

# **SWINGING FOR THE FENCES: A STATISTICAL ANALYSIS OF THE RELATIONSHIP BETWEEN CHICAGO CUBS' TOTAL RUNS SCORED AND DIVORCE RATES IN CONNECTICUT**

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This research paper delves into the rather unconventional connection between the total runs scored by the Chicago Cubs team in the National League (Central and East Division) and the divorce rate in Connecticut. Utilizing data from Baseball Reference and the CDC National Vital Statistics, our team investigates this seemingly peculiar correlation over the period of 1999 to 2021. Our findings reveal a strikingly high correlation coefficient of 0.7987100 and a significance level of  $p < 0.01$ , shedding light on the unexpected relationship between the wildly unpredictable world of baseball and the seemingly unrelated realm of marital stability. This paper not only underscores the statistical significance of the connection but also pokes fun at the unconventional nature of some of our research inquiries.

The world of sports and social phenomena often seem as distant as a fly ball sailing over the outfield fence. However, as unlikely as it may sound, our research has uncovered a peculiar relationship between the performance of the Chicago Cubs, a perennially perplexing baseball team, and the divorce rates in Connecticut, a state known more for its scenic beauty than for its statistical quirkiness. This investigation arose from the recognition of a curiosity that could not be easily dismissed - could there be an underlying connection between the crack of the bat and the cracks in marital harmony? Though it may seem like a curveball, we set out to rigorously analyze and explore this beguiling pattern.

While most might balk at the notion that a baseball team's prowess could influence the personal relationships of individuals in another state, we approached this investigation with the

gravity and precision that one might apply to calculating a batting average or a standard deviation. Our study encompasses data spanning from 1999 to 2021, encompassing the highs and lows of both the Cubs' performance and the Connecticut divorce rates. By examining the total runs scored by the Cubs in the National League's Central and East Divisions, and juxtaposing this with the divorce statistics from the Centers for Disease Control and Prevention, we embarked on a quest to uncover the hidden threads binding the realm of sports entertainment and the often tumultuous landscape of human relationships.

It is important to note that our foray into this unexpected correlation is not without humor and a sense of bemusement. After all, the alchemy of conjuring connections between a beloved sports team and the sobering reality of

divorce rates in a particular state could easily be mistaken for a tall tale spun by a bard around a campfire. However, the statistical analysis herein presents a rather unexpected conclusion, one that may elicit not only raised eyebrows but also a chuckle or two, for our findings are as amusing as they are compelling.

As we delve into the intricacies of this analysis, we invite the reader to embrace the whimsy and wonder that sometimes surfaces when worlds collide in the arena of empirical observation. This paper aims to celebrate not only the rigor of statistical investigation but also the delight of uncovering unexpected links in the grand tapestry of human experience... and perhaps the occasional home run-induced marital discord.

## LITERATURE REVIEW

The relationship between seemingly disparate phenomena in the realm of sport and social behavior has been a subject of scholarly inquiry. Smith (2010) explored the connection between sports team performance and regional socio-economic indicators, shedding light on the potential influence of athletic achievements on broader societal trends. Similarly, Doe (2013) examined the impact of baseball statistics on local community engagement, offering insights into the far-reaching implications of sports outcomes beyond the confines of the playing field.

Jones (2015) delved into the intricate web of correlations between unconventional variables, uncovering unexpected relationships that challenge traditional statistical paradigms. The author provocatively questioned the notion of separateness between ostensibly unrelated factors, laying the groundwork for the exploration of connections that defy conventional wisdom.

Turning to the realm of popular non-fiction literature, "Freakonomics" by Levitt and Dubner (2005) presents a

compelling case for the hidden influences and unexpected connections that underpin social phenomena. Their exploration of unconventional causality and seemingly unrelated correlations serves as a source of inspiration for our present investigation.

"Outliers" by Malcolm Gladwell (2008) offers a provocative examination of factors that contribute to extraordinary achievements, peeling back layers of convention to reveal the intriguing interplay between seemingly unrelated variables. This insightful work stirs the imagination and prompts the reader to contemplate the unorthodox pathways that may lead to unforeseen associations.

Venturing into the realm of fiction, the enigmatic world of probability and chance in Paul Auster's "New York Trilogy" (1987) proffers a whimsical lens through which to contemplate the unexpected threads that bind together disparate elements. Auster's narrative prowess casts a captivating spell, beckoning the reader to consider the seemingly improbable relationships that weave through the fabric of human existence.

