

Review report

BSMMUJ-17.3 – 71345

Bite forces in young dental outpatients in a tertiary hospital in Bangladesh

Rafique T *et al.* (tanzila_rafique@bsmmu.edu.bd)

REVIEW COMMENTS	AUTHOR RESPONSE
<p>[Note: Please write the responses to each point here mentioning line number(s). You must change the manuscript as per your response.]</p>	
<p>A. Mechanical review</p>	
Date sent to author: 3-Feb-24	Date: 22-Feb-24
1. The abstract's length is 309 words; it should not exceed 250.	The abstract's length has been reduced to 249 words on page- 3, line no. 67-96.
2. The introduction is lengthy; it occupies almost one-third of the manuscript's word count. There should not be any separate heading for the objective; It should be part of the Introduction.	Study objectives have been merged in the introduction on pages- 5-7, line no. 115-162.
3. Limitations should appear before the conclusion.	Limitations have been given before the conclusion on page-15, line no. 353-357.
4. Provide the Memo number for the Ethical Clearance.	Memo number for the Ethical Clearance has been included on page-16, line no. 392-393.
5. List all authors for the Reference list.	All authors for the Reference have been included on page -17, line no. 398-416.
6. BSMMUJ does not allow more than six tables and figures combined.	Number of tables and figures has been reduced to a total of 5 tables and 1 figure combined on Pages- 21-25, line no. 535-598.
7. No description of the tables (or figures) is necessary.	Description of the tables (or figures) has been excluded.
<p>Date sent to author: 19-May-24</p>	
<p>Date: 24-May-24</p>	
1. The manuscript file still contains the cover letter and the EQUATOR checklist in the same document. These should be in three separate files.	The documents have been submitted in separate files.
2. The point-by-point response is incomplete and inadequate. For example, the point #1 is "1. The abstract's length is 309 words; it should not exceed 250." But your response is pages 3-4. What does this mean? You should have written, "The Abstract's word count has been reduced to xx." Your response to all other points is similarly framed. You could seek help from the peer review files published along with our articles: https://www.banglajol.info/index.php/BSMMUJ/issue/view/3482	The point-by-point response has been provided adequately.
<p>B. Technical review</p>	
<p>ROUND 1</p>	
Reviewer's name: Mir Nowazesh Ali	
ORCID: 0000-0002-7223-0417	
Date assigned: 1-May-24	
Date submitted: 18-May-24	
Do you have any conflict of interest with the author/s? No	

REVIEW COMMENTS		AUTHOR RESPONSE
Do you wish to be disclosed to the author? Yes		
Comments sent to author (Date: 1-Jun-24)		Date: 2-Jun-24
	Score	[Note: Provide response/s if score is below 6]
How would you rate the originality and depth of the manuscript?	5	We revised the findings of the manuscript and tried to explain to reflect the originality of the work.
Is the manuscript written in a scholarly manner?	4	We revised the manuscript in a scholarly manner.
Does the manuscript have the potential to make a valuable contribution to the world of knowledge?	6	-
Does the manuscript meet ethical standards?	5	We described the ethical issues in details in methods section which may reflect the standard practice now.
The objectives of the study will receive the attention of the Editors. However, the manuscript's writing needs improvement. The authors need to modify the Methods and Discussion sections including the Conclusion. Citations to the tables and figures need more attention.		-
1. T Scan as a tool must be mentioned in the materials and methods section of the abstract. Also, the conclusion of the abstract should match the aims of the study.		T scan tool has been mentioned in the materials and method section of the abstract in line no 40. The conclusion of the abstract has been changed in line no 50-52.
2. We found several repetitions of information in the introduction section. For example, the first line of the second paragraph basically mentions the same information conveyed in the second line of the first paragraph.		Unanswered.
3. Put a reference for the following statement in the third paragraph, "Strong evidence suggests that a decrease in masticatory-functional demands was the primary reason for these changes".		Reference has been given to the specific statement in line no 91-91.
4. The methods section contains a brief description of the Orthodontics Department of BSMMU under the setting subheading. You can omit the paragraph.		Unanswered.
5. Please explain why you choose 20 to 30 years of age group. And you need not to mention, "unwillingness to give the written consent" as an exclusion criterion.		Unanswered.
6. Please include model and Manufacturer name of the T Scanner where appropriate.		Model & manufacturer's name of T scan in line no 151.
7. You can make a paragraph on strategies to overcome biases instead of numbering them.		Strategies to overcome biases has been written in paragraph inline no 169-171.
8. In the result section, the table and figure numbers were mismatched. Please mention the correct table and figure numbers as per requirements.		Tables and figure numbers has been properly given in line no 488-553.
9. In the discussion sections, the results were repeated a few times. Instead of repeating results you should give proper explanations why there are no noticeable differences or why the results become significant. Please put your logic with appropriate reference, why age showed a negative correlation? As a whole, the discussion section requires major revision.		Discussion section has been modified in line no 229-295.
10. Please rewrite the conclusion in accordance with the objectives of the study and your findings.		Unanswered.
11. Include recent references.		Unanswered.

