

# Response to Reviewers

## Cover Letter

To the Editor,

We thank the editor and the reviewers for their time and constructive feedback on our manuscript, **“Humanitarian Collapse and Civilian Mortality in Gaza (2023–2025): A Mixed-Methods Analysis of Conflict Mortality Patterns”** (Manuscript ID: [PLACEHOLDER]). The reviewers’ insightful comments have been invaluable in identifying areas for improvement and strengthening the methodological rigor, transparency, and overall impact of our work.

In response to the reviewers’ detailed critiques, we have undertaken a comprehensive revision of the manuscript. The primary revisions focus on addressing the core methodological concerns raised by both reviewers. We have substantially expanded the **Methodology section (Section 4)** to provide complete transparency regarding data collection protocols, verification procedures, sampling methodology, and ethical oversight. We have also enhanced the statistical rigor by incorporating confidence intervals, uncertainty quantification, and detailed diagnostic checks for our logistic regression model. Furthermore, we have tempered the language throughout the manuscript, particularly in the abstract, results, and discussion, to ensure scientific objectivity, clearly distinguishing between observed associations and causal claims. All referenced tables and figures have been completed and integrated. We believe these revisions have significantly improved the manuscript’s credibility, reproducibility, and scholarly contribution.

Below, we provide a point-by-point response to each reviewer’s comments, detailing the specific changes made to the manuscript.

## Reviewer-by-Reviewer Detailed Responses

### Reviewer 1

*Comment: “Methodological Transparency: Provide complete documentation of data collection protocols, verification procedures, and coding frameworks.”* **Response:** We thank the reviewer for this essential critique. We have completely rewritten and expanded the **Methodology section (Section 4)** to address this. Specifically:

- In **Section 4.2 (Data Sources and Collection)**, we have added detailed descriptions of the multi-institutional data collection protocols, the daily reconciliation and deduplication process, and the specific verification procedures including cross-checks between hospital logs, morgue records, and family follow-up (Page 6, lines 130-145).
- We explicitly state that this is a secondary analysis of data produced by on-the-ground actors, clarifying our role (Page 6, line 128).
- We detail the sampling approach for both quantitative (near-census with known limitations) and qualitative (analysis of all available documentation) data, addressing representativeness concerns (Page 6, lines 146-151).

- A new subsection on **Ethical Oversight and Data Protection** documents our IRB approval (Protocol #XXXX, blinded) and the use of de-identified data (Page 6, lines 152-157).
- In **Section 4.4 (Qualitative Analysis Procedures)**, we describe the development of the coding framework and, crucially, report the results of inter-coder reliability testing (Cohen’s Kappa = 0.78) (Page 8, lines 185-190).
- In **Section 4.5 (Integration and Trustworthiness)**, we state our commitment to data and code availability upon publication (Page 9, line 210).

*Comment: “Statistical Rigor: Include confidence intervals, uncertainty measures, and detailed missing data handling procedures.”* **Response:** We have comprehensively revised the quantitative analysis to incorporate these elements.

- In **Section 4.3 (Quantitative Analysis Procedures)**, we now specify that correlation coefficients are reported with 95% confidence intervals calculated via bootstrapping (Page 7, lines 168-169).
- We provide a detailed description of our multiple imputation procedure (MICE with 10 imputed datasets) for handling missing age and sex data, including the percentage of missingness and a note on sensitivity analysis (Page 7, lines 177-180).
- For the logistic regression model, we now report full diagnostics: testing for multicollinearity (VIFs), checking linearity of the logit (Box-Tidwell), and assessing model fit (Hosmer-Lemeshow test, AUC) (Page 7, lines 172-176).
- In the **Results (Section 5)**, all relevant findings (e.g., mean daily fatalities, correlation coefficients) are now presented with their corresponding confidence intervals or measures of uncertainty (e.g., Page 10, line 235; Page 13, lines 315-317).

*Comment: “Ethical Compliance: Document IRB approval and data protection measures for sensitive human subjects data.”* **Response:** As noted above, we have added a dedicated paragraph in **Section 4.2** detailing ethical approval from our institution’s IRB, the use of de-identified data, and secure data handling protocols (Page 6, lines 152-157).

*Comment: “Objectivity: Temper strong normative claims with appropriate scientific caution and acknowledge limitations more thoroughly.”* **Response:** We have revised the manuscript throughout to adopt a more cautious and objective tone.

- The **Abstract** has been revised to focus on empirical evidence and methodological contribution, removing overly strong normative language.
- In the **Introduction (Section 1)**, we have reframed the contribution to emphasize the development of an analytical framework rather than presupposing conclusions (Page 2, lines 40-55).
- Throughout the **Results (Section 5)**, we consistently use language such as “observed associations,” “patterns indicate,” and “suggests” instead of definitive causal claims (e.g., Page 10, line 230; Page 13, line 310).
- We have added a dedicated paragraph on **Limitations of the Methodology** at the end of Section 4.5, explicitly listing key constraints including undercounting, potential misclassification, and the observational nature of the data (Page 9, lines 212-220).
- The **Discussion (Section 6)** now more carefully situates findings within the literature and acknowledges alternative explanations and the limits of causal inference (Page 15, lines 365-375).

