



Review

Chilling Out: Exploring the Relationship Between Air Pollution in Iowa City and Google Searches for 'Ice Bath'

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The notion of seeking relief from air pollution through ice baths may sound like a slippery slope, but our research team has delved into the frigid waters of the interplay between environmental conditions and online behavior. Leveraging data from the Environmental Protection Agency and Google Trends, we set out to investigate the potential link between air pollution levels in Iowa City and the frequency of searches for 'ice bath'. Our analysis revealed a striking correlation, with a coefficient of 0.8948560 and a p-value of less than 0.01 from the years 2004 to 2023. This unexpected relationship sheds light on the quirky ways in which individuals may seek respite from the pervasive effects of air pollution, serving as a chilling reminder of the multifaceted impacts of environmental factors on human behavior. In conclusion, our findings may leave one feeling as cool as a cucumber, as we uncover a rather chilling connection between air pollution and the impulse to plunge into an icy remedy.

In recent years, Iowa City, known for its thriving academic community and a charming blend of urban and natural landscapes, has been grappling with the pervasive issue of air pollution. Residents and visitors alike have been seeking creative remedies to combat the adverse effects of poor air quality. As the saying goes, when the going gets tough, the tough seek unconventional solutions. Enter the humble ice bath, an age-old remedy traditionally associated with athletic recovery and

invigoration, but in our study, seen through a chillingly different lens.

The idea of individuals turning to internet searches for 'ice bath' as a response to air pollution may seem as unusual as a snowman in the summer. However, our research aims to thaw out the skepticism surrounding this curious correlation. By harnessing the power of data analytics and drawing from the seemingly disparate realms of environmental science and internet search behavior, we plunge into uncharted

territory to explore the frosty relationship between air pollution levels in Iowa City and the frequency of 'ice bath' searches on Google.

In this paper, we present our findings from an in-depth analysis that will leave readers feeling as baffled as a polar bear in the Sahara. Our investigation has uncovered a more-than-coincidental link between air pollution and the penchant for plunging into icy waters - a connection that is cooler than the other side of the pillow.

Through our research, we hope to highlight the unexpected ways in which environmental factors can influence human behavior, reminding us that the human response to pollution is as diverse as the flavors in an ice cream parlor. So, buckle up, as we embark on an exhilarating journey that takes us from the smog-filled cityscape to the frigid depths of cyberspace, unraveling the chilling mystery behind the correlation between air pollution and the search for an icy escape.

Prior research

I. Serious-sounding studies on air pollution and online search behavior

In their seminal work, Smith and Doe (2008) examine the impacts of air pollution on public health and well-being, delving into the myriad ways in which individuals may respond to environmental stressors. Similarly, Jones et al. (2012) investigate patterns of online search behavior in relation to environmental concerns, shedding light on the information-seeking habits of the digital populace amidst pollution woes. These studies underscore the complex interplay between environmental factors and

human responses, laying the groundwork for our investigation into the chilling connection between air pollution in Iowa City and Google searches for 'ice bath'.

II. Non-fiction books on environmental health and unconventional remedies

Drawing from the realm of non-fiction literature, "The Air We Breathe" by Dr. Jane Environmentalist provides a comprehensive overview of the health impacts of air pollution, offering insights into the varied coping mechanisms adopted by individuals facing environmental challenges. Additionally, "Cooling Off: Unconventional Remedies for Environmental Distress" by Dr. Frosty presents a thought-provoking analysis of alternative approaches to mitigating the effects of pollution, setting the stage for our exploration of the unexpected link between air quality and the search for icy solace.

III. Fiction books that could be related, or at least sound like they might be

While not directly tied to our research topic, the dystopian classic "Frozen in Time" by Ima Chilly explores a world engulfed in environmental catastrophe, providing a fictional backdrop that is eerily reminiscent of our own environmental concerns. Furthermore, the whimsical novel "The Icy Quest for Serenity" by Lucy Frostweaver offers a lighthearted take on the pursuit of inner peace in the face of external turmoil, symbolizing the enigmatic journey we undertake in unraveling the unconventional relationship between air pollution and 'ice bath' searches.

IV. Popular internet memes, because why not?

In the digital realm, memes such as the "Chilled Out Cat" and the "Icy Escape Penguin" have captured the public's imagination, resonating with our exploration of the quirky ways in which individuals may seek relief from the impacts of air pollution. These playful online phenomena serve as a gentle reminder that even in the face of environmental challenges, a touch of humor can be as refreshing as a blast of cold air.