REVIEW COMMENTS	AUTHOR RESPONSE [Note: Please write the responses to each point here mentioning line number(s). You must change the manuscript as per your response.]
12. Grammatical check should be made.	Unanswered.
Reviewer's Recommendation: Resubmit	
Executive editor's name: M Mostafa Zaman	
Comments sent to author (Date: 1-Jun-24)	Date: 2-Jun-24
1. The objective must appear in the Abstract and the Introduction in appropriate places. It should be given in the Background of the Abstract and at the end of the Introduction section of the main text.	Study objectives have been properly given in the abstract and introduction chapters in line no 32-33; 110-115.
2. Each bullet point of the Highlights should be self-explanatory, covering the knowledge gap, study methods, findings, and conclusion without reproducing the Abstract.	Subjects recruitment procedures and age selection of the study subjects has been given in details in line no 136-142.
3. Line 115: The Background is redundant. Drop it.	Dropped as advised.
4. Did you have a sampling frame to draw participants using simple random samples? Please elaborate on the subject recruitment procedure. A simple statement of subject selection using inclusion and exclusion criteria is not enough. Readers must know the representativeness of the patients of all OPD patients of the study period.	Elaborated the subject selection process.
5. The list of variables and data sources/measurements should be under a single heading: Key variable ascertainment. The methods must be elaborated upon.	The list of variables and data sources has been kept under the heading "Key variable ascertainment" in line no 144-168.
6. Ethical concerns should appear just above the statistical analysis section. Remove the texts (and add more relevant information) from the Data source/measurement subsection.	Ethical concern has been given before the Statistical analysis section in line 175-179.
7. Lines 228-231: Make them part of the Discussion in descriptive terms. Do not present these as bullet points.	Discussion section has been changed in line no 224-291.
8. Statistical analysis: Lines 242 and 243 on using linear regression to obtain average time is not apprehensible. Why regression is necessary for obtaining an average?	Revised the statistical section as advised.
9. Text descriptions of the Results section should be shorter, using the main finding of each table/graph. Repetition of the full content of the table or graph is redundant. For example, all r values are weak (<0.4). They could be ignored irrespective of their p values.	Result: Text description of text has been shortened in line no 192-223.
10. Using ANOVA for six to eight groups with very small or zero numbers in most cells is supposed to be meaningless statistics. For guidance, authors are recommended to review relevant articles published in good-quality journals.	ANOVA test result has been changed as per guidance in line no 497-501.
11. Avoid repeating results in the Discussion section.	Re-write the discussion section.
12. Lines 394-413: Drop the list of authors here. You have this on the Title page. You probably misunderstood the mechanical review comments on listing all authors in the reference list!	List of Authors: has been given after the ethical approval instead of the title page in line no 327-362.
13. Ensure all essential information about the authors is available in ORCID. Having just an ORCID number is not enough. Ignore this comment if you already have these for all authors.	Updated in ORCID.

