

Review Form 3

Journal Name:	Archives of Current Research International
Manuscript Number:	Ms_ACRI_122907
Title of the Manuscript:	Comparative analysis of Mortality in the United States in 1980 and 2019.
Type of the Article	Original Research Article

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PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<p>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</p>	<p>This manuscript is significant for the scientific community as it provides a comprehensive analysis of mortality trends over an extended period, shedding light on the evolving health challenges in the United States. By comparing data from 1980 and 2019, the study offers valuable insights into how major causes of death have persisted or shifted, which is crucial for informing public health policies and strategies. I appreciate the manuscript's thorough examination of gender differences in mortality and its use of robust statistical methods to identify correlations and trends. However, further clarification and deeper analysis could enhance its impact and utility.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>The title "Comparative Analysis of Mortality in the United States in 1980 and 2019" is clear and descriptive, but it may not fully capture the depth of the study, especially if the manuscript delves into trends, causes of death, and correlations over time. If the analysis includes more than just a comparison of the two years and explores broader trends, a more suitable title could be:</p> <p>"Trends and Comparative Analysis of Mortality in the United States: A Study from 1980 to 2019"</p> <p>This alternative title emphasizes both the comparative aspect and the analysis of trends over the 39-year period, giving potential readers a better understanding of the study's scope.</p>	
<p>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</p>	<p>The abstract effectively outlines the study's objectives, methods, results, and conclusions. It clearly describes the comparison of mortality patterns between 1980 and 2019, using a range of statistical tools. The results are summarized, highlighting key findings such as the increase in total deaths, leading causes of death, and significant correlations. The conclusions address the observed trends and suggest potential links to healthcare advancements.</p> <p>Suggestions for Improvement</p> <ol style="list-style-type: none"> 1. Clarify Mean Age: The mention of a mean age of 15-24 for both years is unclear and likely incorrect. This should be clarified or corrected. 2. Elaborate on Key Findings: More detail could be provided on the increase in deaths due to mental illness and suicides, and the significance of the reported trends. 3. Refine Statistical Reporting: The reference to the "hiv Coefficient of Determination (R² value)" is out of context and should be either clarified or removed. 4. Strengthen Conclusions: The conclusions could more strongly connect the findings to broader public health implications, particularly regarding future healthcare strategies. 	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The conclusion summarizes the key findings and their importance. It is a bit short and could be expanded to provide a more comprehensive summary of the study's contributions. Overall, the structure and subsections are suitable for a research article, with the exception of the missing discussion section. The writing is clear and the use of figures and tables enhances the presentation of results. With some minor revisions to improve flow and add a discussion section, this manuscript would be well-suited for publication in a peer-reviewed journal.</p>	
<p>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</p>	<p>The study presents a detailed comparison of mortality data of 1980 and 2019 in the United States, highlighting several important trends and correlations. The increase in the total number of deaths from 1,989,841 in 1980 to 2,854,838 in 2019, along with the rise in the mortality rate to 869.7 per 100,000 population in 2019, indicates a significant</p>	

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	<p>change over the 39-year period. However, while the data clearly shows an upward trend in deaths, the results could benefit from a more in-depth analysis of the underlying factors contributing to this increase.</p> <p>The identification of the five major causes of death remaining consistent between the two years (heart disease, cancer, accidents, respiratory diseases, and cerebrovascular diseases) is crucial, but the study could delve deeper into why these causes have persisted as the leading killers and whether any shifts in their relative rankings or impact have occurred.</p> <p>The Pearson correlation showing a strong positive linear trend ($r = 0.947$, $p < 0.01$) between the number of deaths attributed to all causes for males and females is a significant finding, indicating that mortality patterns are similarly influenced for both genders. The higher variability in the number of deaths among males, and the fact that male deaths are higher overall, suggests that gender-specific factors, perhaps related to lifestyle, healthcare access, or biological differences, might be worth exploring further.</p> <p>The mention of the mean age being 15-24 for both years is somewhat confusing, as this does not align with the typical mean age of death, especially given the context of the causes of death listed. This point may require clarification or correction.</p> <p>The study reports a high Coefficient of Determination ($R^2 = 0.897$), indicating that the model used explains a significant portion of the variability in the data. However, the interpretation of the "expected increase of 1.01 deaths in 2019" needs clarification, as this statement seems inconsistent with the broader trends presented.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p> <p>-</p>	<p>The references are relevant and generally up-to-date, with most from 2017 to 2021. However, including more recent publications or updates, especially for key sources like WHO and IHME, could enhance the currency of the study. Moreover, incorporating specific studies on U.S. mortality trends might strengthen the references further.</p>	

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<p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>The language of the article is generally clear but could benefit from refinement to enhance readability and precision. Some sentences require restructuring for better clarity and consistency. For example:</p> <p>Original sentence: "There is an upward trend in deaths in both years, with an expected increase of 1.01 deaths in 2019 and a hiv Coefficient of Determination (R² value) of 0.897."</p> <p>Revised sentence: "The analysis reveals an upward trend in mortality rates from 1980 to 2019, with a substantial increase observed in 2019. The model's high R² value of 0.897 indicates that the model explains a significant portion of the variability in the data."</p> <p>By making such adjustments, the language will be more precise and aligned with scholarly standards, improving the overall quality of the article.</p>	
<p>Optional/General comments</p>	<p>The study provides valuable insights by comparing mortality patterns between 1980 and 2019, which is a commendable effort. However, I believe it would be even more beneficial to analyze the entire period from 1980 to 2019. This broader approach would capture long-term trends and shifts in mortality patterns, offering a more comprehensive understanding. By expanding the analysis to include all years, you could uncover significant trends or changes that might be missed with a two-year comparison. For this, I suggest using statistical tools like time series analysis (e.g., ARIMA), trend analysis, change point analysis, survival analysis, or mixed-effects models. These methods would enhance the depth and robustness of your findings, leading to stronger conclusions.</p>	

PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p>Are there ethical issues in this manuscript?</p>	<p><i>(If yes. Kindly please write down the ethical issues here in details)</i></p>	

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