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### Tinnitus and Qigong

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## INTRODUCTION

- Tinnitus is the perception of sound without any external stimuli.
- Tinnitus affects up to 50 million US adults and one third report that their tinnitus is bothersome<sup>1</sup>
- 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<sup>2-4</sup>
- 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).<sup>5-7</sup>
- Acupuncture<sup>8</sup> and mindfulness<sup>9</sup> 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<sup>10</sup>.

## 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
- Participants**
- 12 adults (7 female, 5 male) with bothersome tinnitus were enrolled.
- Inclusion criteria:** bothersome tinnitus, not currently seeking other tinnitus treatment
- Exclusion criteria:** Post-Traumatic Stress Disorder (PTSD), Traumatic Brain Injury (TBI), neurological conditions, whiplash, neck injury, or severe anxiety or depression

## METHODS continued

### Protocol

- Administer questionnaires, randomize group assignment
- Group 1: experimental maneuver first; group 2: sham maneuver first
- Participants re-administered THI, TFI, VAS 48 hours later by phone
- Participants returned 2 weeks later for alternate treatment and re-administered questionnaires
- Participants re-administered THI, TFI, VAS 48 hours later by phone and asked their preferred intervention (sham or experimental)

### Outcome measures

- Tinnitus Handicap Inventory
- Tinnitus Functional Index
- Hospital Anxiety and Depression Scale
- Visual Analog Scale
- Tinnitus Case History

### Maneuvers

- Experimental: Beating the Heavenly Drum for a count of 50
  - Place the middle finger just above the base of the skull.
  - Place the index finger on the middle finger, then bringing the index finger against the base of the skull
- Sham: 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

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

Subjects	THI		TFI		VAS		Subject Preference
	Experimental	Sham	Experimental	Sham	Experimental	Sham	
P1	2	2	3.6	-8.8	**	3	Experimental
P2	12	0	4.3	-7.2	2	-1	Neither
P5	-8	-4	-1.2	8.9	-2	2	Neither
P7	0	0	1.6	3.8	1.5	1	Neither
P8	10	4	9.4	3.2	1.5	2	Sham
P10	-2	-14	0.6	-1.2	0.75	-1	Experimental
P11	-4	4	-8.4	-7	0	4	Neither
P12	0	2	4.4	2.8	-5	-6	Sham
P13	-2	12	1.2	5.6	3	0	Neither
P14	18	10	6	39.4	1.5	6	Sham
P16	10	4	8	-1.2	-3	1	Sham
P17	4	4	6	-7.6	2	1	Sham

## RESULTS

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

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

There is 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., 1996).
- 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 is an agreed upon clinically significant difference score for the TFI (Table 2).

- The value in **red** is 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

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