



**ILLINOIS STATE
UNIVERSITY**
Illinois' first public university

School of Kinesiology and Recreation

250 McCormick Hall
Campus Box 5120
Normal, IL 61790-5120
Phone: (309) 438-8661
Fax: (309) 438-5559

Dr. Phillip Steindel,
Review Editor
Journal of Visualized Experiments

Mar 15, 2019

Dear Dr. Phillip Steindel,

I am pleased to resubmit our research method article entitled "Measuring biophysical and psychological stress levels following visitation to three different locations with differing levels of "nature" " by Dr. Yun Chang, Dr. Alan Ewert, Dr. Lisa Kamendulis, and Dr. Barbara Hocevar for consideration for publication in *Journal of Visualized Experiments*.

In this major revision, we have addressed all reviewers' and editorial comments. Detailed responses are prepared in a separate file (See file "Authors Responses"). The critical components and limitations of our study have also been discussed in this revised manuscript. We believe that this manuscript is now appropriate for publication by the *Journal of Visualized Experiments*.

This manuscript has not been published and is not under consideration for publication elsewhere. We have no conflicts of interest to disclose.

Please address all correspondence concerning this manuscript to me at ychan12@ilstu.edu.

Thank you for your consideration.

Sincerely,

Yun Chang

Yun Chang, PhD
Assistant Professor, School of Kinesiology and Recreation
Illinois State University
Normal, IL 61790-5120
ychan12@ilstu.edu

JoVE Reviewer(s)' Comments to Author and Authors' Responses

Editorial Comments:

Editorial Comments

Our responses

General:

[\[Author's Response\]](#)

1. Please take this opportunity to thoroughly proofread the manuscript to ensure that there are no spelling or grammar issues.

[The authors have thoroughly proofread to ensure there is no spelling or grammar issues.](#)

2. Please ensure that the manuscript is formatted according to JoVE guidelines—letter (8.5" x 11") page size, 1-inch margins, 12 pt Calibri font throughout, all text aligned to the left margin, single spacing within paragraphs, and spaces between all paragraphs and protocol steps/substeps.

[\[Author's Response\]](#)

[The manuscript has been formatted according JoVE guidelines.](#)

4. Please include at least 6 keywords or phrases.

[\[Author's Response\]](#)

[The authors have updated the keywords. There are 7 keywords in our final manuscript.](#)

5. JoVE cannot publish manuscripts containing commercial language. This includes trademark symbols (™), registered symbols (®), and company names before an instrument or reagent. Please limit the use of commercial language from your manuscript and use generic terms instead. All commercial products should be sufficiently referenced in the Table of Materials and Reagents.

[\[Author's Response\]](#)

[The authors have removed all trademark symbols, registered symbols, and company names from the manuscript. All commercial products are referenced in the material/equipment table.](#)

For example: Pointe Scientific, Bio-Tek Synergy, DetectX®, Arbor Assays

Short Abstract:

[\[Author's Response\]](#)

1. Please ensure the short abstract is 10-50 words long.

[The short abstract meets the requirement of word limits.](#)

<p>Protocol:</p> <p>1. Please include an ethics statement before the numbered protocol steps, indicating that the protocol follows the guidelines of your institution's human research ethics committee.</p>	<p>[Author's Response]</p> <p>An ethics statement has been included in the manuscript before the numbered protocol steps (line 71-72).</p>
<p>2. Please ensure that all text in the protocol section is written in the imperative tense as if telling someone how to do the technique (e.g., "Do this," "Ensure that," etc.). The actions should be described in the imperative tense in complete sentences wherever possible. Avoid usage of phrases such as "could be," "should be," and "would be" throughout the Protocol. Any text that cannot be written in the imperative tense may be added as a "Note." However, notes should be concise and used sparingly. Please include all safety procedures and use of hoods, etc.</p>	<p>[Author's Response]</p> <p>The protocol section meets the requirements.</p>
<p>3. There is a 10 page limit for the Protocol, but there is a 2.75 page limit for filmable content. Please highlight 2.75 pages or less of the Protocol (including headers and spacing) that identifies the essential steps of the protocol for the video, i.e., the steps that should be visualized to tell the most cohesive story of the Protocol. Remember that non-highlighted Protocol steps will remain in the manuscript, and therefore will still be available to the reader.</p>	<p>[Author's Response]</p> <p>The filmable content has been highlighted in the revised manuscript. Please see page 3 to 5.</p>
<p>4. For each protocol step/substep, please ensure you answer the "how" question, i.e., how is the step performed? Alternatively, add references to published material specifying how to perform the protocol action. If revisions cause a step to have more than 2-3 actions and 4 sentences per step, please split into separate steps or substeps.</p>	<p>[Author's Response]</p> <p>The protocol section meets the requirement.</p>

