Davoli Davoli Society, Boston, MA. If the task in the previous trial was the same as the trial.
There were three types of letter strings:

**Task:**

8

Posture was counterbalanced and manipulated within participants.

**Task:** Participants indicated "square" or "triangle" or "yellow" or "blue" using buttons. If the task in the previous trial was the same as the task in the current trial, it was a no-switch trial. If the tasks differed, it was a switch trial.

**Does standing affect Stroop interference?**

- Participants were presented with a letter string that was displayed in either red or green font.
- There were three types of letter strings:
  - Congruent RED
  - Incongruent RED
  - Neutral XXX
- Posture was counterbalanced and manipulated within participants.
- **Task:** Participants indicated "red" or "green" with buttons. They responded to the font color, not the word itself.

Stroop interference was eliminated when participants completed the task while standing.

**Experiment 1**

**Interaction:** (F(2, 26) = 4.73, p = .018, n = 14)

<table>
<thead>
<tr>
<th>Posture</th>
<th>Congruent</th>
<th>Neutral</th>
<th>Incongruent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sitting</td>
<td>390 ms</td>
<td>410 ms</td>
<td>420 ms</td>
</tr>
<tr>
<td>Standing</td>
<td>360 ms</td>
<td>380 ms</td>
<td>390 ms</td>
</tr>
</tbody>
</table>

Response Time (ms)

**Conclusions**

- Standing alters performance on tasks that require selectivity of attention.
- Specifically, Stroop interference and task-switching cost are reduced when standing. Visual search rate slows.
- These results are similar to findings related to changes in cognition in the near-hand space. A similar mechanism may be involved.
- Perhaps the increased stress and load involved in standing is responsible for these changes.

**References**


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**Experiment 2**

**Does standing affect task-switching performance?**

- A square composed of either a solid or dashed line appeared, indicating to participants whether to respond to the shape or color of the upcoming target.
- Then a yellow or blue square or triangle appeared.
- Posture was counterbalanced and manipulated within participants.
- **Task:** Participants indicated "square" or "triangle" or "yellow" or "blue" using buttons.

There was less of a reduction in accuracy in switch compared to no-switch trials in the standing posture compared to the sitting posture, indicating reduced switch cost when standing.

**Interaction:** (F(1, 11) = 5.9, p = .033, n = 12)

<table>
<thead>
<tr>
<th>Condition</th>
<th>No Switch</th>
<th>Switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posture</td>
<td>Sitting</td>
<td>Standing</td>
</tr>
</tbody>
</table>

Response Time (ms)

**Experiment 3**

**Does standing affect visual search performance?**

- A search display composed of 4 or 8 block letters appeared. There was one target (S or H) and either 3 or 7 distractors (E or U).
- Posture was counterbalanced and manipulated within participants.
- **Task:** Participants indicated "S" or "H" with buttons.

Visual search rate was slower when participants were standing compared to when they were sitting.

**Interaction:** (F(1, 11) = 4.73, p = .052, n = 30)

<table>
<thead>
<tr>
<th>Set Size</th>
<th>4</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>400 ms</td>
<td>420 ms</td>
</tr>
</tbody>
</table>

Response Time (ms)