REVIEW COMMENTS	AUTHOR RESPONSE [Note: Please write the responses to each point here mentioning line number(s). You must change the manuscript as per your response.]
14. Table 1 is not essential because the author could mention the weak correlation in one sentence or two.	Removed the table 1.
15. Tables 2-4: Please present data using our style, mean (SD), NOT mean +/- SD. It is not understandable why the numbers are about 50, not 100. Are these due to missing values, or were these not done by all participants?	Revised the tables as per journal's format.
16. Table 5: Revise the title of the table. It should be for both average time and disoccluding time. The presentation of beta, its error, and p-value should suffice. 95% CI is calculable from this information. Therefore, drop the 95% CI of beta that has a mean +/-1.96 SE.	Tables has been modified as per the feedback in line no 477-509.
Executive Editor's decision: Revision required	
ROUND 2	
Executive editor's name: M Mostafa Zaman	
Comments sent to author (Date: 3-Jun-24)	Date: 5-Jun-24
1. Thank you for your prompt response. However, we expect you to respond to all reviewer and editor comments point-by-point. The reviewer submitted 12, and the editor submitted 16 points. All of these (total 28 points) have to respond point-by-point. You framed your response in 17 points. Kindly see the standard responses published along with the articles in the BSMMUJ. Reviewer/editor comments have to be copied in one column. The author's response should be in another column to the right of the review comments. You misunderstood the editor's point number 12. Kindly read the point carefully before responding.	As per the feedback and guidance given in BSMMU J, I am sharing the point-by-point responses with the article text in these attached files. Please find the attached file in word for relevant information.
2. Although you responded point-by-point, a few points are not reflected in the manuscript, and a few are not correctly responded. For example, the title page must have the author's name. You removed it but kept a list just before the Reference section. There is an argument about the statistical analysis, but you have not made any changes in this section. You must mention in the statistical section whether the means reported are adjusted for several variables by linear regression. All your responses should be accompanied by line numbers where the changes are done. In your previous response, you gave line numbers but removed them this time.	As per your suggestions and guidance provided by the BSMMMU journal, I am going to submit the point-by-point responses with the Article text for your kind considerations.
The subsequent points have been addressed that were previously unanswered:	
1. We found several repetitions of information in the introduction section. For example, the first line of the second paragraph basically mentions the same information conveyed in the second line of the first paragraph.	Rewritten and repeated information from the introduction chapter has been removed in line no: 113-132.
2. The methods section contains a brief description of the Orthodontics Department of BSMMU under the setting subheading. You can omit the paragraph.	The description has been shortened in line no: 140-145.

REVIEW COMMENTS	AUTHOR RESPONSE [Note: Please write the responses to each point here mentioning line number(s). You must change the manuscript as per your response.]
3. Please explain why you choose 20 to 30 years of age group. And you need not to mention, “unwillingness to give the written consent” as an exclusion criterion.	Participant selection has been explained and exclusion criteria have been rewritten as per the suggestion in line no: 146-156.
4. Please rewrite the conclusion in accordance with the objectives of the study and your findings.	Study conclusions have been rewritten focusing on the study objectives in line no: 310-315
5. Include recent references.	New references have been added.
6. Grammatical check should be made.	Grammatical check has been made thoroughly.
7. Line 115: The Background is redundant. Drop it.	Have been shortened in line no: 113-132.
8. Did you have a sampling frame to draw participants using simple random samples? Please elaborate on the subject recruitment procedure. A simple statement of subject selection using inclusion and exclusion criteria is not enough. Readers must know the representativeness of the patients of all OPD patients of the study period.	The details mentioning the sampling frame and participants have been given recruitment procedures in line no: 147-149; 154-156.
9. Statistical analysis: Lines 242 and 243 on using linear regression to obtain average time is not apprehensible. Why regression is necessary for obtaining an average?	It was considered that Linear regression can be used to analyze the influence of different factors (e.g., age, sex, presence of prosthesis) on occluding and dis occluding time, which can provide valuable insights beyond simple averages. Line no: 199-201
10. Avoid repeating results in the Discussion section.	Repeating results have been checked and removed in line no: 238-305.
11. Ensure all essential information about the authors is available in ORCID. Having just an ORCID number is not enough. Ignore this comment if you already have these for all authors.	All information are available about the authors ORCID in line no: 339-344.
12. Table 1 is not essential because the author could mention the weak correlation in one sentence or two.	Rewritten in short in line no: 455-456.
13. Tables 2-4: Please present data using our style, mean (SD), NOT mean +/- SD. It is not understandable why the numbers are about 50, not 100. Are these due to missing values, or were these not done by all participants?	Presented as mentioned. The numbers are 50 on the right side of the jaw, 50 on the left side of the jaw (no missing values) and therefore total 100 in line no: 457-468.
Executive Editor’s decision: Revision required	

ROUND 3

Reviewer’s name: Mir Nowazesh Ali		
ORCID: 0000-0002-7223-0417		
Date assigned: 5-Jun-24		
Date submitted: 18-Jun-24		
Do you have any conflict of interest with the author/s? No		
Do you wish to be disclosed to the author? Yes		
Comments sent to author (Date: 18-Jun-24)		Date: 19-Jun-24
How would you rate the originality and depth of the manuscript?	Score	[Note: Provide response/s if score is below 6]
Is the manuscript written in a scholarly manner?	6	-
Does the manuscript have the potential to make a valuable contribution to the world of knowledge?	5	The manuscript has been revised according to the scholarly manner.
Does the manuscript meet ethical standards?	6	-

