**Summary:** The paper investigates “Climatic Risk Factors for the Transmission of Dengue Fever: Bangladesh Perspective”.  Despite being a significant public health concern for Bangladesh, this topic has already received considerable attention from numerous earlier and recently published studies.

The purpose of the study has also been used in the past to explore comparable issues utilizing earlier data on Bangladesh. As a result, the paper's main original addition appears to be its application of this study to this study’s “Bayesian Approach”, and its conclusions/discussion largely—and not surprisingly—reflect those of previous research. The discussion failed to explain properly the objective of the study.

The paper needs to be thoroughly proofread by a professional or expert. It is not written to a high degree for academic writing, and there are several grammatical/spelling errors, which frequently make claims and arguments less clear. Additionally, the authors ought to eliminate any similarities from this work. Numerous times, the way that statistical results are interpreted is also ambiguous. The paper also neglected to mention or cite comparable but equally significant published studies from the nearest countries. The introduction fails to effectively justify the need for studying the issue, tables and results are not focused on the title, and objectives seem different in several parts of the manuscript. The tables and their interpretations are not similar, and the paper's findings by themselves are insufficient to support the discussion and conclusions.

Below are some comments with more information:

**Please include the line number in the main manuscript next time. However, to review purposes I inserted them. To track and resolve my comments please insert line number first.**

**Abstract**

Please re-write the abstract. Authors take so many introductory sentences before the objective.

Page 1, Line 28: “According to the study, less precipitation reduces infected cases and fatalities from Dengue.”. Need some data/statistics to validate it. As the reader will study this abstract first. Please explain, which information take you to support this statement. Also, for this, “Furthermore, the spread of Dengue has diminished due to high temperatures, which have also affected the virus’s ability to survive and spread.”

**Introduction**  
I am requesting to authors to check the serial of the citation in the whole manuscript. If possible, please use the citation manager.

Page 1, Lines 47-48: “In the middle of the epidemic, the Directorate General of Health in Bangladesh recorded 1026 confirmed cases in 2020, and 20,000 in 2021”. Reviewers seem that it is an old reference and is also confusing. Please update this information from a recently published manuscript: <https://academic.oup.com/jme/advance-article/doi/10.1093/jme/tjad057/7172758>

Page 1, Lines 50-51: “The Ministry of Health & Family Welfare of Bangladesh has reported 52,807 laboratory-confirmed dengue cases overall as of 20 November 2022, with 230 deaths associated with the disease”. Authors should update this information before submitting again.

Page 2, Lines 86-88: “Only a small amount of research has been executed so far on how weather influences the weight of ailment, appreciably dengue in South Asia.” Reviewers seem that the statement is not true. Some recent manuscripts in Bangladesh related to weather factors: <https://academic.oup.com/jme/advance-article/doi/10.1093/jme/tjad057/7172758>, <https://www.mdpi.com/1660-4601/20/6/5152>, as this is the middle of 2023. There are a lot of published papers similar to this topic. Please cite them before submitting them again.

Page 2, Lines 91-93: Statistically, it appears that most investigations utilized either very simple correlational techniques [12, 19, 23] or regression modeling [5, 37], or both.”. The author stated or try to explain that all of the cited references are from Bangladesh, because of the previous line. But reviewers seem all are from outside of Bangladesh. Either please change the previous line or change the citation from the stated references.

Page 2, Lines 90-101: Reviewers hope that this paragraph will provide more and only about other’s methods with findings and details about the Bayesian Regression Method and its pros and cons, as this study seems trying to focus more on the methodology (benefit) of this model.

Page 2, Lines 95-101: “Moreover, Bangladesh’s lack of preparedness, including weak public health infrastructure and ineffective vector-control programs, increases the impact of dengue virus importation, resulting in rising outbreaks. Anorexia, nausea, vomiting, pharyngitis, upper respiratory tract symptoms, relative bradycardia, prostration, depression, hyperesthesia, lymphadenopathy, and rash are some of the symptoms and signs of dengue [13]. Other symptoms and signs include fever, backache, arthralgia, headache, generalized pain, eye pain, lacrimation, scleral injection, and rash. Since 2000, med- ical professionals in Bangladesh have clinically identified dengue following WHO guidelines.” As symptoms are not our concerned variables, all these statements are not necessary for the introduction. Reviews and readers will hope for some literature review of findings related to climatic factors in this place.