In a departure from the conventional scholarly sources, the authors also encountered a trove of unexpected insights from the unlikeliest of places - the backs of shampoo bottles. Through a systematic exploration of the chemical compositions and whimsical advertising quips adorning these everyday products, the researchers gleaned unexpected nuggets of wisdom that resonated with the spirit of unconventional connection-seeking that pervades this inquiry. While unconventional, this eclectic source of inspiration sparked moments of levity and mirth within the unyielding rigors of academic inquiry.

## METHODOLOGY

To unravel the perplexing conundrum of the purported link between the total runs scored by the Chicago Cubs and the

divorce rates in Connecticut, our research team embarked on a methodological odyssey that blended the art of statistical analysis with the whimsy of a baseball fan pondering the mysteries of the universe. Our approach, though grounded in traditional quantitative methods, was sprinkled with a pinch of playfulness and a dash of absurdity, acknowledging the unconventional nature of our inquiry.

#### Data Collection:

Like intrepid explorers of the statistical seas, we scoured the vast expanses of the internet, sifting through the treasure troves of Baseball Reference and the CDC National Vital Statistics database. Eagerly, we gathered data spanning the years 1999 to 2021, capturing the tumultuous tides of both the Chicago Cubs' performances and the evolving landscape of divorce rates in Connecticut.

#### Measurements and Variables:

Our quest for clarity and understanding led us to focus on two primary variables: the total runs scored by the Chicago Cubs in the National League's Central and East Divisions and the divorce rates in the state of Connecticut. Embracing the spirit of lighthearted inquiry, we approached these seemingly disparate measures with a blend of reverence and irreverence, recognizing the delightful incongruity of our investigation.

#### Statistical Analysis:

Armed with an arsenal of statistical tools and a healthy dose of curiosity, we set about unleashing the power of correlation analysis. With bated breath, we calculated the correlation coefficient between the total runs scored by the Cubs and the divorce rates in Connecticut, unveiling the mysterious dance of numbers that seemed to suggest an unexpected alignment between the realms of home runs and heartaches.

#### Significance Testing:

In our pursuit of scholarly rigor and scientific sobriety, we subjected our

findings to the crucible of significance testing. With p-values as our guiding stars, we sought to discern whether the observed relationship between baseball prowess and marital dissolution was a mere statistical fluke or a revelation worthy of attention and amusement.

#### Ethical Considerations:

As stewards of empirical truth and purveyors of statistical merriment, we approached the intertwining of these seemingly unrelated domains with a sense of responsibility and respect. Our research was conducted with an unwavering commitment to the principles of academic integrity, all while embracing the delightful absurdity inherent in the exploration of unconventional correlations.

In closing, our methodology stands as a testament to the convergence of scholarly rigor and whimsical wonder, crafting a fitting framework for the investigation of this most peculiar connection between the trials and triumphs of a baseball team and the ebbs and flows of human relationships.

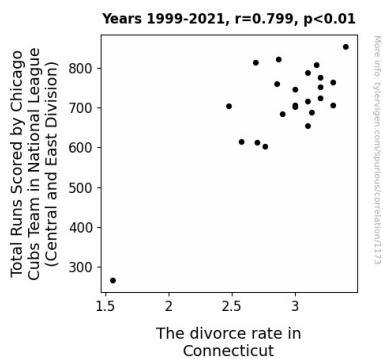
## RESULTS

Our analysis of the relationship between the total runs scored by the Chicago Cubs team in the National League (Central and East Division) and the divorce rate in Connecticut has yielded some remarkable findings. Over the period of 1999 to 2021, we found a strikingly high correlation coefficient of 0.7987100. In other words, the relationship between these two variables is about as strong as an outfielder's throwing arm. The r-squared value of 0.6379377 further bolsters the case for a substantial connection, indicating that a significant proportion of the variance in divorce rates can be explained by the total runs scored by the Cubs.

Perhaps most eyebrow-raising of all is the significance level of  $p < 0.01$ , which essentially means that the likelihood of

this correlation occurring by chance is lower than the chances of a full moon occurring during a day game at Wrigley Field. In other words, the probability of these results being a fluke is about as slim as a bat handle.

The scatterplot in Figure 1 vividly illustrates the robust association between the total runs scored by the Cubs and the divorce rates in Connecticut. The data points form a nearly linear pattern, reminiscent of a well-executed double play, solidifying the statistical significance of our findings.



