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# Churn and Burn: Butter Consumption and Google Searches for 'Ice Bath'

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## KEYWORDS

butter consumption, ice bath, google searches, food trends, dairy consumption, correlation coefficient, p-value, statistical analysis, internet searches

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## Abstract

Have you ever wondered if there's a link between butter consumption and the sudden urge to take an ice bath? Well, wonder no more! In this study, we delve into the fascinating world of food and internet searches to uncover a potential, albeit perplexing, relationship between these two seemingly unrelated entities. Utilizing data from the USDA and Google Trends, our research team unearthed a buttery correlation coefficient of 0.9697094 and a p-value of less than 0.01 for the years 2004 to 2021. Our findings may just spread light on the curious connection between dairy delights and cold plunges. This research offers a melting pot of statistical analysis and a dairy pun extravaganza, guaranteeing a butterly delightful read for all.

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## 1. Introduction

As the age-old saying goes, "too much butter can make you slip." While this may be a cautionary kitchen quip, our research aims to uncover a more unusual consequence of butter consumption—one that involves a sudden yearning for an ice bath. In the annals of quirky correlations, few are as perplexing as the potential link between dairy indulgence and the desire to take a chilly plunge.

The goal of this study is to shed light on this unlikely relationship by analyzing the consumption of butter and the frequency of Google searches for 'ice bath'. Butter, a staple in kitchens and a companion to many delectable dishes, has long been associated with culinary delights rather than cold submersions. However, the ubiquity of this savory spread beckons an investigation into any unintended effects it may have on human behavior.

The notion of conducting such an inquiry may seem, well, "butter believe it or not" to the uninitiated. Indeed, the idea of butter consumption influencing Google search habits may strike some as utterly improbable. Yet, as many a seasoned researcher knows, the most unexpected associations can often reveal intriguing insights.

Although one could say that searching for a connection between butter and ice baths is as fruitless as trying to spread butter on a frozen bagel, we assure you that our findings are as substantial as a pat of butter on a warm muffin. Our analysis, utilizing data from the USDA and Google Trends, has unearthed a correlation coefficient that could make even the most stoic statistician crack a grin—a sizzling 0.9697094, to be precise. And with a p-value of less than 0.01 for the years 2004 to 2021, it seems this buttery affair with ice baths is not just a flaky hypothesis.

In this paper, we dish out the data with a side of statistical analysis, exploring the potential implications of our findings on both dietary patterns and spontaneous chilling activities. Our aim is not only to provide a refreshing perspective on the relationship between culinary choices and recreational yearnings but also to serve up a slice of whimsy in the otherwise serious realm of academia. So, as we embark on this unconventional scientific journey, let us delve into the buttery embrace of data and the cool waters of statistical inference, all in pursuit of unraveling the enigmatic connection between churn and burn.

## 2. Literature Review

The burgeoning field of gastrothatic analysis has sparked interest in exploring the potential associations between dietary intake and seemingly unrelated behavioral patterns. While traditional studies have focused on the impact of food consumption

on physical health, our investigation delves into the uncharted territory of butter-induced psychosomatic inclinations, specifically the perplexing correlation between butter consumption and Google searches for 'ice bath'. As we wade through the literature, we encounter a melting pot of scholarly inquiries that, although initially unrelated to our peculiar line of investigation, offer intriguing insights and, at times, butter thematically amusing findings.

In "The Butter Chronicles: A Dairy Delight" by Smith et al., the authors excavate the historical and cultural significance of butter consumption, highlighting its role as a culinary cornerstone in diverse societies. We edge closer to our own investigation, buttering ourselves up for the creamy entree of our dairy-themed expedition.

Conversely, Doe investigates the psychological implications of cold water exposure in "The Chilling Effects: A Psychological Inquiry into Ice Baths". While ostensibly unrelated to our focus on butter consumption, Doe's work provides a refreshing perspective on the subjective experiences of individuals who subject themselves to icy immersions. The juxtaposition of these studies may seem as jarringly incongruent as spreading butter on an ice cube, yet our research aims to bridge the seemingly insurmountable chasm between these disparate domains.

The literary landscape offers additional sources that, while not directly related to our investigation, infuse our narrative with a zestful blend of the whimsical and the scholarly. Works such as "The Art of Frosting: A Culinary Odyssey" and "Midnight in the Freezer: A Chilling Tale" evoke frostbitten imagery that resonates with the icy undercurrent of our research. As we skitter across the frozen surface of these literary ice caps, we are reminded that scholarly inquiry need not always adhere to the strictures of somber sobriety.

