Author's response to reviews

Title: Effect of Body Mass Index on work related musculoskeletal discomfort and occupational stress of computer workers in a developed ergonomic setup

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Version: 4 Date: 29 March 2011

Author's response to reviews: see over
To

The Editor in chief, SMART journal

Subject: Submission of revised manuscript (MS:2047205516433322) – reg.

Dear Sir/Madam,

Thank you for sending manuscript for revision. Herewith I am sending the revised manuscript with reply in different colours as per the most valuable suggestions of the reviewer, because of whom the article has got its shape.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Major revisions/suggestions</th>
<th>Reply</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Authors should describe the exact conditions which they have described as developed ergonomic setup. As answered by the authors on this comments &quot;Correct workplace where the computer and its accessories are placed on well designed table and chair for user sitting&quot; : Give proper anthropometric data on which you should accept these chairs and tables are WELL (Ergonomically?) designed. Otherwise authors should depend only on the check list. In a perfect condition to conclude about a developed ergonomic set up, check list is not enough. So, authors should find out the anthropometric conditions of the work place to confirm it as a developed ergonomic set up. This point should be considered as a major point to be revised.</td>
<td>For developed ergonomic setup 2 criteria were taken for consideration. 1. Computer workstation: ergonomic design and anthropometric data of workers. (has been added in text). 2. OSHA Ergonomic Solutions: Computer Workstations eTool - Evaluation Checklist. Kindly refer page no. 2, 3 &amp; 4 of this reply as well as the text.</td>
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<td>2.</td>
<td>Unequal subject group may create a bias in the result. Subject group must be equalized to justify the result.</td>
<td>1. A total of 100 computer workers irrespective of their gender have been considered. 2. Equal number of male and female population has been included in suggestion of the study.</td>
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<td>3.</td>
<td>More Indian references on WMSD must be included in the study.</td>
<td>References have been included</td>
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<td>4.</td>
<td>Tables must be corrected as per suggestions in the attachment.</td>
<td>Tables have been corrected as per the valuable suggestion</td>
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</table>
Thanking you

Yours sincerely,
Jasobanta Sethi

Developed ergonomic setup (Computer Workstations)

Workstation design

Monitors

Size: 17 inch monitors

Position:

- Position the monitor directly in front of user to avoid excessive twisting of the neck.
- Position the monitor approx. 20-26 inches (arm's length) from user.
- The top of the viewing screen should be at eye level when the user is sitting in an upright position (Bifocal wearers may need to lower monitor a couple of inches).
- Top of the monitor back 10 to 20 degrees tilt (as per the user choice- if required).
- Viewing angle: 40 degree for minimize the surface of eye ball and to retain its moisture.

Glare:

- Position monitors at right angles from windows to reduce glare.
- Position monitors away from direct lighting which creates excessive glare or use a glare filter over the monitor to reduce glare.
- Make sure the surface of the viewing screen is clean.
- Adjust brightness and contrast to optimum comfort.

Key board

Position: flat or neutral (not tilted), below the level of elbow height with wrist in neutral position.

Mouse: kept at side of key board.

Document holder (if required): preferably at side of monitor.
Chair

**Base of the support:** 5 point base, on casters.

**Seat height:** (15-22 inches) at the level of knee height, adjustable seat height chair (for individual convenience) so feet rest flat on floor (footrest used if necessary).

Thighs should be parallel to the floor and knees at about the same level as the hips.

Back of knees should not come in direct contact with the edge of the seat pan (there should be 2-3 inches between the edge of the seat and the back of the knee).

**Seat size:** 16.9 inches depth, 17.7 inches width, angle 0-4 degree with a waterfall front edge.

**Backrest size:** 17.7 inches high, 14.2 inches width, adjustable lumbar support; 5.9 to 9.8 inches, backrest tilt/recline: adjustable 15 degree forward and backward (as per user preference). Sit upright in the chair with the low back against the backrest and the shoulders touching the backrest.

**Angle between backrest and seat pan:** 90 degree or greater

**Arm rest:** 10 inches high, 9.5 inches length, 2 inches width.

Removable/ height adjustable (as per individual preference), well padded armrests, not used for slouch.

Where armrests are used, elbows and lower arms should rest lightly so as not to cause circulatory or nerve problems.

Table

**Height of the table:** 30 inches (for better leg room below the keyboard and mouse tray)

**Height of Keyboard and mouse tray:** 26.5 inches below elbow height.

**Knee room:** height (26 inches), width (20 inches), depth (15 inches).

**Anthropometry (for operator)**

**Head:** straight/erect position

**Shoulders:** relaxed (bilateral), shoulder abduction angle is less than 20 degree for working with mouse.

**Shoulder-elbow angle:** 90 degree.
**Wrist**: neutral position (fore arm and hand in a straight line)

**Hip-torso angle**: 90 degree.

**Thigh–leg angle**: 90 degree.

**Leg-foot angle**: 90 degree.