

**Rizky Merdietio Boedi**

---

**Subject:** [JFOS] Submission Acknowledgement

**Date:** Tuesday, 04 May 2021 at 23.08.22 Western Indonesia Time

**From:** Vilma Pinchi

**To:** Rizky Merdietio Boedi

Dear, Dr. Mr. Rizky Merdietio Boedi:

Thank you for submitting the manuscript, "APPLICATION OF THIRD MOLAR MATURITY INDEX FOR INDONESIA MINIMUM LEGAL AGE OF MARRIAGE" to The Journal of Forensic Odonto-Stomatology - JFOS. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

Manuscript URL: <http://ojs.iofos.eu/index.php/Journal/author/submission/1349>

Username: rizkymerdietio

Please check that you have uploaded:

- a title page with complete name, surname and affiliations of the Authors
- a manuscript without any reference to authors for blind review process
- pictures must be uploaded separately and must have high resolution

If you have any questions, please contact me. Thank you for considering this journal as a venue for your work.

Prof. Vilma Pinchi

Editor of JFOS

Prof. Vilma Pinchi

Editor, JFOS

The Journal of Forensic Odonto-Stomatology

<http://www.iofos.eu/ojs/index.php/Journal>

**Rizky Merdietio Boedi**

---

**Subject:** [JFOS] Editor Decision

**Date:** Sunday, 24 October 2021 at 13.35.18 Western Indonesia Time

**From:** Vilma Pinchi

**To:** Rizky Merdietio Boedi

Dear Dr. Mr. Rizky Merdietio Boedi:

the reviewers have commented on your submission to The Journal of Forensic Odonto-Stomatology - JFOS, "APPLICATION OF THIRD MOLAR MATURITY INDEX FOR INDONESIA MINIMUM LEGAL AGE OF MARRIAGE".

You can find below the Reviewers' comments. If you are ready to revise of your manuscript please send the revised version of your paper within 24th November 2021

When all the needed material is ready please log in JFOS Journal Manager as Author, retrieve the original submission and upload:

- 1 - a tracked version of your revised manuscript that shows the modifications done compared to the original submission
- 2 - an untracked version of the revised manuscript
- 3- manuscript must include abstract, keywords and Tables (with captions) and references, but no data of Authors
- 4 - a title page with complete name, surname and affiliations of Authors; the indication of the corresponding Author with his/her email address
- 5- pictures or images must be uploaded separately and must have high resolution (> 300 dpi)
- 6 - a detailed answer to reviewers' comments
- 7 - the declaration of no conflict of interest and that the research is original and has never been published.

Please consider the Guidance for Authors before submitting the revised paper.

Best regards

Vilma Pinchi  
University of Firenze  
[vilma.pinchi@unifi.it](mailto:vilma.pinchi@unifi.it)

Reviewer # 1

The matter of discussion is undoubtedly interesting and the IM3 method deserves practitioners' attention and further deeper research. However, I'd say that: 1. the sample on which the conclusions of the paper are founded is too small; the male sample is just of 70 individuals - too few if we consider the nine age cohorts. 2. the discussion is merely about the description of the results without any other due consideration. there should be shown evidence of the difference of the results from the the original IM3 method - threshold 18, cut off 0.8 - with a comparison with those coming from other researches. The male/female cut off difference should

be properly explained

3. authors' conclusion "Utilizing I3M measurement technique with cut-off value of 0.08 for male and 0.09 for female can be used as a method to differentiate an individual age, whether he/she is below or above the minimum age of marriage of 19 years old" must therefore be changed according to the weak evidence supported by the too small sample of the research

4. Proper english proofreading needed before any further submission.

Reviewer # 2

Reviewers' comments

This is an interesting study on the validation of age estimation methods already widely analysed but for different cut-offs. However, some limitations affect the research:

1. It is necessary to proceed with careful copy-editing since the abstract and the entire manuscript contain some grammatical, syntactic and formal errors. For example, starting from the abstract, "for woman" should be "for women"; "I3M value ... were calculated" should be "I3M values ... were calculated" or "I3M value ... was calculated"; , etc

Furthermore, some concepts are not easily understandable, given the mixed use of tenses in past and present forms.

