

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Animal related injuries and fatalities: Evidence from a large-scale population-based cross-sectional survey in rural Bangladesh
AUTHORS	BHUIYAN, MD AL AMIN; Agrawal, priyanka; Wadhvaniya, Shirin; Li, Qingfeng; Alonge, O; Rahman, AKM; Rahman, Aminur

VERSION 1 – REVIEW

REVIEWER	Joseph D. Forrester Stanford University, USA
REVIEW RETURNED	11-Mar-2019

GENERAL COMMENTS	<p>Dear Editors and Authors,</p> <p>Thank you for providing me the opportunity to review the manuscript entitled "Animal injury mortalities and morbidities: Evidence from a community survey in rural Bangladesh." In this manuscript the authors describe the results of a sub-analysis of the larger SoLID survey, a survey designed to assess drowning prevention.</p> <p>In general, the authors present interesting data. However, there are several concerns I have with the manuscript which I have detailed in the corresponding sections below. Also, it would be useful to have an English language editor review this manuscript for spelling, tense, and sentence structure.</p> <p>Title: Should be "mortality" not "mortalities". Suggest rewording: "Injuries and fatalities associated with animal encounters in rural Bangladesh"</p> <p>Methods: The study design section needs to be considerably expanded. What was the actual protocol for how family were chosen for the survey? Was every third household? What if there were several homes in close proximity, which ones were chosen. It is unclear how the authors addressed clustering? The survey methodology is of critical importance to describe, as this has important implications for the limitations of the manuscript.</p> <p>Methods: Quality control: If the authors present how quality control was performed, they need to describe in their results section the frequency of error identified.</p> <p>Methods: Statistal Methods and analysis: Line 120-122: How were variables chosen for the multivariate analysis? Were all variables entered? Were variables with $P < 0.1$ on univariate analysis chosen? Please explain which threshold was used, and why.</p> <p>Line 121-122: Why wasn't fishers exact test used to compare variables in fatal cases. This should be done and reported.</p> <p>Line 123-129: It is really unclear what injury severity grading scheme was used. Injury severity score (ISS) is the most widely utilized and recognized injury grading scheme. I would strongly suggest the</p>
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	<p>authors re-evaluate their data, and categorize injury in accordance with ISS. This will allow for comparisons between studies.</p> <p>Results: The format of the results section is confusing. The authors describe the SoLiD survey group as a whole, then the fatal cases, then the non-fatal injuries. I would suggest reformatting to describe the SoLiD population first, followed by all animal-injured patients, followed by non-fatal injuries, then fatal injuries. When describing each population, please be consistent in how the data is presented (i.e., age, sex, geographical distribution, occupation, etc.). Changing the order in which this demographic data is presented by sub-group is very confusing.</p> <p>Hymenoptera (hornets/wasps/bees) do not "bite", they envenomate. Please correct this throughout the manuscript. This may change your results considerably. Also, please make sure that only true "bites" are categorized as bites.</p> <p>Table 1: Why is the age group only 18 yrs of age and above? I would suggest breaking up this age group into 18-44, 45-65, and >65. There may be additional interesting interactions with age among the older age groups.</p> <p>Table 1: Wealth quantile. Why not use quartiles? This is an easier concept for the reader to understand. Line 171-172: This sentence is strangely worded and has to do with how the authors coded their data. Really this should be coded as females had lower odds of injury compared to males.</p> <p>Line 172-174: Generally in the results section, any comparison statement should be accompanied by a corresponding OR/95% CI. Table 3: Reference should be referent Discussion: Line 200-201: How do these rates compare to rates in settings like the US, or Europe? Line 204-208: This is a broad generalization and doesn't seem appropriate without citation. The authors should consider comparing their sex distribution to other studies, this will get the same point across and will be less controversial. Line 209-211: The authors should go into more detail here as to why they think this is the case. Line 218-220: This citation seems incorrect. This language is nearly identical to the two manuscripts by Forrester et al describing animal-related injury and the WONDER database. Please change. Line 224-226: This conclusion is surprising, and doesn't seem supported by the data, at least as presented. Having most rabies cases occur as a result of exposure to farm animals would be unusual. Would be much more common for this to occur as a result of contact with canines, cats, or other wild mammals. Line 228-236: The limitations section needs to be markedly expanded. There are numerous limitations to this manuscript. How was clustering accounted for the survey methodology? Was selection bias present? Was recall bias present?</p>
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REVIEWER	Jose Manuel Ramos-Rincon Hospital General Universitario de Alicante Spain
REVIEW RETURNED	04-Apr-2019