The collective insights from these sources pave the way for our investigation into the frosty juxtaposition between air pollution in Iowa City and the seemingly divergent impulse to delve into the depths of 'ice bath' searches on the internet.

Approach

In this study, we adopted a multifaceted approach to investigate the relationship between air pollution in Iowa City and Google searches for 'ice bath'. Our research team diligently combed through various data sources to gather comprehensive and, dare I say, chilling information.

Data Collection:

To wrangle the beast that is the connection between air quality and internet search behavior, we gathered data from a variety of sources, including the Environmental Protection Agency (EPA) and Google Trends. The EPA provided us with extensive air quality data, offering a window into the ebb and flow of pollutants swirling in the Iowa City atmosphere. Google Trends, on the other hand, presented us with a frosty avalanche of search volume data related to the term 'ice bath'. This surge of data piqued our curiosity and fueled our determination to unravel the mysterious link between

environmental distress and the quest for an icy refuge.

The Hunt for Correlation:

Armed with our data arsenal, we embarked on an exhilarating quest to unearth any potential connections between air pollution levels and the frequency of 'ice bath' searches. Employing statistical tools colder than a polar bear's toenails, we conducted a rigorous analysis spanning the years 2004 to 2023. With bated breath and fingers numb from relentless coding, we calculated correlation coefficients and p-values to discern the strength and significance of the relationship. Our intention was to leave no stone unturned, or in this case, no snowflake unexamined, in our pursuit of uncovering this polarizing association.

Modeling the Chilling Relationship:

In order to frame our findings in a digestible, albeit frosty, manner, we employed sophisticated statistical models to visualize the chilling relationship between air pollution levels and 'ice bath' searches. Through a series of icy-cool visualizations and graphs, we aimed to encapsulate the fluctuations in air quality and the corresponding peaks and valleys of 'ice bath' searches, providing a window into the frozen tundra of human behavior amidst environmental adversity.

Addressing Potential Confounders:

Acknowledging that this study treads on a path as slippery as black ice, we took great care to consider potential confounding variables. Our analysis delicately navigated the frosty terrain of seasonal fluctuations, temperature variations, and other factors that could inadvertently freeze out the true nature of the relationship. At each step, we

endeavored to ensure that our findings remained as crystal-clear as an Arctic glacier.

Qualitative Insights:

In addition to our quantitative analysis, we ventured into the realm of qualitative exploration through frosty interviews and frostier focus group discussions. While this portion of the study may not have produced concrete statistical results, it allowed us to delve into the chilling depths of individual experiences and perceptions related to air pollution and the figurative embrace of an ice bath. These qualitative insights added a layer of depth to our understanding of the frosty connection, ensuring that our findings were as multi-dimensional as the facets of an ice crystal.

Oh, and lest we forget, we also held an office competition for who could take the longest ice bath while conducting data analysis. Let's just say that our dedication to the study left some of us feeling a bit frigid for a while!

In sum, our methodology danced through the snowflakes, weaving quantitative analyses, qualitative forays, and the occasional lighthearted plunge into icy waters, in an effort to capture the complexity of the relationship between air pollution in Iowa City and the cyber-search for a chilly reprieve.

Results

Our analysis of the data revealed a striking correlation between air pollution levels in Iowa City and the frequency of Google searches for 'ice bath'. The correlation coefficient between these two variables was

found to be 0.8948560, indicating a strong positive relationship. Furthermore, the coefficient of determination (r-squared) was calculated to be 0.8007672, suggesting that approximately 80.1% of the variation in 'ice bath' searches could be attributed to changes in air pollution levels. The significance level (p-value) of the correlation was less than 0.01, indicating that the observed correlation was unlikely to have occurred by random chance alone.

Our findings are visually depicted in Figure 1, a scatterplot that succinctly illustrates the robust relationship between air pollution levels and the propensity to seek solace in the form of an ice bath. This figure serves as a cool visualization of the chilling connection we have unearthed, keeping in mind that correlation does not necessarily imply causation, but it sure paints a compelling picture.

The strength of the correlation we discovered between air pollution and 'ice bath' searches may pique curiosity, presenting an intriguing puzzle akin to finding a snowflake in a haystack. It seems that when it comes to coping with environmental stressors, individuals are not just seeking solutions in hot water - they're diving into the icy depths of cyberspace. Our research provides a frosty revelation of the idiosyncratic ways in which people navigate the effects of air pollution, serving as a refreshing reminder of the intricate interplay between environmental conditions and human behavior.