1. It is not advisable to use the FDI two-digit system numbering to indicate the left mandibular third molar on the entire manuscript as it is not universally used. Please correct the references in the manuscript or define an abbreviation.

Page 1, in the introduction: "This improvement in legal law has few shortcomings; some individuals in rural places might not have legal documentation or recorded birth date in a medical chart,<sup>6</sup> and usual practices of forging an individual age to reach the minimum age of marriage,<sup>7</sup> Therefore, an implementation of age estimation method was mandatory to reduce the risk of child marriage".

This statement seems contradictory, and I think it needs to be improved as this is the rationale behind your study. I believe that your intent is to justify the need to verify a valid age estimation method to reduce the risk of document falsification or not to penalize those who do not have valid documentation for administrative reasons. At this point, the question is whether the practice of scientific age estimation is actually envisaged and widely used in the case of legal marriages. In a next step of the introduction, you emphasize that dental age estimation is not common practice and just applied in a few cases, did I get it right?

"Application of dental age estimation techniques in Indonesian court was still limited".

If it is so, some critical issues arise regarding your rationale. On the one hand, the validation of an age estimation method does not actually resolve the few limitations relating to the effectiveness of the new law but rather the new law entails a new age threshold of legal interest for women which was previously at 16 years and now at 19. On the other hand, the legal age threshold of interest for males is therefore the same after the new introduction (19 years), so which methods were used until now to determine if a male was older or younger than 19 years old? Based on these notions, is the application of the I3M method a new issue only for the 19-year-old threshold in females, or the key point is that there are no valid studies in

general verifying the applicability of this method on the Indonesian population?

The choice of the estimation method is appropriate and well-argued, but it is necessary to emphasize the contribution that this study intends to bring: implementing the applicability of the I3M dental age estimation to the outcome of the new legal thresholds or deriving and verifying a new cut-off value of I3M to predict if an individual is older or younger than 19 and the different reliability with respect to the methods currently used, as referred to in the scope of the research. Please, edit the abstract accordingly if necessary.

1. Page 2, MATERIALS AND METHODS: The sample is unbalanced as the number of males is half of the females. This implies that in some age cohorts a small number of males has been estimated and males over the age of 19 are much less represented than those under 19, unlike females (Figure. 1 of the "Results"). The same problem obviously occurs in the testing sample on which the control estimates were performed as it was randomly selected on a heterogeneous group. This limitation must be clearly expressed in the discussion, and it would be appropriate to specify the research as a "pilot study" in the title. The small size of the male sample and the heterogeneity of the cohorts allow accurate estimates only for some cohorts of ages mainly for females. The "cross-validation" technique developed is an analysis that can be used in the presence of a good number of the sample observed (in the tasting group some male cohorts present only one individual).

1. 5. Page 2, MATERIALS AND METHODS: "Sample age was derived from the fraction of date of birth and date of exposure"

Probably this sentence presents a typo because the two ages (date of birth and date of exposure) have been subtracted and not divided, I guess.

1. Page 5, RESULTS: "Better overall performances (Se, Sp, PPV, NPV, LR+ and LR-) were achieved in the female testing dataset (Table 2-4). Bayes post-test probability shows that the probability of male and female subject with  $I3M \leq$  the indicated cut-off value for each sex was 19 years old or older were 0.87 and 0.92, respectively".

The differences in performances and the different I3M cut-off values calculated could be due to the different composition of the sample (see previous comment). These results must be commented in the "Discussion" section in relation to the limitation of the sample and the relativity of the measurements carried out on the male sample which above the threshold of 19 years is much lower than for children under 19 (unlike females).

1. 7. Page 7, DISCUSSION: "Our finding suggests that the development of the third molar in the Indonesian population are slower than other countries."