GENERAL COMMENTS	D bmjopen-2019-030039, entitled "Animal injury mortalities and
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	<p>morbidities: Evidence from a community survey in rural Bangladesh."</p> <p>Animal injury mortalities and morbidities: Evidence from a community survey in rural Bangladesh</p> <p>The presented work is a great and extensive work that deals with the epidemiology of bites</p> <p>The work must be accepted by the depth of the results the authors have to review the bibliography, since they have different writing errors.</p> <p>The authors have to add limitations in the discussion of the work.</p> <p>For the rest, the work is very good and I congratulate the researchers for this magnificent work and I hope it will be a reference in the future.</p>
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REVIEWER	Randall Loder Department of Orthopaedic Surgery, Indiana University School of Medicine, USA
REVIEW RETURNED	22-May-2019

GENERAL COMMENTS	<p>This is a very interesting manuscript. I have several queries.</p> <p>Abstract, line 25: Please describe in a little more detail, the political divisions of unions and sub-districts as most readers will not be acquainted with these unless living in Bangladesh or neighboring countries. This could be done in the Materials/Methods, and not necessarily the abstract. A simple map/figure of the country demonstrating where these political divisions are would be very interesting to this reviewer</p> <p>Abstract, line 34, was the cow/buffalo interaction a bite, like for dogs and snakes? Please clarify.</p> <p>Line 64 – should read “and 70% of those are from pets.”</p> <p>Line 65 – “being stepped on by and animal.”</p> <p>Line 95 – if only six months backwards questioning was used for injuries excluding death, then can these results be truly expanded to annual values due to perhaps seasonal differences in the other 6 months? This is especially so when viewing the seasonal variation figure. Just clarify this some.</p> <p>Line 148-149 – please explain how a mortality is a low severity injury? This seems contradictory.</p>
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REVIEWER	Frank Leonel Tianyi Tianyi Cameroon Society of Epidemiology, Cameroon
REVIEW RETURNED	31-May-2019

GENERAL COMMENTS	<p>The authors carried out secondary analysis of the SoLiD study and presented findings on the burden of animal injuries in rural Bangladesh, This is a pertinent and neglected cause of injury and I commend their efforts.</p> <p>General Remarks. I would propose the final manuscript be read by a native English speaker or the authors could use an editing tool to correct the</p>
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	<p>grammatical and spelling errors in the manuscript. The in-text references appear after the full stop throughout the manuscript. I would propose the authors read the submission guidelines and modify accordingly.</p> <p>Abstract: Methods - I propose the authors include the instrument used for statistical analysis in the abstract Results - I propose the authors include the specific injury for each animal, for example dog bite as opposed to simply dogs.</p> <p>Introduction: A brief statement on the outcome of victims of animal injuries in Bangladesh would help the reader understand the importance and significance of the current study.</p> <p>Methods: The authors were precise and clear in their estimation of the magnitude of animal injuries in this population, however, the description of the patterns of the animal injuries is wanting in many aspects. From the manuscript, it is not clear how they modelled the determinants of non fatal injury outcomes. Which variables were included in the logistic regression? What level of statistical significance warranted their inclusion into the model? While the use of Odd ratios is justified for this specific study, the authors should rephrase the reporting so as to make it easy for readers to understand. The Injury Severity Index used in this study was designed for victims of burn injuries. Considering the difference in circumstances, consequences and outcomes between victims of burn injuries and animal injuries, would it not have been better to use a more appropriate instrument? I would propose that the authors evaluate the multitude of injury Severity Scores to identify which would be most applicable for animal injuries.</p> <p>Results: The adjusted OR are very weak, inviting questions about the possibilities of con founders and the relevance of the findings. I would propose that the authors review the statistical analysis, especially the selection of variables for building the logistic regression model.</p> <p>Discussion: The authors did not really bring out the patterns of animal injuries in their study population. They also did not compare to available data on the current situation in Bangladesh and in similar settings. This will make it easier to identify successful interventions and their applicability in this setting.</p> <p>Conclusion: I propose the authors rephrase the conclusion to answer the research questions and maybe fit in one or two recommendations.</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Title: Should be "mortality" not "mortalities". Suggest rewording: "Injuries and fatalities associated with animal encounters in rural Bangladesh"

Response: We have made necessary changes to the title. Thank you.

