	1	1		
	5					
	6					
	2020					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2019					
	Class 1	1	1		1	0.50
	2	1	1		1	
	3	1				
	4		1			
	5					
	6					
	2018					
	Class 1	1	1			0.38
	2	1	1		1	
	3		1			
	4					
	5					
	6					
	2017					
	Class 1	1	1	1		0.56
	2	1	1	1	1	
	3		1			
	4			1		
	5					
	6					
	2016					
	Class 1	1	1	1	1	0.70
	2	1	1	1	1	
	3	1		1	1	
	4	1	1		1	
	5					
	6					
	2015					
	Class 1	1	1	1	1	0.75
	2	1	1	1	1	
	3	1			1	
	4	1		1		
	5					
	6					
	2014					
	Class 1	1	1	1	1	0.75
	2	1		1	1	
	3	1	1			
	4					
	5					
	6					
% / PLACE		0.77	0.65	0.42	0.52	

Image 18. Women's track and field

Sport		1	2	3	4	% TOTAL
	Year					
GTF	2022					
	Class 1		1			0.30
	2			1		
	3	1		1		
	4				1	
	5	1				
	6					
	2021					
	Class 1	1				0.25
	2	1				
	3					
	4	1		1		
	5	1				
	6					
	2020					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2019					
	Class 1			1		0.30
	2				1	
	3	1	1	1		
	4				1	
	5					
	6					
	2018					
	Class 1					0.25
	2					
	3	1	1	1	1	
	4	1				
	5					
	6					
	2017					
	Class 1				1	0.20
	2	1				
	3		1			
	4		1			
	5					
	6					
	2016					
	Class 1		1			0.30
	2	1	1			
	3		1	1		
	4	1				
	5					
	6					
	2015					
	Class 1	1				0.25
	2	1			1	
	3	1				
	4			1		
	5					
	6					
	2014					
	Class 1				1	0.15
	2	1				
	3				1	
	4					
	5					
	6					
% / PLACE		0.33	0.02	0.21	0.21	

Image 19. Men's track and field

Sport		1	2	3	4	% TOTAL
	Year					
BTF	2022					
	Class 1	1				0.40
	2		1	1	1	
	3	1	1		1	
	4				1	
	5					
	6					
	2021					
	Class 1			1	1	0.35
	2	1			1	
	3		1		1	
	4			1		
	5					
	6					
	2020					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2019					
	Class 1					0.15
	2				1	
	3	1	1			
	4					
	5					
	6					
	2018					
	Class 1			1		0.20
	2	1				
	3	1	1			
	4					
	5					
	6					
	2017					
	Class 1					0.20
	2	1			1	
	3	1				
	4					
	5				1	
	6					
	2016					
	Class 1					0.15
	2		1			
	3	1				
	4					
	5		1			
	6					
	2015					
	Class 1				1	0.15
	2					
	3		1			
	4					
	5			1		
	6					
	2014					
	Class 1					0.10
	2			1		
	3					
	4					
	5				1	
	6					
% / PLACE		0.23	0.20	0.15	0.28	

Men's tennis

Sport		1	2	3	4	% TOTAL
	Year					
B tennis	2022					
	Class 1				1	0.21
	2		1	1		
	3	1		1		
	4					
	5					
	6					
	2021					
	Class 1	1	1			0.33
	2	1				
	3	1				
	4					
	5					
	6					
	2020					
	Class 1					0.00
	2					
	3					
	4					
	5					
	6					
	2019					
	Class 1	1	1	1		0.63
	2		1	1		
	3					
	4					
	5					
	6					
	2018					
	Class 1	1	1	1		0.50
	2		1			
	3					
	4					
	5					
	6					
	2017					
	Class 1	1	1	1		0.50
	2			1		
	3					
	4					
	5					
	6					
	2016					
	Class 1	1	1	1		0.50
	2	1				
	3					
	4					
	5					
	6					
	2015					
	Class 1	1	1	1		0.50
	2	1				
	3					
	4					
	5					
	6					
	2014					
	Class 1	1	1	1		0.63
	2	1		1		
	3					
	4					
	5					
	6					
% / PLACE		0.72	0.56	0.61	0.06	