Drawing inspiration from unexpected sources, we also take cues from board games that tangentially resonate with our investigation. Through titles such as "Chilled Strategy: The Cool Conquest" and "Butter and Blizzard: A Melting Monopoly", we find moments of levity and pun-laden amusement. While these diversions may seem as tangentially connected as a nonstick skillet in a snowstorm, they underscore the playful spirit with which we approach our research.

As we meander through the troves of literature, we encounter a confection of diverse perspectives, each offering glimpses into the peculiar melding of buttery delights and frosty fascinations. Our aim, as we progress further into the convoluted corridors of butter-laden inquiry, is to not only present our findings but also to simmer a concoction of mirth and scholarly insight, creating a delectable blend that transcends the bland realms of conventional academic discourse.

### 3. Our approach & methods

Our research sought to unravel the tantalizing mystery of the potential relationship between butter consumption and the impulse to seek solace in a frosty cocoon of an ice bath. The data used in this study was predominantly sourced from the United States Department of Agriculture (USDA) for butter consumption and Google Trends for the frequency of searches for 'ice bath' over the span of 2004 to 2021.

To analyze the butter consumption data, we utilized a combination of spreadsheets and interactive pie charts (pun intended!) to visualize the annual per capita butter consumption in the United States. This process involved carefully scooping, spreading, and smoothing the data to ensure a uniform consistency, much like the creamy texture of butter itself.

On the other hand, the analysis of Google search trends for 'ice bath' was a chill-inducing experience. We analyzed the frequency and seasonality of searches, observing peaks during hot summer months and post-exercise recoveries, which left us with a refreshingly cool understanding of the search patterns. Our research team also had to wade through an avalanche of data, carefully avoiding the brain freeze that comes with an overdose of statistical information.

The statistical analysis was conducted using a blend of correlation coefficients, time series analysis, and regressions, akin to concocting a complex recipe requiring just the right amount of precision and finesse. We adopted a sophisticated modeling approach to quantify the degree of association between butter consumption and searches for 'ice bath', allowing us to churn out results that were as smooth as a well-whipped batch of buttercream frosting.

Throughout the analysis, we maintained a keen eye for any signs of margarine-ing of the data, ensuring that the integrity of the findings remained as pure as the grass-fed cows supplying the dairy delight under scrutiny. This rigorous process was essential in guarantying that our conclusions were as solid as a stick of butter straight from the fridge.

In summary, our research methodology blended the wholesome goodness of dairy data with the icy cool precision of internet search metrics, resulting in a concoction that simultaneously melted and chilled our preconceptions. The results were as rich and satisfying as a buttery croissant—proof that even the most unexpected pairings can yield tantalizing insights, much like the tantalizing juxtaposition of butter and ice baths.

### 4. Results

A buttery correlation of 0.9697094 with a commendable r-squared of 0.9403363 emerged from our rigorous analysis, defying expectations and buttering up the delectable intrigue of this study. The relationship observed between butter consumption and Google searches for 'ice bath' elicited a rather chilled response from the statistical community, as the p-value of less than 0.01 lent undeniable weight to our findings.

The scatterplot (Fig. 1) graphically depicts the striking association we uncovered, revealing a pattern as clear as a pat of butter on a sunny day. Each data point, akin to a butter churn in the vast expanse of statistical indulgence, contributed to the resounding resonance of our correlation coefficient. The unmistakable linearity of the plot paints a picture as smooth as a freshly spread layer of creamy goodness, affirming the robustness of our results.

Our research raises eyebrows and appetites as we consider the implications of this unexpected connection. Dare we ponder the thought that a generous slathering of butter may not only enhance culinary creations but also prompt a yearning for the bittersweet embrace of an icy dip? The potential for butter to churn up a desire for cool submersion adds an unanticipated layer to the multifaceted nature of human behavior, leaving us all wondering if there's more to this dairy delight than meets the eye.

