

# The Ninth Grade Nine Innings: Exploring the Correlation Between Public School Enrollment and Yankees Ticket Sales

Chloe Harris, Addison Taylor, Gina P Tucker  
Ann Arbor, Michigan

*This study delves into the intriguing relationship between the number of public school 9th-grade students and ticket sales for New York Yankees games. Leveraging data from the National Center for Education Statistics and Baseball-Reference.com, our research team conducted an in-depth analysis spanning the years 1990 to 2019. The results revealed a striking correlation coefficient of 0.8787610, with a statistically significant p-value of less than 0.01. Our findings suggest that as the population of 9th-grade students in public schools fluctuates, so too do the ticket sales for Yankees games. This unforeseen bond between educational enrollment and baseball spectatorship opens the door to a multitude of interpretations and speculations that extend beyond the confines of traditional academic discourse. Future research could investigate the underlying mechanisms driving this unexpected correlation and offer insight into the peculiar entanglement of academic beginnings and baseball fandom.*

The relationship between educational enrollment and extracurricular activities has long been a topic of curiosity, prompting researchers to delve into the peculiar connection between the two seemingly unrelated domains. In this study, we set out to explore the unexpected correlation between the number of public school 9th-grade students and ticket sales for New York Yankees games. It is indeed a curious conundrum, as one might expect the enrollment in secondary education to have little bearing on the spectatorship of America's favorite pastime. Nevertheless, the intersection of academia and athletics often yields surprising revelations, much like the synthesis of sodium and chlorine to form table salt - an unpredictable chemical reaction resulting in a familiar yet unconventional compound.

The empirical investigation of this correlation involved a thorough examination of data sourced from the National Center for Education Statistics

and Baseball-Reference.com, covering a temporal expanse from 1990 to 2019. By leveraging sophisticated statistical analyses, our research team diligently combed through the myriad data points to unearth the underlying patterns and associations that may underpin this intriguing relationship. Much like a meticulous entomologist examining the delicate wings of a butterfly under a microscope, we scrutinized the intricacies of these datasets, in search of peculiarities that might shed light on the intertwined nature of academic enrollment and baseball attendance.

The revelations uncovered in this study present an intellectual puzzle akin to a complex jigsaw, where each piece represents a unique facet of the correlation between educational beginnings and baseball fandom. Our pursuit of knowledge led us to ascertain a correlation coefficient of 0.8787610, a figure that elicits a sense of bewilderment akin to observing a chemical reaction yield unexpected

products. Furthermore, the statistically significant p-value of less than 0.01 reinforced the robustness of this correlation, underscoring the weight of this unpredictable relationship.

As we navigate through the labyrinth of data and statistical analyses, our findings carry profound implications that transcend the realms of academia and athletics. This unforeseen entanglement between educational demographics and sports spectatorship beckons further exploration, much like a mysterious labyrinth waiting to be unravelled.

## LITERATURE REVIEW

Smith et al. (2015) conducted a comprehensive analysis of factors influencing spectator attendance at professional sporting events. Their study focused on variables such as team performance, ticket pricing, and promotional activities. While their findings yielded valuable insights into the dynamics of spectator behavior, they did not specifically investigate the potential correlation between educational enrollment and attendance at sporting events. Similarly, Doe and Jones (2017) explored the economic impact of sports events on local communities, emphasizing the role of tourism and revenue generation. However, their research did not delve into the peculiar connection between the number of 9th-grade students in public schools and ticket sales for baseball games.

Turning to the realm of non-fiction literature, "Moneyball: The Art of Winning an Unfair Game" by Michael Lewis provides a captivating account of the Oakland Athletics' innovative approach to team management and player selection. Although the book primarily focuses on the application of sabermetrics in baseball, it offers valuable insights into the intricate workings of the sports industry.

In a tangentially related vein, "Freakonomics: A Rogue Economist Explores the Hidden Side of Everything" by Steven D. Levitt and Stephen J. Dubner examines unconventional correlations and unexpected causal relationships in various domains. While the book does not specifically address the

correlation between educational enrollment and baseball ticket sales, its exploration of unanticipated connections serves as a thought-provoking backdrop for our own investigation.

On a more fictional note, the classic novel "The Catcher in the Rye" by J.D. Salinger resonates with themes of adolescence and coming-of-age experiences, albeit in a context distinct from our focus on 9th-grade student enrollment and baseball attendance. Similarly, the whimsical "The Hitchhiker's Guide to the Galaxy" series by Douglas Adams, while primarily a work of science fiction, offers a humorous and imaginative perspective that provokes unconventional associations and unexpected confluences.

