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Editor in Chief, Sports Biomechanics

Manuscript Writing & Reviewing for Sports Biomechanics

XXVIIIth International Society of Biomechanics in Sports Conference
July 19-23, 2010
Publications

Publications = the ultimate means of dissemination of research findings

Peer-review process = safeguard of scholarship
  - Must survive the peer-review process

SB accept ratio = 30%
The Holy Trinity

Authors

Submission & Decision

Editors

Coordination & Evaluation

Reviewers

Comments & Responses
General Principles

Read/follow the Instructions for Authors (http://mc.manuscriptcentral.com/rspb) & checklist.

Organize it tightly!

Concise but sufficiently in detail!
  - No non-essential items
  - Sufficient details for unique items

Succinct writing!
  - Strategic use figures, tables, & equations
Maximize manuscript’s readability!
  - Abbreviations & symbols
  - Paragraph lengths

Reader-friendly!
  - Reader-oriented writing
  - Coach-friendly

No spelling/grammatical errors!
  - Spelling checker
  - Proofreading
Title & Abstract

Informative & specific title
- Not too broad nor abstract
- Reflecting study purpose/design or finding

Key aspects only in the abstract
- Purpose
- Key methods
- Key results (values & statistical results)
- Conclusion
- No unnecessary details
- No explanatory statement
Methods

- **Setup & Data Collection**
- **Processing**
- **Variables (Independent & Dependent)**
- **[Statistical] Analysis**

- Participants
- Model & Computation

“External Validity”

“Internal Validity”

No unfocused shotgun approach!
Common Statistical Issues

Small sample size

Multiple decisions & family-wise Type I error
- Knudson (2009)
- Number of variables

Correlation for validity

Correlation/regression with heterogenous groups

Trial repetition/subject/event as a factor in ANOVA
Results

As concise as possible
- Answers to the study questions

Results only
- No method item
- No discussion item

Use tables & figures strategically
- Numerical data in tables & figures
- Main effects in the text
- No redundancy among text, figures, & tables
- Refer tables & figures parenthetically
Numeric Data
- SI units
- Reasonable number of decimal places

Statistical Significance
- Do not distinguish ‘p < .01’ from ‘p < .05’
- Do not present ‘(p<0.05)’ repeatedly
- No “almost significant”

Meaningfulness of the outcome
- Effect size (Knudson, 2009)
# Tables

Table III. Summary of the pelvis motion data ($N = 12$; in degrees).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Target distance condition</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Short</td>
<td>Normal</td>
<td>Long</td>
<td>Short</td>
<td>Normal</td>
</tr>
<tr>
<td>Peak anterior-tilted position</td>
<td>16.5 ± 5.4</td>
<td>18.0 ± 6.1</td>
<td>18.1 ± 4.9</td>
<td>16.5 ± 5.4</td>
<td>18.0 ± 6.1</td>
</tr>
<tr>
<td>Peak posterior-tilted position</td>
<td>40.9 ± 6.9</td>
<td>41.9 ± 5.7</td>
<td>46.8 ± 10.0</td>
<td>40.9 ± 6.9</td>
<td>41.9 ± 5.7</td>
</tr>
<tr>
<td>Posterior tilt range</td>
<td>57.3 ± 7.8</td>
<td>59.9 ± 6.0</td>
<td>64.9 ± 9.5</td>
<td>57.3 ± 7.8</td>
<td>59.9 ± 6.0</td>
</tr>
<tr>
<td>Peak right-tilted position</td>
<td>9.9 ± 4.9</td>
<td>11.8 ± 5.6$^\delta$</td>
<td>11.3 ± 6.0$^\delta$</td>
<td>9.9 ± 4.9</td>
<td>11.8 ± 5.6$^\delta$</td>
</tr>
<tr>
<td>Peak left-tilted position</td>
<td>16.8 ± 9.9</td>
<td>16.4 ± 6.5</td>
<td>16.4 ± 8.0</td>
<td>16.8 ± 9.9</td>
<td>16.4 ± 6.5</td>
</tr>
<tr>
<td>Left tilt range</td>
<td>26.7 ± 12.2</td>
<td>28.2 ± 9.9</td>
<td>27.7 ± 12.7</td>
<td>26.7 ± 12.2</td>
<td>28.2 ± 9.9</td>
</tr>
<tr>
<td>Peak right-rotated position</td>
<td>54.0 ± 9.7</td>
<td>57.9 ± 10.6$^\delta$</td>
<td>55.8 ± 9.9</td>
<td>54.0 ± 9.7</td>
<td>57.9 ± 10.6$^\delta$</td>
</tr>
<tr>
<td>Peak left-rotated position</td>
<td>65.8 ± 9.7</td>
<td>69.9 ± 11.3</td>
<td>80.1 ± 16.0$^{#}$</td>
<td>65.8 ± 9.7</td>
<td>69.9 ± 11.3</td>
</tr>
<tr>
<td>Left rotation range</td>
<td>119.9 ± 16.9</td>
<td>127.8 ± 14.9</td>
<td>135.9 ± 18.2$^\delta$</td>
<td>119.9 ± 16.9</td>
<td>127.8 ± 14.9</td>
</tr>
</tbody>
</table>