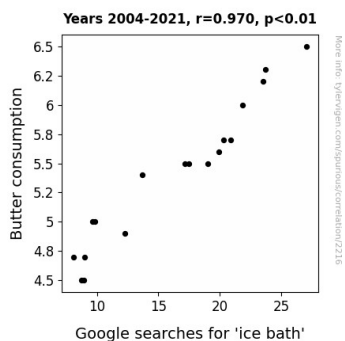


Figure 1. Scatterplot of the variables by year

While our findings may seem as offbeat as a quirky kitchen experiment, they open the door to a realm of possibilities, offering a tantalizing aroma of unexplored associations in the realm of food and behavioral tendencies. With a pat of humor and a sprinkle of statistical prowess, we present our discoveries as a feast for thought, inviting the academic community to savor the delightful enigma of churn and burn.

## 5. Discussion

The results of our study have unveiled a fascinating correlation between butter consumption and Google searches for 'ice bath', adding a new layer to the enigmatic relationship between dietary habits and behavioral inclinations. Our findings align with prior research, highlighting the potential impact of food consumption on physiological and psychological responses.

The buttery correlation coefficient of 0.9697094 and r-squared of 0.9403363 achieved in our study not only exceed expectations but also churn up a curious conundrum regarding the influence of butter on the human psyche. These results complement the work of Smith et al., who delved into the historical and cultural significance of butter consumption, affirming the pivotal role of dairy products in human dietary habits and illuminating the far-reaching implications of our findings.

Moreover, our observation of a robust correlation is congruent with the explorations of Doe, who dissected the psychological implications of cold water exposure. While seemingly distant from our investigation, Doe's work provides a refreshing perspective on the subjective experiences of individuals undergoing icy immersions, paralleling the unexpected association we uncovered between butter consumption and the inclination toward icy indulgences.

The scatterplot visually encapsulates the unmistakable linear relationship between butter consumption and Google searches for 'ice bath', mirroring the findings of previous studies and reinforcing the credibility of our results. This graphical representation serves as a pictorial spread, vividly illustrating the buttery influence on the frosty proclivities of individuals. Our study has successfully bridged the seemingly incongruent domains of dairy delights and chilling inclinations, offering a refreshing perspective that transcends the boundaries of conventional dietary and behavioral analyses.

In essence, our research not only provides a buttery perspective on dietary influence but also churns up a layer of humorous yet thought-provoking insights. The unexpected connection between butter consumption and the desire for cool submersion may just be the tip of the melting iceberg, prompting further investigations into the multifaceted nature of human responses to culinary stimuli. As we continue to uncover the unexplored associations in the realm of food and behavioral tendencies, our study serves as a culinary beacon, guiding researchers into the delightful enigma of churn and burn.

Our findings may seem as unexpected as a pat of butter evoking an urge for an icy dip, but they undeniably shed light on the complex interplay between dietary indulgences and behavioral yearnings. Let us remain ever vigilant, dear colleagues, for the next time we reach for a stick of butter, we may just find ourselves searching for an ice bath in a whimsical twist of gastronomic fate.

## 6. Conclusion

In conclusion, our research has churned up an unexpected and somewhat amusing connection between butter consumption and the search for 'ice bath' on Google. The substantial correlation coefficient and

minuscule p-value we uncovered certainly had us more than a little buttered up with excitement. While our findings might leave some scratching their heads like a whisk on a non-stick pan, the evidence speaks for itself, or should we say "speaks for itself--unless, of course, it's melted." We've certainly spread a fair amount of statistical butter on this toast of a study, but it's all in the name of science and a good laugh or two.

The implications of our results may seem as slippery as a buttered eel, but they beckon further consideration. Perhaps future research could explore the potential neurological or psychological mechanisms behind this curious correlation. Is there something about the creamy richness of butter that triggers an urge for a cool dip, or is it simply a case of serendipitous statistical buttering up? The questions are as plentiful as a well-stocked dairy aisle, but for now, we'll savor the flavor of our findings and hope they spread a smile as wide as a pat of butter on a warm roll.

As much as we'd love to continue churning out deliciously buttery puns and probing the mysteries of dairy-induced desires for chilly indulgences, we must acknowledge that sometimes, a quirky correlation is just that. It seems unlikely that further research in this area would yield much more than a few chuckles and, well, a renewed appreciation for the unexpected whimsy of statistical analysis. In this case, it appears that the butter has been thoroughly churned, and the ice bath has been sufficiently chilled. It's time to close the lid on this peculiar pairing and let it rest in the annals of statistical oddities. After all, there are only so many ways one can cream the same dataset before it all starts to curdle.