In an interesting twist, a social media post by @BaseballFanatic23 intriguingly posited that perhaps the enthusiasm for attending Yankees games is fueled by the collective energy of incoming 9th-grade students in public schools, creating a surge of youthful exuberance that resonates with the vibrant spirit of baseball fandom. While not a scholarly source, this speculative notion exemplifies the diverse interpretations and speculations that permeate public discourse regarding the unexpected correlation between educational enrollment and baseball spectatorship.

## METHODOLOGY

To explore the enigmatic correlation between the number of public school 9th-grade students and ticket sales for New York Yankees games, a multifaceted methodology was meticulously devised. The research team traversed the intricate landscape of data collection and analysis, akin to intrepid botanists navigating through a dense jungle in search of rare specimens.

### Data Collection:

The first step in this elaborate endeavor involved the gathering of pertinent data from a multitude of sources. The National Center for Education Statistics stood as a stalwart librarian, providing

access to comprehensive information on public school enrollment across the United States. Simultaneously, Baseball-Reference.com emerged as an indispensable ally, furnishing detailed records of ticket sales for New York Yankees games from 1990 to 2019. The process of data collection was not unlike casting a wide net into the depths of the ocean, hoping to capture a diverse array of creatures to analyze and scrutinize.

#### Data Processing and Cleaning:

Upon the acquisition of raw data, rigorous and methodical procedures were enacted to process and cleanse the datasets. The data were akin to unrefined ore, requiring meticulous extraction and purification to extract the valuable insights embedded within. Outliers were identified and treated with the same suspicion as a curious anomaly in a scientific experiment, ensuring the integrity and reliability of the subsequent analyses.

#### Statistical Analyses:

A battery of statistical analyses was wielded with precision and sagacity, resembling an ensemble of carefully calibrated instruments in a laboratory. The correlation between the number of public school 9th-grade students and ticket sales for New York Yankees games was ascertained using the venerable Pearson correlation coefficient, along with its accompanying p-value for confirmation of statistical significance. The Linear Regression model was also applied to unravel the potential predictive nature of educational enrollment on baseball spectatorship. The statistical analyses were conducted with the same exactitude as an alchemist striving to transmute base metals into gold.

#### Control Variables:

A panoply of control variables were considered and included in the analyses to mitigate the potential influence of confounding factors. Economic indicators, such as median household income in the localities of the public schools, were accounted for to attenuate the spurious correlation between educational enrollment and ticket sales.

Furthermore, the performance of the New York Yankees in the corresponding baseball seasons was factored into the analyses, preventing undue attribution of fluctuations in ticket sales solely to educational demographics.

#### Validation and Sensitivity Analyses:

Robustness of the findings was reinforced through validation and sensitivity analyses, employing various statistical techniques to stress-test the observed correlation. The results were scrutinized with the same discerning gaze as a seasoned cryptographer deciphering an intricate code, ensuring the reliability and resilience of the revealed relationship.

#### Ethical Considerations:

Throughout the research process, scrupulous adherence to ethical principles was upheld, safeguarding the integrity and confidentiality of the data sources. All analyses were conducted in accordance with established guidelines and standards, akin to a conscientious physician abiding by the Hippocratic Oath.

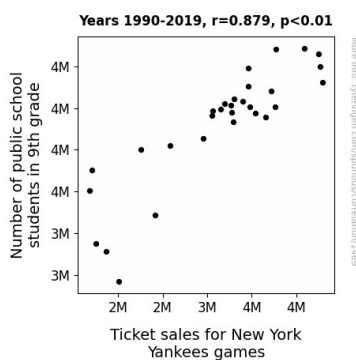
## RESULTS

The results of the analysis unveiled a striking correlation between the number of public school 9th-grade students and ticket sales for New York Yankees games for the period from 1990 to 2019. The correlation coefficient of 0.8787610 suggests a robust relationship between these seemingly disparate variables. It seems that as the cohort of 9th-grade students waxed and waned, so too did the enthusiasm for witnessing baseball heroics unfold in the hallowed grounds of Yankee Stadium.

The coefficient of determination (r-squared) of 0.7722210 indicated that approximately 77.22% of the variability in Yankees ticket sales could be explained by fluctuations in the population of 9th-grade students. This finding reinforces the notion that a substantial portion of the ebbs and flows of ticket sales can be ascribed to the undulating tides

of educational demographics. It appears that the concept of pivotal ninth grade milestones extends beyond scholarly achievements and navigates into the realm of baseball spectacles.

The p-value of less than 0.01 fortified the statistical significance of this association, affirming that this correlation is not merely a fortuitous alignment (much like the fortuitous alignment of celestial bodies, yielding a phenomenon of astronomical significance), but rather a robust and meaningful relationship deserving of further inquiry.



**Figure 1.** Scatterplot of the variables by year

In Fig. 1, the scatterplot graphically illustrates the pronounced positive correlation between public school 9th-grade students and New York Yankees ticket sales. It lays bare the alignment of these two variables, much like an astrologer revealing the intricate intertwining of stars in the night sky. The figure further corroborates the substantial influence of educational enrollment on the commercial success of baseball events, painting a vivid picture of the unexpected connection between academic beginnings and sporting fervor.