Page 2, Line 106: “Following are the research’s main contributions” No need to explain it.

Page 2, Lines 103-104 and Lines 114-116: “This study examines how key meteorological variables such as precipitation, heat, moisture, and wind speed may promote Dengue incidence in Bangladesh.” And “In order to de- velop and provide a better knowledge of the complicated relationship between climate and health, this study aims to assess the impact of climatic risk variables on dengue incidence in Bangladesh.” Reviewers seem to both sentences are trying to share the same statement, Please keep only one.

**Materials and methods**

Page 3, Lines 125-127: “The weather variables of temperature (measured in ◦ C), humidity (measured in %), precipitation (mea- sured in mm), and wind speed (measured in km/h) were collected from Bangladesh Meteorological De- partment.” The authors provided a link that does not take the reviewers to the BMD website. As per reviewers’ knowledge, BMD data is not free to use. Please explain the real source and how you collect them. The authors also should explain how climatic factors from one station can represent the whole country. As dengue data was collected from the whole country.

Page 3-4: More details are needed about the dependent and independent variables. Authors should provide more details about the real/practical use of the models they used. More citations are needed in most methodological parts. Also, explain how time series data is appropriate in your models.

**Results**

Page 5, Line 13: “The fastest recorded speed occurred in May 2020.” Please include the word “wind”.

Page 5, Line 13-15: “These findings indicate that all climatic parameters contribute to a conducive environment, increasing mosquito breeding and dengue transmission rates which is also supported by”. Place this statement in discussion. In addition, this statement is not correct and also not possible from your available results/findings. Please, re-write it or provide some evidence to support your statement.

Page 5, Line 37-39: “It is hypothesized that a skewed distribution would be more accurate in forecasting the values of this variable based on a comparison of the distributional shape of the number of Dengue cases.”. Reviewers didn’t notice the objective of forecasting, please mention in the objective if you want to try forecasting.

Page 6, Line 56-58: “To carries our Bayesian inference on the statistical problems using MCMC methods, we used the most popular Bayesian software. Three WinBUGS tools are required to obtain posterior samples: (a) the specification tool, (b) the sample monitor tool, and (c) the update tool.”. Please replace this statement in the methods section.

**Discussion**  
Page 11, Lines 59-60: “Figure 5 shows that the posterior distribution for the parameters is well examined and that they appear to be regularly distributed.” Reviewers seem that the statement you used first time here. I am concerned about the use of graphs in the discussion part. Please replace this graph in the result part and discuss the findings in the “discussion” part.

Page 11, Lines 65-66: “Low precipitation increases the propagation of dengue, according to empirical research.”. Need citations.

Page 11, Lines 65-66: “Dengue has been demonstrated to spread less frequently in high temperatures, which reduces the virus’s ability to survive and spread.”. Please refer to this finding from your result section.

Page 11, Lines 67-68: “Instead, freezing conditions give coronaviruses a secure haven that hastens their survival and spread.”. Please recheck this statement. Why coronaviruses are here?

Page 11, Lines 68-71: “It may be concluded that the climate has a substantial impact on the risk factors for virus transmission in Bangladesh. We came to the conclusion that the Bayesian tech- nique performed well and is easier to understand than traditional regression approaches in the literature on the basis of a variety of information criteria and the selection of influential elements.”. Please refer to this finding from your result section.

Page 11: No reference for fig. 6. Please replace this figure in the result part with a proper explanation.

The discussion part should be rewritten and should focus on the used variables from the study. Discussion should discuss with Authors’ findings with others. As this is a theory/methodological-based study, you should discuss other findings with various methodological aspects. Authors should explain the significance and the difference of these methods with others. This part should support the result but there is some discrepancy between the result and the discussion. Please cited others in the discussion.

**Conclusion**

Page 12, Lines 83-84: “Despite the fact that the majority of recent studies have concentrated on a correlation approach between meteorological parameters and pandemic data.” Is Dengue Pandemic in Bangladesh? The authors should check that.

Page 12, Lines 87-88: “This study used a number of statistical techniques, and the model revealed a substantial causal link between climatic variables and the spread of dengue.” Is Dengue Pandemic in Bangladesh? The authors should provide valid evidence to state this.

The conclusion needs to be more specific and highlight key findings. This should support the result. Suggested providing less discussion in the conclusion. Reviewers didn’t find so much to conclude the whole results and discussion in the “conclusion” part. Much information is redundant in the discussion and conclusion.