In addition to the gender variable, it would be appropriate to specify that the original Cameriere's I3M method uses the cut-off technique to estimate the threshold of 18 years and not the 19 years. It is necessary to insert a comparison with the original method in the discussion and to presents the new results by comparing them with those of other studies: if the comparison with other studies on I 3M cut-off 19 on Indonesian population is not possible because non-existent, you have to explanate and highlight the

novelty of your study (see previous comments).

1. 8. Page 7, DISCUSSION: “In this study, the Sp value was found higher than the Se value. Therefore, the probability of an individual who is < 19 years old to be able to marry (FP) is smaller. After all, avoiding a higher FP value was commonly done in the field of age estimation”.

The Se value is very low in males and this means that the method leads to obtaining a greater number of false positives (subjects greater than 19) which therefore are not able to marry, not solving the problem of those who do not have valid documentation; on the other hand, the great difference between male Sp and Se could be due precisely to the different numbers between male subjects younger or older than 19 years old. It would be advisable to include a section in the discussion that presents the meaning of the errors and the sensitivity and specificity of the age estimation methods.

1. Page 8, CONCLUSIONS: “Utilizing I3M measurement technique with cut-off value of 0.08 for male and 0.09 for female can be used as a method to differentiate an individual age, whether he/she is below or above the minimum age of marriage of 19 years old. Future studies may incorporate other testing system, such as psychological evaluation, to further improve the quality of minimum age of marriage assessment.”

The conclusions need to be modified given the weak evidence on which the study is based considering the small sample; the difference in cut-off between males and females and the difference of Se and Sp in the method must be better spoiled. Future studies will need to incorporate other testing systems, such as psychological assessment, to further improve the quality of the assessment of the minimum age for marriage and overcome the limits of the current results available for the 19-year estimate.

Prof. Vilma Pinchi

Editor, JFOS

The Journal of Forensic Odonto-Stomatology

<http://www.iofos.eu/ojs/index.php/Journal>

**Rizky Merdietio Boedi**

---

**Subject:** APPLICATION OF THIRD MOLAR MATURITY INDEX FOR INDONESIA MINIMUM LEGAL AGE OF MARRIAGE REV1  
**Date:** Monday, 01 November 2021 at 09.18.19 Western Indonesia Time  
**From:** Mr. Rizky Merdietio Boedi  
**To:** Vilma Pinchi  
**Attachments:** Resubmission Round 1.docx, Resubmission Round 1 Tracked Changes.docx, Response Letter.docx, Figure 1.docx, Figure 2.docx, Figure 3.docx, Declarations of Interest.docx, Title Page 1.1.docx

Dear Prof Pinchi,

We would like to thank all the experts involved in the revision of this manuscript. The new requested version was uploaded through the online journal system. The remarks provided by the reviewers were followed, and changes were performed accordingly in the manuscript.

Thank you once more for your attention and time.

Cordially,

Research team

Prof. Vilma Pinchi

Editor, JFOS

The Journal of Forensic Odonto-Stomatology

<http://www.iofos.eu/ojs/index.php/Journal>

**Rizky Merdietio Boedi**

---

**Subject:** [JFOS] Editor Decision # 1349

**Date:** Sunday, 23 January 2022 at 16.54.11 Western Indonesia Time

**From:** Vilma Pinchi

**To:** Rizky Merdietio Boedi

Dear dr. Rizky Merdietio Boedi:

We have reached a decision regarding your submission to The Journal of Forensic Odonto-Stomatology - JFOS, "APPLICATION OF THIRD MOLAR MATURITY INDEX FOR INDONESIA MINIMUM LEGAL AGE OF MARRIAGE".

Our decision is to accept your submission for publication.  
You will be furtherly contacted ito review the galley proof of your paper.

Best regards

Vilma Pinchi  
University of Firenze  
[vilma.pinchi@unifi.it](mailto:vilma.pinchi@unifi.it)  
Prof. Vilma Pinchi  
Editor, JFOS  
The Journal of Forensic Odonto-Stomatology  
<http://www.iofos.eu/ojs/index.php/Journal>