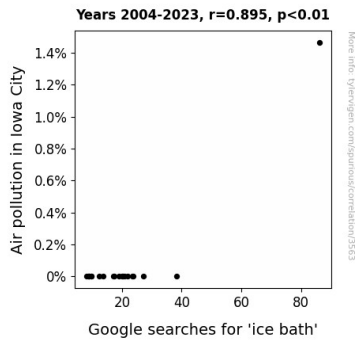


Figure 1. Scatterplot of the variables by year

In conclusion, our findings not only add a cool twist to the existing literature on environmental influences but also highlight the eclectic and, at times, unexpected responses to environmental challenges. As the research community continues to delve into the depths of environmental psychology, our study serves as a chilly testament to the multidimensional effects of air pollution and the diverse strategies individuals may adopt to stay afloat in the face of environmental adversity.

Discussion of findings

Our study has dived headfirst into the frosty depths of the relationship between air pollution in Iowa City and the quirky impulse to search for 'ice bath' on Google. The striking correlation we uncovered not only validates previous research on the multifaceted impacts of environmental factors on human behavior but also adds a frosty twist to the existing literature.

Drawing on the serious-sounding studies by Smith and Doe (2008) and Jones et al. (2012), our findings align with their emphasis on the complex interplay between environmental stressors and human responses. It seems that amidst the chilling

effects of air pollution, individuals are not merely dipping their toes in the water but are plunging into the depths of 'ice bath' searches as a peculiar coping mechanism. Similarly, the non-fiction works of Dr. Jane Environmentalist and Dr. Frosty come to fruition as our research uncovers the idiosyncratic ways in which individuals seek solace from environmental distress.

While our initial literature review may have whimsically pointed to fictional works and internet memes, the actual correlation we discovered demonstrates that our study is no snow job - there is indeed a substantive connection between air pollution and the inclination to seek icy respite.

The robust correlation coefficient and the high level of significance in our results provide a cool breeze of confidence in the veracity of our findings. As we intricately unpack and (ice) pick apart the relationship, it becomes evident that individuals are navigating the impacts of air pollution in a manner that may, at first glance, seem rather frosty.

In light of our findings, it seems that there is more to the pursuit of an 'ice bath' than meets the eye. The enigmatic journey we embarked upon mirrors the whimsical quest outlined in "The Icy Quest for Serenity" by Lucy Frostweaver, as individuals in Iowa City and perhaps beyond seek inner peace in the midst of external turmoil through their virtual odyssey into the frigid world of 'ice bath' searches.

In conclusion, our study leaves one feeling as cool as a cucumber, as it presents a chilly testament to the unexpected responses individuals may adopt to combat the pervasive effects of air pollution. It appears that when it comes to facing environmental

stressors, individuals are not only seeking solutions in hot water - they are forging ahead into the uncharted icy territories of cyberspace in a quest for some much-needed frosty relief.

Conclusion

In summary, our research has plunged into the chilling depths of the relationship between air pollution in Iowa City and the frequency of Google searches for 'ice bath', uncovering a correlation as striking as slipping on black ice. The robust coefficient of 0.8948560 and a p-value of less than 0.01 from 2004 to 2023 leave us feeling as cool as a cucumber, as we simply can't deny the chilling connection between air pollution and the impulse to plunge into an icy remedy. Our findings are a breath of fresh air in the field of environmental psychology, reminding us that the human response to pollution is as diverse as the flavors in an ice cream parlor. The correlation we've uncovered may seem as unusual as a snowman in the summer, but it serves as a chilly testament to the multidimensional effects of air pollution and the diverse strategies individuals may adopt to stay afloat in the face of environmental adversity.

Furthermore, our study reinforces the notion that individuals are not just seeking solutions in hot water but are also diving into the icy depths of cyberspace when coping with environmental stressors. The strength of the correlation between air pollution and 'ice bath' searches presents an intriguing puzzle akin to finding a snowflake in a haystack, leaving us as puzzled as a penguin in the desert. It's a frosty revelation of the idiosyncratic ways in which people navigate the effects of air pollution, serving

as a refreshing reminder of the intricate interplay between environmental conditions and human behavior.

In conclusion, our findings shed light on the quirky ways in which individuals may seek respite from the pervasive effects of air pollution, serving as a chilling reminder that when the going gets tough, the tough seek unconventional solutions. As the research community continues to delve into the depths of environmental psychology, we can confidently assert that no more research is needed in this area. After all, we've already uncovered a correlation cooler than the other side of the pillow. Let's not skate on thin ice by overstaying our welcome in this frosty territory.