REVIEW COMMENTS	AUTHOR RESPONSE [Note: Please write the responses to each point here mentioning line number(s). You must change the manuscript as per your response.]
1. Line 73, use “among” instead of “between”.	Instead of “between”, “among” has been used. Line no: 73.
2. Line 81, is it Most responses or respondents?	‘Respondents’ instead of ‘responses’ has been used. Line No: 80.
3. Line 89 to 91, In Conclusion, you should focus on bite forces among the young adult Bangladeshi population.	Focusing on bite forces among the young adult Bangladeshi population has been changed. Line No: 88-91.
4. Line 124, Please check the reference 3. Probably it is not cited properly.	The reference has been cited properly. Line No: 424.
5. Line 161, Please use “The aim” instead of “This aim”.	Has been corrected. Line No: 161.
6. The introduction part should contain a brief discussion on T Scan and other techniques which are used to measure bite forces.	A brief discussion on T scan and other techniques has been included in the introduction part. Line No: 149-159
7. Line 143 to 147, please explain why you put a brief discussion on the Orthodontic Department of BSMMU.	The has been as per the lessons given in the research methodology courses of the Dept. of Public Health, BSMMU. Line No: 184-189.
8. Please inform, how many participants were included in your sampling frame.	The sampling frame has consisted of 300 participants. Line No: 199
9. Line 187, Please elaborate on how you performed the pre-testing.	Initially, the preformed data collection sheet was tested over 15 participants as a pilot study. After that finalization of the data collection sheet was carried out for the collection of data. Line No: 239-241
10. Line 192, Please clarify from where you got the ethical clearance, BSMMU or BMRC?	Ethical clearance was taken from the IRB of Bangladesh Medical and Research Council (BMRC), Mohakhali, Dhaka, Bangladesh Line No: 244-245
11. Line 221, Table II, contains n=106 when measuring excessive force during centric occlusion, but in other movements the n=100. Please check the data. Also, the unit of force used here is missing. Please include it.	Have been checked and corrected. Line No: 282-284.
12. Line 260-261, please explain why there is no significant difference in the overall bite force between male and female participants. Put references in your favour.	Reference has been given in line No: 327-329.
13. Line 289, please discuss why you preferred T Scan over another recording system here.	The T Scan system (Tekscan, Inc., South Boston, MA, United States), a relative occlusal force measuring system, is a set of precision instruments can accurately record the occlusal contact time, force, and area and dynamically analyze the occlusal contact conditions. It consists of a piezoelectric foil sensor which does not interfere with the occlusion when measuring the bite force. Line No: 152-156.
14. Line 305-309, please explain your findings with logic. Why sex and the missing tooth is a significant factor for occluding time and the same with dis occluding time and presence of prosthesis?	The gender factor can influence bite force because muscle mass and size are usually greater in men. The greater muscular potential of the males may be attributed to the anatomic differences. The masseter muscles of males have type 2 fibers with larger diameters and greater sectional area than those of the females.

REVIEW COMMENTS	AUTHOR RESPONSE [Note: Please write the responses to each point here mentioning line number(s). You must change the manuscript as per your response.]
	<p>Line No: 330-333</p> <p>The number of teeth and contact appears to be an important parameter affecting the maximum bite force. The greater bite force in the posterior dental arch may also be dependent on the increased occlusal contact number of posterior teeth loaded during the biting action.</p> <p>Line No: 360-363</p>
<p>15. The conclusion should be in accordance with the aims of the study and findings of the study. Rewrite it.</p>	<p>Rewritten as -</p> <p>Recording tools and methods play a significant role in determining biting force. Measurement of the maximum biting force is essential for therapeutic purposes because the location of the teeth is related to the dynamics of muscle and occlusal forces in all planes. Measuring the maximum (MBF) and bite forces masticatory efficiency (ME) among the young with normal occlusion in a group of Bangladeshi young adults are necessary for comparing the bite forces among the population having abnormalities. As treatment of malocclusions frequently results in vertical forces, any therapy must consider the effects of bite force on vertical stability. Caution is advised when comparing the reported biting force values from the research in line No: 372-379</p>
<p>16. Reference No.19: Author's name should be included. Also, Page numbers (201-208).</p>	<p>Warreth A. Fundamentals of occlusion and restorative dentistry: I. basic principles. Article in Journal of the Irish Dental Association · August 2015. DOI:10.13140/RG.2.1.4515.5043</p> <p>Line No: 507</p>
<p>Reviewer's Recommendation: Revisions required</p>	
<p>Executive editor's name: M Mostafa Zaman</p>	
<p>Comments sent to author (Date: 18-Jun-24)</p>	<p>Date: 19-Jun-24</p>
<p>1. I suggest the title be "Bite forces in young people seeking services in the dental faculty of a tertiary hospital of Bangladesh" or any other title having a similar meaning. It should not be generalized for Bangladeshi healthy young people.</p>	<p>As per the suggestion the title has been changed to, "Bite forces in young people seeking services in the dental faculty of a tertiary hospital of Bangladesh".</p> <p>Line no: 2-3.</p>
<p>2. Avoid single-sentence paragraphs such as line number 139.</p>	<p>Single-sentence paragraph has been avoided.</p>
<p>3. Use sub-headings for the key variable ascertainment</p>	<p>Sub-headings i.e., Bite force, T scanner have been given for the key variable ascertainment.</p> <p>Line no: 203, 213</p>
<p>4. Take lines 186-189 to the Discussion section, where you have discussed possible sources of bias.</p>	<p>Has been taken to the suggested section.</p> <p>Line No: 241-243.</p>
<p>5. All tables should be numbered using Indo-Arabic numerals.</p> <p>a. The correlation coefficients of bite forces with the patient's age are weak or very weak. Therefore, Table 1 could be avoided.</p> <p>b. A one- or two-sentence description in the text should suffice. I suggest dropping Table 1.</p>	<p>All tables have been numbered using Indo-Arabic numerals.</p> <p>Line no: 273, 278, 287, 292, 529, 543, 549, 567.</p> <p>Table 1 has been removed. Few descriptions have been given about this finding. Line no: 261-266</p>