Methods: The study design section needs to be considerably expanded. What was the actual protocol for how family were chosen for the survey? Was every third household? What if there were several homes in close proximity, which ones were chosen. It is unclear how the authors addressed clustering? The survey methodology is of critical importance to describe, as this has important implications for the limitations of the manuscript.

Response: We have added more details about the methodology of the study. Please review revised manuscript.

Methods: Quality control: If the authors present how quality control was performed, they need to describe in their results section the frequency of error identified.

Response: We have revised the quality control section.

Methods: Statistical Methods and analysis: Line 120-122: How were variables chosen for the multivariate analysis? Were all variables entered? Were variables with $P < 0.1$ on univariate analysis chosen? Please explain which threshold was used, and why.

Response: We have revised the analysis section.

Line 121-122: Why wasn't fishers exact test used to compare variables in fatal cases. This should be done and reported.

Response: We have added more details about the variables and Associations were not compared for fatal injury events as only eight deaths were recorded. Please review revised section.

Line 123-129: It is really unclear what injury severity grading scheme was used. Injury severity score (ISS) is the most widely utilized and recognized injury grading scheme. I would strongly suggest the authors re-evaluate their data, and categorize injury in accordance with ISS. This will allow for comparisons between studies.

Response: We have added more details about the injury severity grading. Please review the revised section.

Results: The format of the results section is confusing. The authors describe the SoLiD survey group as a whole, then the fatal cases, then the non-fatal injuries. I would suggest reformatting to describe the SoLiD population first, followed by all animal-injured patients, followed by non-fatal injuries, then fatal injuries. When describing each population, please be consistent in how the data is presented (i.e., age, sex, geographical distribution, occupation, etc.). Changing the order in which this demographic data is presented by sub-group is very confusing.

Response: We have used the same categories for this paper to maintain uniformity across all the publications coming out from this study

Hymenoptera (hornets/wasps/bees) do not "bite", they envenomate. Please correct this throughout the manuscript. This may change your results considerably. Also, please make sure that only true "bites" are categorized as bites.

Response: We have changed bite with sting accordingly. Please review

Table 1: Why is the age group only 18 yrs of age and above? I would suggest breaking up this age group into 18-44, 45-65, and >65. There may be additional interesting interactions with age among the older age groups.

Response: For ages 18 years and above – the data set was arranged such that people 18 – 64 years were categorized into one group. We have used the same categories for this paper to maintain uniformity across all the publications coming out of this study

Table 1: Wealth quantile. Why not use quartiles? This is an easier concept for the reader to understand.

Response: Thank you for your comments. But we wanted have the same categories for this paper to maintain uniformity across all the publications coming out from this study

Line 171-172: This sentence is strangely worded and has to do with how the authors coded their data. Really this should be coded as females had lower odds of injury compared to males.

Response: We have revised the section, please review.

Line 172-174: Generally in the results section, any comparison statement should be accompanied by a corresponding OR/95% CI.

Response: We have revised the section, please review.

Table 3: Reference should be referent

Discussion:

Response: We have added and also made necessary changes in the discussion section. Please review the revised discussion section.

Line 200-201: How do these rates compare to rates in settings like the US, or Europe?

Line 204-208: This is a broad generalization and doesn't seem appropriate without citation. The authors should consider comparing their sex distribution to other studies, this will get the same point across and will be less controversial.

Line 209-211: The authors should go into more detail here as to why they think this is the case.

Line 218-220: This citation seems incorrect. This language is nearly identical to the two manuscripts by Forrester et al describing animal-related injury and the WONDER database. Please change.

Line 224-226: This conclusion is surprising, and doesn't seem supported by the data, at least as presented. Having most rabies cases occur as a result of exposure to farm animals would be unusual. Would be much more common for this to occur as a result of contact with canines, cats, or other wild mammals.

Line 228-236: The limitations section needs to be markedly expanded. There are numerous limitations to this manuscript. How was clustering accounted for the survey methodology? Was selection bias present? Was recall bias present?

Response: We have added more details about the limitations of the study. Please review the revised section.

Reviewer: 2

Reviewer Name: Jose Manuel Ramos-Rincon

Institution and Country: Hospital General Universitario de Alicante, Spain

Please state any competing interests or state 'None declared': None declared

Please leave your comments for the authors below

D bmjopen-2019-030039, entitled "Animal injury mortalities and morbidities: Evidence from a community survey in rural Bangladesh."