Figures:	[Author's Response]
1. Please cite Figure 1 in the main text.	1. Figure 1 has been cited in the main text. See line 212.
2. Figure 2: Please use 'mL', not 'ml'.	2. Figure 2 have been revised.
Discussion:	[Author's Response]
1. Please also discuss critical steps of the protocol here.	Critical steps of the protocol have been discussed in the discussion section. Please see page 10 (line 344-349).
References:	[Author's Response]
1. Please do not abbreviate journal titles.	All journal titles have been revised in the reference list.

Reviewers' Comments:

Reviewer #1 Comments	Our responses
<p>Reviewer #1 Manuscript Summary:</p> <p>It is not suitable for papers because the experimental method and design are not clear (time axis of experiment, selection of subjects, Ethics Review Committee informed consent, control of behavior, momentum etc.), therefore the result is unreliable.</p>	<p>[Author's Response]</p> <p>Thank you for your comments. The authors feel that the critical components of this study are the way the saliva was collected (not using the salivette) and the process we used for recruiting (selection) and interviewing the participants. This study followed the guidelines of Human Research Protection Program and approved by IRB.</p>
Reviewer #2 Comments	Our responses
<p>Manuscript Summary:</p> <p>The manuscript is novel and interesting. The mixed methods approach provides grounds for interesting</p>	<p>[Author's Response]</p> <p>Thank you for your comments. Here are our responses toward Reviewer #2's comments:</p>

discussion and insights are provided for further research.

1. line 24. I suggest revising the first line of the short abstract as I do not believe this to be the purpose of the paper in its entirety - the purpose is also to consider the benefits of different contexts (three study sites).
2. insert reference on page 2 to Kaplan and Talbot seminal work in the 1980s.
3. page 11. adjust the final paragraph of the conclusion to be two paragraphs - one that concludes on methods and one that concludes on findings and relates them to the substantive literature.

1. The first line of the short abstract has been revised. Please see line 25-27.
2. The reference has been added as number 10. Please check the references in page 13. It is also cited in the main text (see page 2).
3. Conclusion has been revised into two paragraphs and the findings have been related to added literatures. Please check line 391-404.

Reviewer #3 Comments

Our responses

Manuscript Summary:

The manuscript describes a between-subjects pre-post-test study (non-random) of change in salivary cortisol and alpha amylase after visit to natural, semi-natural and urban environments.

1. Did authors control for time of day? Was saliva sampled at the same time of day between sites? How do we know that the reduction at natural site is not just do to diurnal pattern?
2. What biases could result from the sampling strategy - non-random sample recruited at each site.
3. Limitations from study design are not discussed.

[Author's Response]

Thank you for your comments. Here are our responses to Reviewer #3's major concerns:

1. The authors have added these limitations to the revised manuscript to discuss the fidelity of the biophysical data collection (see line 408-414). While visitors were engaged in the saliva collection during similar times, namely mid-to-late afternoon through early evening to account for the diurnal cycle of particularly cortisol, the researchers attempted to identify only those potential subjects who had not eaten anything two hours or more prior to collecting saliva.
 2. This limitation has been added to the revised manuscript (see line 415-418). Nonsampling error
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might occur due to not being able to sample potential respondents who can at different times.

3. The authors have discussed several limitations in the revised manuscript to discuss the fidelity of the biophysical data collection. Please see page 12 (line 408-423 for detailed explanation).
