# Nuclear Batter Up: Exploring the Home Run Connection between Global Count of Operating Nuclear Power Plants and Ticket Sales for Atlanta Braves Games

## Catherine Hart, Alexander Tanner, Gemma P Tate

## Academic Excellence Institute

In this study, we tackled the seemingly unrelated realms of nuclear power and baseball by investigating the potential correlation between the global count of operating nuclear power plants and ticket sales for Atlanta Braves games. As perplexing as it may seem, our research team delved into the statistics from Statista and Baseball-Reference.com, spanning the years 1975 to 2019, to unravel this enigma. Surprisingly, our findings revealed a striking correlation coefficient of 0.7197852 alongside a significant p-value of less than 0.01, prompting further investigation into the underlying mechanisms driving this quirky relationship. Our results not only add a whimsical twist to the discourse on nuclear energy and sports, but also spark contemplation on the interconnectedness of seemingly disparate phenomena.

The intersection of nuclear power and baseball may seem as incongruous as a pitcher stepping up to the plate, but as the adage goes, "you can't hit a home run if you don't swing." In this spirit, our research endeavors to explore the unexpected link between the global count of operating nuclear power plants and the ticket sales for Atlanta Braves games.

As peculiar as it may sound, the impulse to investigate this unconventional connection stemmed from a serendipitous observation made during our team's lunch break at the local diner. As we debated the merits of various condiments for our hot dogs, an intuitive colleague remarked, "I wonder if there's a correlation between nuclear power and baseball attendance. After all, both involve a certain level of power and potential for explosive action!" What started as a jest soon turned into a research question that captivated our curiosity and piqued our statistical acumen, leading to the endeavor at hand.

The study period, covering the years 1975 to 2019, was chosen to encapsulate a substantial timeframe that allowed for robust analysis and comprehensive exploration of the dynamics at play. Leveraging data from Statista and Baseball-Reference.com, our team meticulously compiled and organized ticket sales for Atlanta Braves games alongside the global count of operating nuclear power plants during the same period.

The initial inspection of the data revealed an intriguing pattern that defied conventional wisdom, compelling us to further scrutinize and interrogate the statistical relationship between these ostensibly unrelated domains. Our careful analysis unearthed a striking correlation coefficient of 0.7197852 and a p-value of less than 0.01, leaving us both amused and intrigued by the unexpected coherence between nuclear proliferation and baseball fervor.

This collaboration of statistical curiosity and a pinch of humor not only sheds light on the enigmatic connection between seemingly disparate phenomena but also adds a touch of levity to the often serious discourse surrounding nuclear energy. As we embark on this academic endeavor, we invite the scholarly community to join us in unraveling this quirky correlation and pondering the underlying mechanisms that might drive this unanticipated relationship.

Through this research, we aim to not only unveil the statistical significance of the nuclear and baseball nexus but also to challenge the boundaries of scientific inquiry and spark amusement in exploring the unlikeliest of connections. Just as a well-timed bunt can catch the opposing team off guard, so too can the unearthing of an unexpected correlation challenge our preconceived notions and bring a new dimension to the discourse on energy, entertainment, and statistical curiosity.

#### Review of existing research

The pursuit of uncovering the connection between the global count of operating nuclear power plants and ticket sales for Atlanta Braves games has led researchers to trawl through an assortment of literature that at times seems as diverse as the topic itself.

One of the seminal works in our exploration is Smith's "Nuclear Fission and Its Socioeconomic Implications," which initially appears to have no direct relevance to baseball affairs. However, a closer reading uncloaks an offhand reference to the potential influence of nuclear power on social activities, leaving us with a raised eyebrow and a heightened curiosity. Doe's "The Economics of Major League Baseball" provides a more explicit entry point into our inquiry, as it delves into the multifaceted factors affecting baseball attendance. While the author's focus remains on conventional economic and sociocultural determinants, an astute researcher might discern a glimmer of potential relevance to the unorthodox relationship under investigation.

Jones's "Power Play: The Global Politics of Nuclear Energy" may appear to be a rather somber treatise on international energy dynamics, but an oft-overlooked chapter slyly hints at the impact of nuclear power on unexpected social phenomena. Like a hidden ball trick in baseball, this subtle suggestion invites a deeper probe into the cryptic connection we seek to unravel.

Venturing beyond the hallowed halls of academia, we turn to non-fiction books that, for varied reasons, pique our interest in this whimsically perplexing endeavor. "Moneyball: The Art of Winning an Unfair Game" by Michael Lewis, while centered on baseball strategy, hints at the interplay of complex variables that may hold relevance to our seemingly far-fetched correlation. "The Physics of Baseball" by Robert K. Adair, though ostensibly dedicated to the physics of the beloved sport, prompts contemplation on the potential impact of external forces, possibly including nuclear propulsion, on the game.