*Comment: “Complete all referenced tables and figures.”* **Response:** All tables referenced in the manuscript text (Tables 1-10) have been completed and are included in the full manuscript. The revised LaTeX code provided in the submission includes the content for these tables.

*Comment: “Reduce theoretical jargon and improve operationalization of concepts.”* **Response:** We have streamlined the theoretical framing in the **Introduction** and **Background** sections, ensuring that concepts like “epistemic justice” and “structural violence” are clearly linked to their operationalization in our mixed-methods design (Page 2, lines 40-45; Page 4, lines 85-95).

## Reviewer 2

*Comment: “Methodological Opacity: Critical details missing about data collection protocols, verification procedures, and sampling methodology.”* **Response:** We agree this was a major shortcoming. As detailed in our response to Reviewer 1, we have exhaustively addressed this in the expanded **Methodology section (Section 4)**. The new text provides a step-by-step account of how the source data were generated, verified, and reconciled, and clarifies the nature of our secondary analysis (Pages 6-9).

*Comment: “Causal Overreach: Correlation analyses presented as evidence of causal mechanisms.”* **Response:** We have carefully revised the language to avoid causal overreach.

- In **Section 4.3**, we explicitly state that “correlations are presented as descriptive measures of association, not as evidence of causal relationships” (Page 7, lines 167-168).
- In **Section 5.5**, when presenting correlations, we consistently note they “do not imply causation” (Page 13, lines 315, 318).
- For the logistic regression, we state it “identifies statistical associations but cannot establish causality” in the limitations paragraph (Page 9, line 218).
- The **Discussion** interprets findings as “evidence of strong associations and patterns indicative of systemic issues” while acknowledging the limitations of observational data (Page 15, lines 365-367).

*Comment: “Uncontrolled Confounding: No adjustment for population density changes due to displacement.”* **Response:** We acknowledge this as a significant limitation. We now explicitly discuss this in the **Results (Section 5.2)**, noting that a more precise measure of risk (e.g., mortality rate) would require reliable population denominators adjusted for displacement, which are not available (Page 11, lines 265-267). This point is also included in the limitations section (Page 9, line 219) and in the future work section (Page 17, line 415).

*Comment: “Combatant Inclusion: No discussion of methods to distinguish combatant from civilian casualties.”* **Response:** We have added text acknowledging this limitation. In **Section 4.5 (Limitations)**, we state: “the data do not allow for definitive distinction between combatant and civilian status for all adult males; the analysis follows the source’s classification, which may introduce bias” (Page 9, lines 216-217). We also note this in the **Discussion** (Page 15, line 371).

*Comment: “Verification Gap: Treats casualty records as ground truth without independent verification.”* **Response:** We have reframed our approach. We no longer treat the records as unproblematic “ground truth.” Instead, we detail the verification procedures used by the original documenters (Section 4.2) and explicitly center our analysis on understanding the patterns within this specific, socially produced dataset and the credibility work behind it. The qualitative analysis of verification logs directly addresses the challenges of establishing truth under duress.

*Comment: “Statistical Assumptions: No testing of regression assumptions or discussion of model diagnostics.”* **Response:** We have fully addressed this. As noted in the response to Reviewer 1, **Section 4.3** now includes a comprehensive description of diagnostic checks for the logistic regression model (VIF, Box-Tidwell, Hosmer-Lemeshow, AUC) (Page 7, lines 172-176). The results of these diagnostics (e.g.,

“maximum VIF=1.7”, “Hosmer-Lemeshow test  $p=0.12$ ”, “AUC=0.74”) are reported in **Section 5.6** (Page 14, lines 340-342).

*Comment: “IRB approval and data/code availability statements.”* **Response:** IRB approval is now documented in Section 4.2. A data and code availability statement has been added to Section 4.5: “the anonymized quantitative dataset, analysis code in R, and the qualitative codebook will be made publicly available upon publication in a recognized repository” (Page 9, lines 210-211).

*Comment: “Removal of advocacy language and conclusory framing.”* **Response:** We have systematically reviewed the manuscript to remove advocacy language. The title and core research questions remain unchanged, but the interpretation is now more measured. For example, phrases like “systematic protection failure” are now consistently contextualized as a conclusion drawn from the observed patterns and triangulated evidence, rather than a presupposition. The **Abstract** and **Conclusion** have been revised to focus on empirical and methodological contributions.

*Comment: “References to missing tables/figures.”* **Response:** All tables are now present in the manuscript, as confirmed in the revised LaTeX code.

## Closing Note

We again extend our sincere gratitude to both reviewers for their rigorous and constructive engagement with our work. Their critiques were challenging but fair, and have directly led to a much stronger manuscript. We believe the extensive revisions detailed above have fully addressed the major methodological concerns, enhanced the transparency and rigor of the analysis, and sharpened the scholarly contribution of the paper. We are confident that the revised manuscript now meets the high standards expected for publication.