Animal injury mortalities and morbidities: Evidence from a community survey in rural Bangladesh

The presented work is a great and extensive work that deals with the epidemiology of bites

The work must be accepted by the depth of the results

the authors have to review the bibliography, since they have different writing errors.

Response: We have revised referencing style. Please review revised bibliography.

The authors have to add limitations in the discussion of the work.

Response: We have added more details about the limitations of the study. Please review the revised manuscript.

For the rest, the work is very good and I congratulate the researchers for this magnificent work and I hope it will be a reference in the future.

Reviewer: 3

Reviewer Name: Randall Loder

Institution and Country: Department of Orthopaedic Surgery, Indiana University School of Medicine,

USA

Please state any competing interests or state 'None declared': None declared

Please leave your comments for the authors below

This is a very interesting manuscript. I have several queries.

Abstract, line 25: Please describe in a little more detail, the political divisions of unions and sub-districts as most readers will not be acquainted with these unless living in Bangladesh or neighboring countries. This could be done in the Materials/Methods, and not necessarily the abstract. A simple map/figure of the country demonstrating where these political divisions are would be very interesting to this reviewer

Response: Changes as recommended and the detail description of the political divisions of unions and sub-districts have been referred with published paper. Also there is a Map of Bangladesh with study site on that paper. Please review.

Abstract, line 34, was the cow/buffalo interaction a bite, like for dogs and snakes? Please clarify.

Response: We have made necessary changes. Please review.

Line 64 – should read “and 70% of those are from pets.”

Response: We have made necessary corrections. Please review.

Line 65 – “being stepped on by and animal.”

Response: We have made the necessary changes. Please review.

Line 95 – if only six months backwards questioning was used for injuries excluding death, then can these results be truly expanded to annual values due to perhaps seasonal differences in the other 6 months? This is especially so when viewing the seasonal variation figure. Just clarify this some.

Response: We have added and also made necessary changes in the methods section. Please review the revised section.

Line 148-149 – please explain how a mortality is a low severity injury? This seems contradictory.

Response: We have made the necessary changes. Please review.

Reviewer: 4

Reviewer Name: Frank Leonel Tianyi Tianyi

Institution and Country: Cameroon Society of Epidemiology, Cameroon

Please state any competing interests or state 'None declared': I declare no competing interests.

Please leave your comments for the authors below

The authors carried out secondary analysis of the SoLiD study and presented findings on the burden of animal injuries in rural Bangladesh, This is a pertinent and neglected cause of injury and I commend their efforts.

General Remarks.

I would propose the final manuscript be read by a native English speaker or the authors could use an editing tool to correct the grammatical and spelling errors in the manuscript.

The in-text references appear after the full stop throughout the manuscript. I would propose the authors read the submission guidelines and modify accordingly.

Abstract:

Methods - I propose the authors include the instrument used for statistical analysis in the abstract

Response: We have made the necessary changes. Please review.

Results - I propose the authors include the specific injury for each animal, for example dog bite as opposed to simply dogs.

Response: We have made the necessary changes. Please review.

Introduction: A brief statement on the outcome of victims of animal injuries in Bangladesh would help the reader understand the importance and significance of the current study.

Response: We have added additional statement on snake-bite situation in Bangladesh. Please review the revised section.

Methods: The authors were precise and clear in their estimation of the magnitude of animal injuries in this population, however, the description of the patterns of the animal injuries is wanting in many aspects.

From the manuscript, it is not clear how they modelled the determinants of non fatal injury outcomes. Which variables were included in the logistic regression?

What level of statistical significance warranted their inclusion into the model?

While the use of Odd ratios is justified for this specific study, the authors should rephrase the reporting so as to make it easy for readers to understand.

The Injury Severity Index used in this study was designed for victims of burn injuries. Considering the difference in circumstances, consequences and outcomes between victims of burn injuries and animal injuries, would it not have been better to use a more appropriate instrument?

I would propose that the authors evaluate the multitude of injury Severity Scores to identify which would be most applicable for animal injuries.

Response: We have added and also made necessary changes in the methods section. Please review the revised section.

Results: The adjusted OR are very weak, inviting questions about the possibilities of con founders and the relevance of the findings. I would propose that the authors review the statistical analysis, especially the selection of variables for building the logistic regression model.

Discussion: The authors did not really bring out the patterns of animal injuries in their study population. They also did not compare to available data on the current situation in Bangladesh and in similar settings. This will make it easier to identify successful interventions and their applicability in this setting.

