Tinnitus and Qigong

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INTRODUCTION

- Tinnitus is the perception of sound without any external stimulus.
- Tinnitus affects up to 50 million US adults and one third report that their tinnitus is bothersome.
- There is no well-accepted theory of tinnitus, thus it is generally recognized that the cause of tinnitus and its effects are heterogeneous across patients.
- Management options include medical (i.e., drug therapy), audiologic (sound therapy, hearing aids), psychological (counseling, cognitive-behavioral therapy) and complimentary approaches (diet variation, vitamin supplementation, herbal medicine).
- Acupuncture and mindfullness have been explored with inconsistent results.
- A Qigong maneuver, Beating the Heavenly Drum was shown to relieve bothersome tinnitus in a video that went viral.

PURPOSE

The purpose of this study was to evaluate the effectiveness of the Qigong maneuver, Beating the Heavenly Drum, in relieving tinnitus.

METHODS

• Experimental design: Randomized cross-over design
• Participants:
  - 12 adults (7 female, 5 male) with bothersome tinnitus were enrolled.
  - Inclusion criteria: bothersome tinnitus, 12 adults (7 female, 5 male) with bothersome tinnitus were enrolled. Exclusion criteria: bothersome tinnitus, 12 adults (7 female, 5 male) with bothersome tinnitus were enrolled.
• Exclusion criteria: bothersome tinnitus, 12 adults (7 female, 5 male) with bothersome tinnitus were enrolled.
• Protocol:
  - Sham: rub small circles at the base of the skull for a count of 50
  - Place the index finger on the middle finger, then bringing the index finger against the base of the skull
  - Shams: rub small circles at the base of the skull for a count of 50
• Using the index and middle fingers, rub a circle at the base of the skull

RESULTS

Table 1. Each subject is listed, along with their demographic information, the year of tinnitus onset, and a description of their tinnitus.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Age</th>
<th>Gender</th>
<th>Tinnitus Onset Year</th>
<th>Description of Tinnitus</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>60</td>
<td>Male</td>
<td>2000</td>
<td>Locus</td>
</tr>
<tr>
<td>P2</td>
<td>67</td>
<td>Female</td>
<td>2009</td>
<td>Whistles, wind, music, roaring, blinding fan</td>
</tr>
<tr>
<td>P5</td>
<td>53</td>
<td>Female</td>
<td>Unsure</td>
<td>Ringing, pulsing, whooshing</td>
</tr>
<tr>
<td>P7</td>
<td>61</td>
<td>Male</td>
<td>2013</td>
<td>Static, some ringing</td>
</tr>
<tr>
<td>P8</td>
<td>36</td>
<td>Male</td>
<td>2000</td>
<td>High frequency tone</td>
</tr>
<tr>
<td>P10</td>
<td>43</td>
<td>Male</td>
<td>1994</td>
<td>Constant high piercing note</td>
</tr>
<tr>
<td>P11</td>
<td>67</td>
<td>Male</td>
<td>2008-2009</td>
<td>High pitch electronic sound, crickets, buzzing</td>
</tr>
<tr>
<td>P12</td>
<td>59</td>
<td>Male</td>
<td>“years”</td>
<td>White noise, hissing</td>
</tr>
<tr>
<td>P13</td>
<td>54</td>
<td>Female</td>
<td>2014/2015</td>
<td>Electric hum (constant, high pitched sound)</td>
</tr>
<tr>
<td>P14</td>
<td>53</td>
<td>Female</td>
<td>2010/2011</td>
<td>Very high-pitched noise</td>
</tr>
<tr>
<td>P16</td>
<td>87</td>
<td>Female</td>
<td>1980</td>
<td>Buzzing in the back of my head</td>
</tr>
<tr>
<td>P17</td>
<td>29</td>
<td>Female</td>
<td>Unsure</td>
<td>Hissing</td>
</tr>
</tbody>
</table>

Table 2. The difference scores for THI, TFI, and VAS for each subject are listed, as well as the participants stated treatment preference.

<table>
<thead>
<tr>
<th>Subjects</th>
<th>THI</th>
<th>TFI</th>
<th>VAS</th>
<th>Subject Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental</td>
<td>Sham</td>
<td>Experimental</td>
<td>Sham</td>
</tr>
<tr>
<td>P1</td>
<td>2</td>
<td>2</td>
<td>3.6</td>
<td>-8.8</td>
</tr>
<tr>
<td>P2</td>
<td>12</td>
<td>0</td>
<td>4.3</td>
<td>-7.2</td>
</tr>
<tr>
<td>P5</td>
<td>-8</td>
<td>-4</td>
<td>1.2</td>
<td>-8.9</td>
</tr>
<tr>
<td>P7</td>
<td>0</td>
<td>0</td>
<td>1.6</td>
<td>3.8</td>
</tr>
<tr>
<td>P10</td>
<td>10</td>
<td>4</td>
<td>9.4</td>
<td>3.2</td>
</tr>
<tr>
<td>P8</td>
<td>10</td>
<td>4</td>
<td>-14</td>
<td>-1.2</td>
</tr>
<tr>
<td>P11</td>
<td>-4</td>
<td>-4</td>
<td>8.4</td>
<td>-7</td>
</tr>
<tr>
<td>P12</td>
<td>0</td>
<td>2</td>
<td>4.4</td>
<td>2.8</td>
</tr>
<tr>
<td>P13</td>
<td>-2</td>
<td>-14</td>
<td>0.6</td>
<td>1.2</td>
</tr>
<tr>
<td>P14</td>
<td>18</td>
<td>10</td>
<td>6</td>
<td>39.4</td>
</tr>
<tr>
<td>P16</td>
<td>10</td>
<td>4</td>
<td>8</td>
<td>-1.2</td>
</tr>
<tr>
<td>P17</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>-7.6</td>
</tr>
</tbody>
</table>

There was no agreed upon clinically significant difference score for the THI (Table 2).
- There were no clinically significant changes for the THI, which would be a change of 20 or more points (Newman et al., 1986).
- The values in blue are difference scores for the THI that are clinically significant, which is a difference score of 7 or more (Zeman et al., 2011).

There was no agreed upon clinically significant difference score for the TFI (Table 2).
There were no clinically significant changes for the TFI, which would be a change of 20 or more points (Newman et al., 1986).

- The values in red are a clinically significant difference score which is a difference score of 13 points or more (Henry et al., 2014).

SUMMARY & CONCLUSIONS

- Overall, the evidence did not support the use of Beating the Heavenly Drum maneuver as an effective intervention to relieve tinnitus.
- More participants felt that the sham maneuver was effective in relieving their tinnitus.
- Using larger difference scores is crucial in determining effectiveness of treatment vs normal variability in participant responses.
- The proliferation of sound streaming programs and internet options ensures there will be many tinnitus management options that patients can easily access.
- Although the Qigong maneuver was not effective, there are ways to manage tinnitus, and patients may have to try several options to find what is effective for them, such as utilizing background noise in quiet rooms or seeing an audiologist for tinnitus counseling.

LIMITATIONS

- Small sample size
- Low qualifying THI scores
- Similarities of maneuvers, specifically where they are performed on the participant

REFERENCES


White noise, hissing

There were no clinically significant changes for the TFI, which would be a change of 20 or more points (Newman et al., 1986).

- The values in blue are difference scores for the THI that are clinically significant, which is a difference score of 7 or more (Zeman et al., 2011).

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There were no clinically significant changes for the TFI, which would be a change of 20 or more points (Newman et al., 1986).

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