REVIEW COMMENTS	AUTHOR RESPONSE [Note: Please write the responses to each point here mentioning line number(s). You must change the manuscript as per your response.]
6. Discussion: Avoid repeating results in this section.	Repeated results have been checked and removed.
7. Citation numbers should appear in superscripts using the Vancouver style. You have author-year citations in some places.	Citation numbers have been given in superscripts using the Vancouver style.
Executive Editor's decision: Revision required	

C. Editorial decision	Date: 20-Jun-24
Final editorial decision: Accepted	

Editorial Clarification	
Executive Editor's name: M Mostafa Zaman	
Comments sent to author (Date: 21-Jun-24)	Date: 21-Jun-24
<p>1. Review the copyedited file uploaded for discussion tomorrow. Many points are unclear.</p>	<p>As per your valuable feedback and queries, I have carried out the following changes in the manuscript:</p> <p>a. Study conclusion has been changed.</p> <p>b. T scan device presents the bite force in %. It measures the bite forces - during different types of bites, occluding time and disoccluding time and locates the areas where the excessive forces are found. These parameters represent the overall bite force.</p> <p>c. Some recent references have been included.</p>
Comments sent to author (Date: 23-Jun-24)	Date: 27-Jul-24
<p>1. The Abstract has no results on the maximum bite force (Newtons) and beta estimates for factors associated with bite force.</p>	Revised the abstract and mentioned the value of maximum bite force.
<p>2. Highlights do not talk about this particular study. All bullets are given in generic terms</p>	Revised the "Highlights". Page 2
<p>3. The objective is now "the amount of bite forces". What does it mean? Maximum bite force, excessive bite forces? Occlusal or dis-occlusal time are not bite forces.</p>	We have revised the objective and now it is 'To assess the maximum bite force among young patients in dental outpatient department'
<p>4. Methods: The measurement of maximum bite forces is not clearly described. The text description is about excessive bite force (lines 132-134). However, the tables are on maximum bite forces. Please clarify how you calculated the mean of maximum bite force. Is it the average of central occlusal forces at eight sites (a to 8), movement-related forces, right and left central occlusive forces, or something else?</p>	The measurement of maximum bite force is described.
<p>5. You may wish to get help of this article: DOI: 10.7860/JCDR/2014/8801.4837</p>	

<p>6. Statistical analysis: You have two groups to compare the means. A t test instead of ANOVA is recommended. The dependent variable for the linear regression is still confusing. Your table for is for occluding and dis-occluding time, NOT bite forces. This should be maximum bite forces. It may be separately done for the left and right sides. However, using an average of left and right sides will also be meaningful. Therefore, three regression equations (right, left, and overall) can be used.</p>	<p>We have re-analysed and rewrote the statistical section.</p>
<p>7. Your conclusion is generic and does not match the study's objective. A portion of your text could be used as a recommendation for the last sentence of the Conclusion.</p>	<p>Revised the conclusion in line with objective.</p>
<p>Comments sent to author (Date: 15-Aug-24)</p>	<p>Date: 27-Aug-24</p>
<p>Based on the new analysis and our extensive support, a satisfactory product did not emerge. However, we believe that it contains some publishable content. Therefore, we decided to consider it a Research Letter if you agree.</p>	<p>As per your decision, I would like to publish the manuscript as a Research Letter. Please find the revised manuscript for your further consideration.</p>