Response: We have added and also made necessary changes in the discussion section. Please review the revised discussion section.

Conclusion: I propose the authors rephrase the conclusion to answer the research questions and maybe fit in one or two recommendations.

Response: We have made necessary changes in the conclusion and recommendation section. Please review the revised section.

VERSION 2 – REVIEW

REVIEWER	Joseph D Forrester Stanford University, USA
REVIEW RETURNED	22-Jul-2019

GENERAL COMMENTS	<p>Dear Editors and Authors, Thank you for providing me the opportunity to review this revision. The authors have addressed a number of my concerns. Several remaining concerns remain.</p> <ol style="list-style-type: none"> 1) This manuscript should be re-edited for grammar. 2) I would suggest using the term "animal-related injury" consistently throughout the manuscript, rather than animal injury, animal related injury, etc. 3) Line 72- The term "familial animal attack" is non-specific. Please revise. 4) Line 86-89. This study really represents a sub-group analysis evaluating animal-related injury among data previously obtained
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	<p>during the SoLiD survey. Please be accurate and specific.</p> <p>5) Line 94-98. The fact that the SoLiD survey was performed in districts with higher flooding risk may introduce selection bias into the results, particularly when evaluating the snakebite data. This should be discussed in the limitations section.</p> <p>Line 128-9 - Sentence beginning "The Preliminary results..." is grammatically incorrect.</p> <p>Line 144-145: Multiplying by a factor of 2 assuming animal-related injury is consistent throughout the year is a major limitation. What data do the authors have to support that this is appropriate? This should be well-delineated in the limitations section.</p> <p>Line 153-4- Was the significance for variable to be included in the multivariate regression 0.1? Or were results with a $p < 0.1$ considered significant? Please be specific.</p> <p>Line 161: Sentence doesn't appear to be complete as written.</p> <p>Line 199-200: This sentence here is important, and explains the difficulty in just multiplying rates by two to account for recall issues. This is a major limitation of the study....</p> <p>Line 211-212: Saying higher education is protective is not correct. The authors should state the facts...that higher education was associated with a lower odds of injury. It is not clear if this is a "protective" variable or not.</p> <p>Line 214-5: Again, the authors are using the term "risk" incorrectly. The statistical methodology the authors use will never allow them to infer risk or protection, only lesser or greater odds. These terms should be corrected throughout the manuscript.</p> <p>Line 238-39: The sentence beginning "Farming related..." is not complete as written.</p>
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REVIEWER	Frank Leonel Tianyi Cameroon Society of Epidemiology, Cameroon
REVIEW RETURNED	22-Jul-2019

GENERAL COMMENTS	<p>I would love to thank the authors for the time taken to improve the manuscript, while taking into consideration some of the suggestions I made.</p> <p>I would ask them to have review the manuscript for the few grammatical or spelling errors, preferably using an English editing tool or a native English language speaker.</p> <p>Congratulations once more.</p>
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VERSION 2 – AUTHOR RESPONSE

Manuscript ID: bmjopen-2019-030039

Title: "Injuries and fatalities associated with animal- evidence from rural Bangladesh"

The authors thank the Editor for considering our manuscript. We also highly appreciate the reviewers' extensive and constructive comments, which have been used to improve and strengthen the manuscript. Below is a summary of the major revisions and the authors' detailed responses (in italics) to the reviewers' comments (bolded).

Summary of major revisions

Following the constructive comments and suggestions from the two reviewers and we have addressed the comments and suggestions accordingly from our-site, please review.

Responses to Reviewer 4's Comments

- 1. Please state any competing interests or state 'None declared': None declared**

Response: We have changed the state any competing interests accordingly, please review.

- 2. I would ask them to have review the manuscript for the few grammatical or spelling errors, preferably using an English editing tool or a native English language speaker.**

Response: English language editing has been done by a native speaker Eric Schulman, Communications Specialist of Johns Hopkins International Injury Research Unit.

Responses to Reviewer 1's Comments:

- 1. I would suggest using the term "animal-related injury" consistently throughout the manuscript, rather than animal injury, animal related injury, etc.**

Response: We have made the changes as using the term "animal-related injury" consistently throughout the manuscript.

- 2. Line 72- The term "familial animal attack" is non-specific. Please revise.**

Response: We have made the necessary changes.