In an unexpected turn, we also draw inspiration from fictional realms for insight into our investigative conundrum. "The Hitchhiker's Guide to the Galaxy" by Douglas Adams, while seemingly light years away from nuclear power and baseball, imparts the serendipitous spirit that pervades our pursuit, reminding us that truth can be stranger than fiction. "The Beach" by Alex Garland, a narrative seemingly distant from both nuclear physics and baseball diamonds, tantalizes with its exploration of unforeseen connections and unpredictable correlations, nudging us to embrace the unexpected with openminded curiosity.

Research endeavors such as these benefit from a healthy dose of real-world immersion. We have therefore taken to viewing television shows with potential relevance, such as "The Simpsons," which, in its whimsical portrayal of nuclear power at the Springfield Nuclear Power Plant, may offer subtle insights into the popular perceptions and cultural nuances surrounding the subject. "Friday Night Lights," a drama centered on high school football, serves as a delightful diversion, infusing our inquiries with the fervor and fanfare that characterizes the world of sports attendance.

As we wade through this eclectic array of literary and audiovisual sources, we are acutely aware of the unexpected twists and turns that await us within this multifaceted exploration. The journey to unraveling the enigmatic connection between nuclear power and baseball attendance is one that necessitates an open mind, a sense of humor, and an unwavering commitment to seeking knowledge in the unlikeliest of places.

#### Procedure

To unearth the potential connection between the global count of operating nuclear power plants and ticket sales for Atlanta Braves games, our research team embarked on a methodological odyssey that blended statistical rigor with a dash of whimsy. We sourced our data primarily from Statista and Baseball-Reference.com, scouring the internet like intrepid explorers searching for buried treasure. The years 1975 to 2019 were chosen to encapsulate a period of substantial historical significance, granting us the canvas upon which to paint our statistical tapestry.

In our quest for knowledge, our team wrangled with diverse sources and data formats, akin to brave knights facing a thicket of statistical challenges. Gleaning ticket sales for Atlanta Braves games involved meticulous extraction and organization of data, reminiscent of a gardener tending to a field of statistical flowers, albeit with less picturesque results. Similarly, the global count of operating nuclear power plants was collated and curated with scholarly fastidiousness, mirroring the efforts of a librarian archiving tomes of nuclear intricacies.

Upon the assemblage of our data trove, statistical analyses akin to alchemists transmuting raw materials into precious insights were employed. Leveraging the power of correlation coefficients and p-values, we sought to distill the essence of the relationship between nuclear power proliferation and the fervor for Braves baseball. Our calculations were subjected to rigorous scrutiny, akin to a discerning wine connoisseur evaluating the bouquet of a fine vintage, albeit with less intoxicating results. The revelation of a correlation coefficient of 0.7197852 and a pvalue of less than 0.01 proved to be the golden chalice, signaling the discovery of a significant statistical relationship.

In the spirit of scientific inquiry tempered with mirth, our research process incorporated moments of levity and scholarly camaraderie. Our statistical wanderings were enlivened by the occasional whimsical aside and lighthearted quip, reminiscent of jesters regaling the court with tales of statistical derring-do. The collective pursuit of unraveling this peculiar correlation served as a reminder that even in the most serious of academic endeavors, a sprinkle of humor can act as the yeast that leavens the loaf of analytical rigor.

In summation, our methodology combined the precision of rigorous statistical analyses with the camaraderie and humor reminiscent of a scholarly roundtable, in pursuit of understanding the unexpected nexus between nuclear energy and baseball fervor. As we unveil the findings of our research, we invite the academic community to join us in our appreciation of statistics with a side of whimsy.

#### Findings

The analysis of the data from 1975 to 2019 yielded a correlation coefficient of 0.7197852, indicating a moderately strong positive relationship between the global count of operating nuclear power plants and ticket sales for Atlanta Braves games. This unexpected connection shook the foundations of convention like a seismic wave, prompting contemplation of the intricate dynamics at play. The coefficient of determination (r-squared) of 0.5180908 further emphasized the notable degree of variability in the ticket sales that can be explained by the global count of

operating nuclear power plants, reinforcing the robust nature of the relationship.

The scatterplot depiction (see Fig. 1) offered a visual portrayal of the striking correlation between the two variables. Notably, the scatterplot resembled a baseball diamond, with the data points mirroring the layout of bases, reinforcing the whimsical nature of this correlation. This visualization not only elucidates the statistical association but also adds a playful touch to the otherwise austere world of academic research.

The p-value of less than 0.01 reinforced the statistical significance of the findings, indicating that the observed relationship is highly unlikely to have occurred by chance. In a world where chaos reigns, the reliability of this correlation provides a comforting sense of order, albeit in an unexpected arena.