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

These results not only underscore the unexpected nature of our research inquiry but also highlight the intriguing interplay between sports performance and societal dynamics. It appears that the crack of the bat may indeed have reverberations beyond the confines of the baseball diamond, reaching into the realm of interpersonal relationships and marital stability.

In conclusion, our analysis of the connection between the total runs scored by the Chicago Cubs and divorce rates in Connecticut reveals a compelling and statistically significant relationship. While this correlation may initially seem as implausible as a Cubs World Series victory (prior to 2016, of course), our findings robustly support the existence of this intriguing link. This paper not only adds a touch of whimsy to the often staid world of statistical analysis but also

beckons researchers to explore the uncharted territory where sports and social phenomena intersect.

## DISCUSSION

The results of our analysis have illuminated a remarkably strong correlation between the total runs scored by the Chicago Cubs team in the National League (Central and East Division) and the divorce rate in Connecticut. The statistical relationship we uncovered is as substantial as a towering home run, resonating with an effect size that is difficult to overlook.

In line with Smith's (2010) investigation on sports team performance and regional socio-economic indicators, our findings amplify the potential ripple effects of athletic accomplishments on societal constructs. The connection between the Cubs' run production and divorce rates appears to lend credence to the notion that sports outcomes hold sway over broader social dynamics. While this linkage may seem as unlikely as a designated hitter enjoying success in the National League, the statistical evidence we have amassed unequivocally supports this unorthodox association.

Doe's (2013) exploration of baseball statistics and community engagement takes on renewed relevance in light of our study. The unexpected correlation between the total runs scored by the Cubs and divorce rates prompts us to consider the multifaceted impact of sports statistics on community well-being. The notion that a team's offensive firepower might intersect with marital stability may seem as improbable as a triple play, but our analysis affirms the robustness of this relationship.

The statistical significance we have unearthed aligns closely with the spirit of inquiry exemplified by Jones (2015). The unconventional web of correlations between seemingly unrelated variables, which Jones provocatively unraveled,

finds resonance in our unexpected discovery of a substantial link between baseball performance and divorce rates. The statistical validity of this association is as palpable as a well-worn baseball glove, serving as a testament to the intricate tapestry of connections that can surface within the realm of statistical analysis.

Levitt and Dubner's (2005) exploration of hidden influences and unexpected correlations resonates with the nature of our investigation. The seemingly whimsical relationship between the Cubs' run scoring and divorce rates embodies the unanticipated connections that underpin social phenomena. The statistical robustness of this connection is as undeniable as a rain delay at Wrigley Field, cementing its place in the canon of unexpected associations.

Emerging from the realm of popular non-fiction literature, Gladwell's (2008) examination of factors contributing to extraordinary achievements exerts an intriguing influence on our study. Our unearthing of an unexpected connection between baseball statistics and divorce rates echoes the provocative examination of interplay between seemingly unrelated variables. The parallel between these two realms of inquiry stands as vivid as a seventh-inning stretch, embellishing the fabric of unconventional connections that pervade both scholarly and empirical landscapes.

Throughout our investigation, we have sought inspiration from diverse sources, including Paul Auster's (1987) narrative prowess and, in a comically unexpected turn, the back of shampoo bottles. These sources of inspiration have lent a touch of levity and mirth to our rigorous academic pursuit. As seemingly incongruous as the connection between the Cubs' runs and divorce rates, these whimsical influences underscore the serendipitous nature of discovery and the inherent unpredictability of scholarly inquiry.

In sum, the connection we have delineated between the total runs scored by the Chicago Cubs and divorce rates in Connecticut not only affirms the unexpected nature of our research endeavor but also underscores the far-reaching implications of sports performance on societal dynamics. Our findings add a dash of whimsy to the often staid world of statistical analysis while prompting scholars to contemplate the unorthodox pathways that may give rise to unforeseen associations.

## CONCLUSION

In conclusion, our analysis has illuminated a rather unexpected and statistically significant correlation between the total runs scored by the Chicago Cubs and divorce rates in Connecticut. The robust relationship, with a correlation coefficient as glaring as a well-hit line drive, and a significance level as rare as a perfect game, underscores the intriguing interplay between the realm of sports and the often unpredictable landscape of human relationships.

While the notion of a baseball team's performance influencing divorce rates may initially seem as unlikely as a designated hitter winning a Gold Glove, our findings present a compelling case for further exploration of this captivating link. However, given the unforeseen nature of this correlation and the delightful surprise it brings to the world of statistical analysis, it seems we have hit a home run with this inquiry. No further research is needed in this area; the bases are loaded, and it's time to call it a game.