- 3. Line 86-89. This study really represents a sub-group analysis evaluating animal-related injury among data previously obtained during the SoLiD survey. Please be accurate and specific.**

Response: We have made necessary corrections, Please review

- 4. Line 94-98. The fact that the SoLiD survey was performed in districts with higher flooding risk may introduce selection bias into the results, particularly when evaluating the snakebite data. This should be discussed in the limitations section**

Response: Study sites were purposively selected for higher risk of drowning among children under 5 years of the age as the main objective of the study was to test the effectiveness of two drowning prevention interventions among children under 5 years of age. These sub districts were selected also because some of their populations are already covered under routine demographic and injury surveillance by the implementing partners; this would facilitate participation in and evaluation of the study. (Reference: 11) However, we have accounted for this limitation later in the manuscript.

- 5. Line 128-9 - Sentence beginning "The Preliminary results..." is grammatically incorrect.**

Response: Changed the sentence accordingly.

6. Line 144-145: Multiplying by a factor of 2 assuming animal-related injury is consistent throughout the year is a major limitation. What data do the authors have to support that this is appropriate? This should be well-delineated in the limitations section.

Response: We understand that in our analysis we did not account for the seasonal variation in animal - related injuries as we worked under the assumption that rates are constant throughout. The main reason for this assumption was to be able to compare rates from this study with other research work as well as to keep the methodology consistent across all analyses we conduct on other injury types from the same study. Additionally, as data was collected on a 6-month recall period, we do not have numbers for the 6 months prior to the 6 months recall period – which limits us from presenting the actual seasonal rates. We have addressed this limitation in the manuscript as per lines 260-263.

7. Line 153-4- Was the significance for variable to be included in the multivariate regression 0.1? Or were results with a $p < 0.1$ considered significant? Please be specific

Response: We have made necessary changes to the line, please review.

8. Line 161: Sentence doesn't appear to be complete as written.

Response: We have made necessary corrections, please review.

9. Line 199-200: This sentence here is important, and explains the difficulty in just multiplying rates by two to account for recall issues. This is a major limitation of the study

Response: We have put this sentence in the limitation's section, please review.

10. Line 211-212: Saying higher education is protective is not correct. The authors should state the facts...that higher education was associated with a lower odds of injury. It is not clear if this is a "protective" variable or not.

Response: We have rephrased the sentence, please review.

11. Line 214-5: Again, the authors are using the term "risk" incorrectly. The statistical methodology the authors use will never allow them to infer risk or protection, only lesser or greater odds. These terms should be corrected throughout the manuscript.

Response: We have also rephrased the term "risk", please review.

12. Line 238-39: The sentence beginning "Farming related..." is not complete as written.

Response: We have made necessary changes, please review.

Responses to Editorial requests:

1. **Please revise your title so that it includes your study design. This is the preferred format for the journal**

Response: Revised the title, please review.

2. **Please reformat the abstract so that it follows the structured abstract recommended in the journal's instructions for authors for research articles. See: https://bmjopen.bmj.com/pages/authors/#research_articles**

Response: Formatted the abstract, please review.

3. **Please work to improve the quality of the English throughout your manuscript. We recommend asking a native English-speaking colleague to assist you or to enlist the help of a professional copyediting service**

Response: English language editing has been done by a native speaker Eric Schulman, Communications Specialist of Johns Hopkins International Injury Research Unit.

4. **The strengths and limitations section after the abstract should contain 3-5 bullet points, not longer than one sentence each, that relate specifically to the methods. The findings of the study should not be included in this section**

Response: We revised the study limitations section, please review.

5. **The methods should be reported in enough details for others to reproduce your work. The reporting could be improved in places, such as the development of the questionnaire measures used (e.g. were they designed specifically for this study? Were they pilot tested? Can you include blank copies as supplementary files?)**

Response: Added the questionnaire as supplementary file.

