

We sincerely thank the reviewer for the careful evaluation of our manuscript and for the constructive comments regarding the statistical analyses. We greatly appreciate the detailed guidance provided, which helped us identify weaknesses in the original presentation and interpretation of the generalized linear models. Following the reviewer's suggestions, we thoroughly re-evaluated the statistical analyses and substantially revised both the main manuscript and the Supplementary Material. These revisions have improved the transparency, robustness, and interpretation of the modelling results.

Specifically, the following changes were made:

1. Model selection framework revised. We restructured the statistical analysis to follow a formal model-selection approach based on Akaike's Information Criterion (AIC). For each response variable, all candidate models were evaluated and compared before selecting the final model.
2. Comprehensive model-selection table added. Table 1 has been completely revised and now presents all tested models, their AIC values, and the significance of model terms.
3. Results reinterpreted using the selected models. The text describing the GLM results was rewritten to ensure that interpretations are based exclusively on the selected model. As noted by the reviewer, dropping terms altered the significance and relative importance of the remaining predictors, and the revised interpretations reflect these updated results.
4. Parameter estimates provided. A new supplementary table (Table S5) has been added presenting the complete parameter estimates for all selected models, including intercept terms, regression coefficients, standard errors, Wald statistics, and significance levels.
5. Interpretation of Gamma-log models revised. We carefully reconsidered the interpretation of model coefficients in light of the Gamma distribution with log-link function. The revised manuscript avoids direct interpretation of individual exponentiated coefficients and instead focuses on model predictions and predictor effects as represented by the fitted models.
6. Model validation performed and reported. Model diagnostics were conducted for all selected models using standardized deviance residuals and Cook's distance. The results are summarized in a new supplementary table (Table S6). Diagnostic plots for the most complex selected model are also provided in the Supplementary Material (Figure S2).
7. Prediction plots added. Following the reviewer's recommendation, model-based prediction plots were generated and included to illustrate the fitted relationships and interactions identified by the selected models.
8. Methods section expanded. The statistical methods were revised to include a more detailed description of model selection, model validation procedures, and the interpretation of the selected generalized linear models.

We believe that these revisions have substantially improved the statistical rigor and interpretability of the study, and we are grateful to the reviewer for highlighting these important issues.