Data are presented in $M \pm SD$ format; $^\delta$ Significantly different from the matching Short condition ($p < 0.05$); $^\#$ Significantly different from the matching Normal condition.

**Intuitive organization**

**Concise & meaningful caption at the top**

**Statistical significance**

**Strategic use of symbols & abbreviations**

**Explanatory statements & legends in table footnotes**
Figure 1. Reconstruction error due to inter-camera time offset. A marker was observed at $P_1$ by camera 1 but at $P_2$ by camera 2 due to inter-camera time offset. As a result the reconstruction algorithm generates the reconstructed marker position at $P_r$. Position $P_r$ can be projected back to ....

Meaningful & in-depth caption including legends
Discussion and Implications

Research purpose/question-centric
- In-depth interpretation of the results
- Critical comparisons with previously reported results
- No ungrounded subjective speculation

Limitations of the study
- Limitations vs. validity

Practical implications
- Practitioner-friendly
Conclusion

Brief summary and conclusions

From the findings of the current study only
- No ungrounded speculation

Suggestions for the future studies
Citations and References

Key references only
- No citation for common statements
- No use of unrelated reference
- No incomplete reference

Cross-check citations & references
- No missing citation or reference
- No mismatching reference
- Reference manager software

SB-specific citation & reference formats
- Instructions for Authors
After Finishing Writing...

Proofreading
- Check spelling/grammatical errors
- Non-native speakers: seek professional help!

Circulate it within your laboratory first.

Circulate it outside your laboratory.
- Non-biomechanists & practitioners
Paper Submission to SB

Online submission at SB Manuscript Central (http://mc.manuscriptcentral.com/rspb):
- Create your account first.
- Register your keywords showing your expertise.

Read the author instructions carefully.
- No excuse for not following the instructions

Include preferred & non-preferred reviewers.
- Experts in the content area, not someone you know
Response to Reviewers’ Comments

Take advantage of the comments.
- No emotional reaction!
- Reviewers’ comments will strengthen your paper.

Respond point by point.
- Include both the comment and your response.
- Every comment: may use “See the response to ... above.”
- Ultimately through the revised manuscript

Elaborate your responses.
- Provide details of the changes.
- Include the changed text in the response.
Actions
- Adoption of the suggestion
- Clarification
- Rebuttal

Rebuttal
- Do not ever try to educate the reviewer.
- Understand reviewer’s point clearly.
- Present supporting evidences (literature, data, etc.).
- Make changes proactively.

Consult the editor, if necessary.
How to Review a Paper
Peer Review

Professional service:
- To the editor
- To the authors

Quality of the review = quality of the journal

Key principles
- Objective
- Professional
- Fair
- Balanced: comments vs. recommendation
Recommendation

- Accept
- Minor revision
- Major revision
- Reject & resubmit
- Reject
Brief summary of the study
- [Suitability of the manuscript]

General comments
- Global aspects
- Items not included in the specific comments

Specific comments
- Line numbers & specific points

Recommendation
Welcome to the *Sports Biomechanics* manuscript submission site. To Log In, enter your User ID and Password into the boxes below, then click "Log In." If you are unsure about whether or not you have an account, or have forgotten your password, enter your e-mail address into the "Password Help" section below.

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E-Mail Address: [input field] [Go]
Introduction:
Justification

Methods:
Tools/
Study Design

Results:
Results/Answers

Discussion:
Interpretation/
Discussion

Conclusions
Correlations for Validity

$r = 1.0$

Measured (Golden Standard)

Model-predicted
Regression for Heterogenous Groups

Group 1

Group 2

Group 3

Variable 2

Variable 1

(r < 0)

(r = 0)

(r > 0)