6. **Can you please clarify the relationship between this study and reference 13 and confirm that this study is using different data to the study reported in reference 13.**

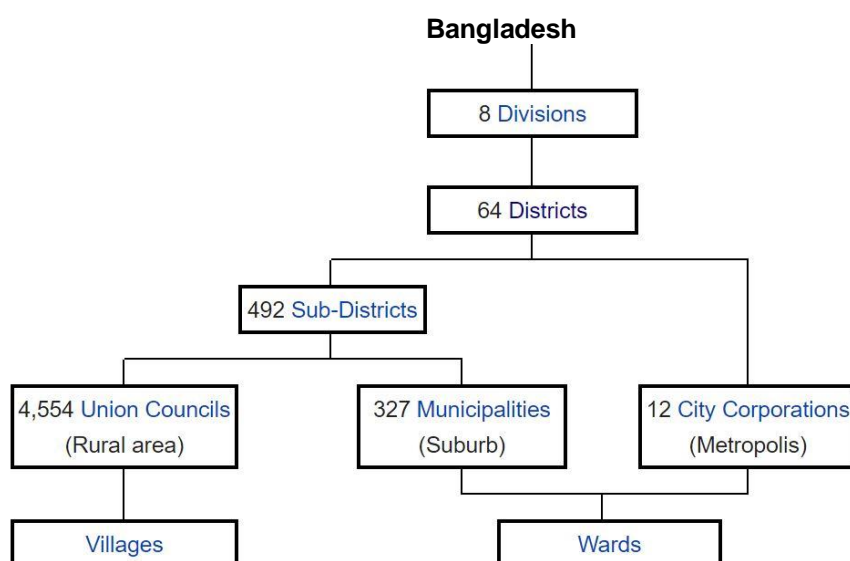
Response: Reference 13 elaborated on the detailed methodology of the study and reported the overall epidemiology of fatal and non-fatal injury profiles across the 1.17 million populations. No details for injury-specific events were described. The current paper uses a sub-set of the dataset from the overall study to further elaborate the epidemiology and circumstantial characteristics of animal-related specific injuries in the same population.

7. **Along with your revised manuscript, please provide a completed copy of the STROBE checklist (<http://www.strobe-statement.org/>) in your manuscript.**

Response: Provided a completed copy of the STROBE checklist.

- 8. Reviewer 3 previously asked you to provide more information on the political divisions of unions and sub-districts in Bangladesh. It is not clear where this information has been provided.**

Response: Bangladesh is divided into 08 Divisions (Bibhag) and 64 Districts (Jela, Zila, Zela), then each districts is divided into Upazila (sub-districts), Municipalities, City Corporations and Union Councils (or rural councils). The diagram below outlines the five tiers of government in Bangladesh:



Link:

<https://bangladesh.gov.bd/index.php>

- 9. As previously requested by reviewer 3, in your manuscript please clearly specify what type of injury was caused by interaction with cow/buffalo.**

Response: Type of injury caused by interaction with cow/buffalo are:

- i. Kick/Step on*
- ii. Horn gore injuries*

- 10. As previously requested by reviewer 3, please revise the text "...and in 70% of those are from pets" to "...and 70% of those are from pets".**

Response: Revised the sentence, please review.

11. In response to a comment from reviewer 3 we note that you have stated that "Since the recall period for non-fatal injuries was 6 months, the rates were annualized by multiplying by a factor of 2 under the assumption that the rate was consistent throughout the year". Please discuss this as a limitation of this study given that animal related injuries may be affected by seasonal differences.

Response: We understand that in our analysis we did not account for the seasonal variation in animal - related injuries as we worked under the assumption that rates are constant throughout. The main reason for this assumption was to be able to compare rates from this study with other research work as well as to keep the methodology consistent across all analyses we conduct on other injury types from the same study. Additionally, as data was collected on a 6-month recall period, we do not have numbers for the 6 months prior to the 6 months recall period – which limits us from presenting the actual seasonal rates. We have addressed this limitation in the manuscript as per lines 260-263.