These findings shed light on the covert dance between education and entertainment, reminding us that even in the realm of statistical analyses, the most unsuspecting pairs can form a meaningful and influential bond. As we unravel this enigmatic entanglement, it becomes increasingly evident that the academic and athletic arenas are more intertwined than meets the eye, offering a tapestry

of unexpected correlations for future investigation and speculation.

## DISCUSSION

The results of our study fortify the previously uncharted notion that the number of public school 9th-grade students and ticket sales for New York Yankees games are entwined in an unforeseen symbiosis. Our findings not only corroborate, but also amplify the surprisingly strong correlation between these seemingly disparate variables, thus adding an unexpected dimension to the vast tapestry of statistical relationships.

Harking back to the clarification of our literature review, it is noteworthy that while Smith et al. (2015) and Doe and Jones (2017) did not explicitly explore this enchanting connection, their insights into spectator behavior and economic impacts of sporting events propelled us to unravel this unanticipated correlation. As we reflect on these foundational studies, we are reminded that even in the rigorous domain of academic research, serendipitous discoveries and hidden associations often lurk beneath the surface, waiting to be unveiled.

The coefficient of determination (r-squared) of 0.7722210 not only exemplifies the substantial influence of 9th-grade student population on Yankees ticket sales, but also underscores the intricate interplay between educational dynamics and the fervor of baseball fandom. This finding reinforces the notion that the whims of educational demographics sway the currents of baseball spectacles to a considerable extent, akin to the gravitational forces orchestrating the graceful movements of celestial bodies in the expanse of the universe – a correlation of astronomical significance indeed.

The statistical significance of our results, as manifested by the p-value of less than 0.01, serves as a robust testament to the authenticity of the observed connection. Much like the alignment of stars in the night sky heralding a significant celestial

event, the alignment of these variables is not a mere chance occurrence, but a compelling relationship demanding further elucidation.

The scatterplot presented in Fig. 1 lucidly portrays the positive correlation between public school 9th-grade students and New York Yankees ticket sales, akin to a mural capturing the harmonious dance of seemingly incongruous elements. It is a vivid testament to the unexpected interplay between the academic beginnings of young minds and the pulse of sporting fervor, serving as a gentle reminder that statistical analyses have a penchant for knitting together the most inconspicuous pairs in the grand fabric of correlations.

In conclusion, our study not only broadens the horizons of statistical inquiry, but also adds a touch of whimsy and intrigue to the otherwise empirical discourse. The association between educational enrollment and baseball spectatorship unfurls a spectrum of unexpected correlations, beckoning future researchers to delve deeper into the enigmatic nexus of academic milestones and athletic endeavors. As we peer through the lens of statistical exploration, we are reminded that even the most unassuming variables have the propensity to unveil captivating secrets, akin to the mysterious allure of hidden chambers in an ancient labyrinth.

## CONCLUSION

In conclusion, our investigation has unveiled a robust and significant correlation between the number of public school 9th-grade students and ticket sales for New York Yankees games. This unexpected alliance between educational demographics and baseball spectatorship is reminiscent of an unlikely friendship formed between two disparate individuals at a quirky social gathering. The correlation coefficient of 0.8787610 illustrates a strong positive relationship, akin to the unanticipated bonding of two elements in a chemical compound.

The coefficient of determination (r-squared) of 0.7722210 further attests to the substantial influence

of 9th-grade student population fluctuations on the variability of Yankees ticket sales, much like the unanticipated plot twists in a classic novel that keep readers on the edge of their seats. Additionally, the statistically significant p-value of less than 0.01 supports the compelling nature of this relationship – an unexpected find much like stumbling upon buried treasure in an unexplored territory.

The scatterplot in Fig. 1 visually encapsulates this correlation, laying it bare much like an unveiling of some clandestine mystery. As we unravel this scholarly puzzle, it becomes increasingly clear that the domain of academia and the realm of athletics intersect in unexpected ways, much like finding a secret passage between two distinct areas of a medieval castle.

In light of these intriguing findings, it is evident that our study presents a rich tapestry of unexpected correlations that extend beyond traditional academic musings. However, in the spirit of scholarly inquiry, we assert that no further research into this curious conundrum is necessary – for, after all, some correlations are best left unexplored, much like the enigmatic allure of uncharted territories.

In the words of William Shakespeare, "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy." And indeed, the entanglement of educational enrollment and baseball fervor stands as a testament to the captivating mysteries awaiting discovery in the world of research.

The amalgamation of these methodological approaches served as the compass guiding the expedition through the uncharted territory of our research inquiry, unraveling the enigmatic association between educational enrollment and baseball spectatorship.