Figure 1. Scatterplot of the variables by year

This unorthodox convergence of nuclear power and baseball attendance opens intriguing avenues for further exploration and underscores the interconnectedness of seemingly unrelated forces. It challenges us to ponder the underlying mechanisms driving this offbeat relationship and forces us to reconsider the boundaries of statistical inquiry. Just as a curveball can catch a batter off guard, so too does this correlation challenge our conventional statistical paradigms and infuse a sense of amusement into the scholarly pursuit of knowledge.

The findings not only enrich the discourse on the peculiar entanglement of nuclear energy and sports but also encourage a lighthearted perspective on the unpredictable delights of statistical exploration. This unexpected alliance serves as a reminder that in the vast tapestry of statistical phenomena, even the most disparate variables can find common ground, much like the unlikely camaraderie between a nuclear reactor and a baseball game.

#### Discussion

The Nexus of Nuclear Power and Baseball Attendance

In this study, we ventured into the uncharted territory of statistical inquiry to investigate the potential correlation between the global count of operating nuclear power plants and ticket sales for Atlanta Braves games. As we tentatively approached this peculiar confluence, reminiscent of the Everglades' gators unexpectedly finding themselves in the company of ballplayers, we were met with a surprising revelation. Our findings not only revealed a statistically significant relationship but also sparked whimsical musings on the intertwined nature of seemingly unrelated phenomena.

The correlation coefficient of 0.7197852, well beyond the conventional boundary of statistical significance, underpins the robustness of the relationship between the global count of operating nuclear power plants and ticket sales for Atlanta Braves games. This unexpected partnership serves as a testament to the quirky unpredictability of statistical inquiry, akin to a fanatical baseball fan suddenly discovering a penchant for quantum physics.

Our results echoed the subtle hints scattered across the annals of literature. Smith's subtle allusion to social activities influenced by nuclear power took on a newfound relevance, akin to a pop fly unexpectedly turning into a home run. Similarly, Jones's veiled reference to the impact of nuclear power on unexpected social phenomena revealed a parallel world of connection, much like a perfectly executed double play that leaves spectators in awe. These seemingly tangential literary cues, when juxtaposed against the surprising statistical revelation, offer a compelling testament to the interconnectedness of seemingly disparate realms.

The scatterplot depiction, resembling a whimsical baseball diamond, not only captured the statistical association but also infused a playful touch into the otherwise austere world of academic research. This unexpected visual resemblance resonates with the whimsical spirit of this correlation, akin to a ninth-inning grand slam that defies all rational expectation.

The statistical significance, underscored by a p-value of less than 0.01, serves as a delightful curveball in the realm of statistical inquiry, reinforcing the reliability of this serendipitous correlation. It is a reminder that statistical whimsy may occasionally prevail, much like a knuckleball that baffles both batter and pitcher alike.

In summary, our foray into the enigmatic connection between nuclear power and baseball attendance not only illuminates the unexpected alliance between two seemingly distant spheres but also infuses a sense of amusement into the scholarly pursuit of knowledge. It emphasizes the capricious spirit of statistical exploration, challenging traditional paradigms and forging unlikely camaraderie between variables, much like the incongruous camaraderie of a nuclear reactor and a baseball game. This quirky confluence opens avenues for further inquiry into the mysterious interplay of diverse forces, reminding us that in the realm of statistics, unexpected bonds can be formed, akin to the unlikeliest of baseball rallies.

### Conclusion

In conclusion, our research has uncovered a surprisingly robust and statistically significant correlation between the global count of operating nuclear power plants and ticket sales for Atlanta Braves games. The striking correlation coefficient of 0.7197852 has left us feeling like we hit a statistical home run, albeit with an unlikely set of variables. The scatterplot, resembling a baseball diamond, added a whimsical touch to our findings, reminding us that statistical exploration can indeed be as delightful as a seventh-inning stretch.

The p-value of less than 0.01 reinforced the reliability of this unanticipated relationship, reassuring us that this peculiar correlation is not a mere statistical curveball. This unexpected alliance challenges us to consider the unexplored dimensions of statistical inquiry and encourages a lighthearted perspective on the whimsical twists and turns of data analysis.

While our study sheds light on this quirky correlation, we acknowledge that further research into the underlying mechanisms driving this connection may deepen our understanding of the nuclear and baseball nexus. However, much like a pitcher looking to secure the final out, we assert that no additional research is needed in this area. The statistically significant correlation we've unearthed stands as a testament to the unpredictable delights of statistical exploration, and we invite fellow scholars to have a laugh, swing for the statistical fences, and embrace the quirky side of research.