VERSION 3 – REVIEW

REVIEWER	Joseph Forrester Stanford University
REVIEW RETURNED	23-Aug-2019

GENERAL COMMENTS	<p>Dear Editors and Authors,</p> <p>Thank you for providing the opportunity to review this revised manuscript. The authors have addressed my prior questions and concerns. I just have a couple of smaller remaining suggestions.</p> <p>Abstract: In the primary and secondary measures, incidence is reported, but then in the conclusion, prevalence is discussed. Please be consistent and make sure to use the appropriate term.</p> <p>Strength and limitation #2 - Arguing that this data can be extrapolated to other LMIC countries is a stretch. Animal-related injury is highly regionally, and locally variable. While certain trends may be applicable to other countries, I would hesitate to say that the findings the authors had are "generalizable findings across similar parts of the country and other low- and middle-income countries"</p> <p>Page 6 Line 142-143: Why was a P-value of 0.1 used? Was this p-value of 0.1 just for incorporation into multivariate regression model? What about the p-value for significance overall? Why did they not choose 0.05?</p> <p>Page 6 Line 148-150: This sentence was confusing to read as written. I would suggest that the authors just say that they used a combination of variable to come up with a custom severity index. That would be easier to understand.</p> <p>Results: Generally, it would be nice to have a map of Bangladesh with the surveyed countries marked, perhaps with a heat-indicator to denote where injury rates are high? Also, the way that the authors report numbers and percentages can be confusing. If you are going to use the (n=x,%) format, I would encourage you to make sure this format is consistent throughout the results section.</p> <p>Page 10 Line 191: Biting? This should be both envenomation and biting. Hymenoptera don't bite, they envenomate.</p> <p>Page 10 line 193: Please ensure that you are consistent when reporting the number of significant figures after the decimal.</p> <p>Page 13 Line 237-9: A word appears to be missing from this</p>
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	<p>sentence. Page 13 Line 242-249: This paragraph is quite confusing to read. As the reader, I am left wondering what is the point of the entire paragraph? It reads as if it were just a bunch of random sentences placed together. Perhaps a unifying introductory sentence would help make this paragraph more clear.</p>
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VERSION 3 – AUTHOR RESPONSE

Responses to Reviewer 1's Comments:

1. Abstract: In the primary and secondary measures, incidence is reported, but then in the conclusion, prevalence is discussed. Please be consistent and make sure to use the appropriate term

Response: We have made the necessary changes in the abstract, please review.

2. Strength and limitation #2 - Arguing that this data can be extrapolated to other LMIC countries is a stretch. Animal-related injury is highly regionally, and locally variable. While certain trends may be applicable to other countries, I would hesitate to say that the findings the authors had are "generalizable findings across similar parts of the country and other low- and middle-income countries"

Response: We have revised the study strengths and limitations section, please review.

3. Page 6 Line 142-143: Why was a P-value of 0.1 used? Was this p-value of 0.1 just for incorporation into multivariate regression model? What about the p-value for significance overall? Why did they not choose 0.05?

Response: We have made necessary changes to the line, please review.

4. Page 6 Line 148-150: This sentence was confusing to read as written. I would suggest that the authors just say that they used a combination of variable to come up with a custom severity index. That would be easier to understand.

Response: Changed the sentence accordingly, please review.

5. Results: Generally, it would be nice to have a map of Bangladesh with the surveyed countries marked, perhaps with a heat-indicator to denote where injury rates are high? Also, the way that the authors report numbers and percentages can be confusing. If you are going to use the (n=x,%) format, I would encourage you to make sure this format is consistent throughout the results section.

Response: We have made necessary corrections and added the study map as a supplementary file, please review.

6. Page 10 Line 191: Biting? This should be both envenomation and biting. Hymenoptera don't bite, they envenomate.

Response: We have made necessary changes to the line, please review.

7. Page 10 line 193: Please ensure that you are consistent when reporting the number of significant figures after the decimal.

Response: We have made necessary changes to the manuscript, please review.

8. Page 13 Line 237-9: A word appears to be missing from this sentence.

Response: We have changed the sentence, please review.

9. Page 13 Line 242-249: This paragraph is quite confusing to read. As the reader, I am left wondering what is the point of the entire paragraph? It reads as if it were just a bunch of random sentences placed together. Perhaps a unifying introductory sentence would help make this paragraph more clear.

Response: We have made necessary changes, please review.

Responses to Editorial requests:

1. Title: we recommend that you revise this for clarity, to "Animal-related injuries and fatalities: evidence...."]

Response: Revised the title, please review.

2. Questionnaire: please ensure that this supplementary file is made available to reviewers and readers. Please also ensure that, as requested before, you include in the Methods section more details of the development of the questionnaire measures used (e.g. were they designed specifically for this study? Were they pilot tested? If this is reported elsewhere please provide a reference

Response: we have given reference, (number 13) and also mentioned in the text as see online supplementary appendix, please review.

3. Strengths and limitations should be one sentence each. Please revise accordingly

Response: We revised the study strengths and limitations section as advised, please review.

4. Along with your revised manuscript, please provide a completed copy of the STROBE checklist (<http://www.strobe-statement.org/>) as a supplementary file.

Response: Provided a completed copy of the STROBE checklist.

VERSION 4 – REVIEW

REVIEWER	Joseph Forrester Stanford University, USA
REVIEW RETURNED	16-Sep-2019
GENERAL COMMENTS	The authors have addressed all of my prior comments.