

Effects of an 8-Week Mindfulness Course in People with Voice Disorders

AUTHORS

Presenting Author: Catherine K. Brown, BA, private voice teacher, Graduate Student in Applied Mindfulness, West Chester University of Pennsylvania, cb965023@wcupa.edu, www.catherinekbrown.com

Co-Author: Donald McCown, PhD, MAMS, MSS, LSW, Professor of Health, West Chester University of Pennsylvania, dmccown@wcupa.edu



INTRODUCTION

People with voice disorders often experience high stress levels (Dietrich et al., 2008; Misono et al., 2016), social and emotional isolation, and loss of work opportunities, sense of self, and ability to communicate (Rosen et al., 2021). Nearly every modern textbook on the etiology and treatment of voice disorders recommends stress reduction as both a preventive and therapeutic tool for professional voice users and patients with voice disorders. Many specifically mention mindfulness, but published literature on mindfulness as an intervention for patients with voice disorders is sparse (Becker et al., 2022), though several studies are underway.

OBJECTIVE

Our objective was to determine whether an 8-week mindfulness course could increase mindfulness and lower stress in people with voice disorders, leading to a decrease in vocal handicap, as measured using the Voice Handicap Index (VHI) and, for singers, the Singing Voice Handicap Index (SVHI).

METHODOLOGY

Subjects with voice disorders were recruited to participate in an 8-week mindfulness course, modeled after the Mindfulness-Based Stress Reduction curriculum and delivered over Zoom. We collected information on their age, gender, diagnosis, treatments received, and identity as a singer or non-singer. Patients in voice therapy were excluded. Pre- and post-test surveys included **Mindful Attention Awareness Scale (MAAS)**, **Perceived Stress Scale-10 (PSS-10)**, **Voice Handicap Index (VHI)**, and **Singing Voice Handicap Index (SVHI)**. Interviews were conducted with select participants after the course was complete. Some participants were assigned to a waitlist control group.

DEMOGRAPHICS

MINDFULNESS GROUP: Thirty-nine people (36 female, 3 male) completed the mindfulness course. Diagnoses included muscle tension dysphonia (19), spasmodic dysphonia (11), vocal fold paresis/paralysis (10), essential vocal tremor (4), vocal fold cyst (3), vocal fold nodules (1), velopharyngeal insufficiency (1), and vocal fold web (1). Eleven participants had more than one voice disorder. One participant (not accounted for in the diagnoses above) said her doctor was unsure whether she had MTD, SD, or both.

CONTROL GROUP: Thirty people (25 female, 5 male) were assigned to a waitlist control group. Diagnoses included muscle tension dysphonia (15), spasmodic dysphonia (11), vocal fold paresis/paralysis (7), vocal fold nodules (1), vocal fold polyp (1), and laryngospasms (1). Six participants had more than one voice disorder.

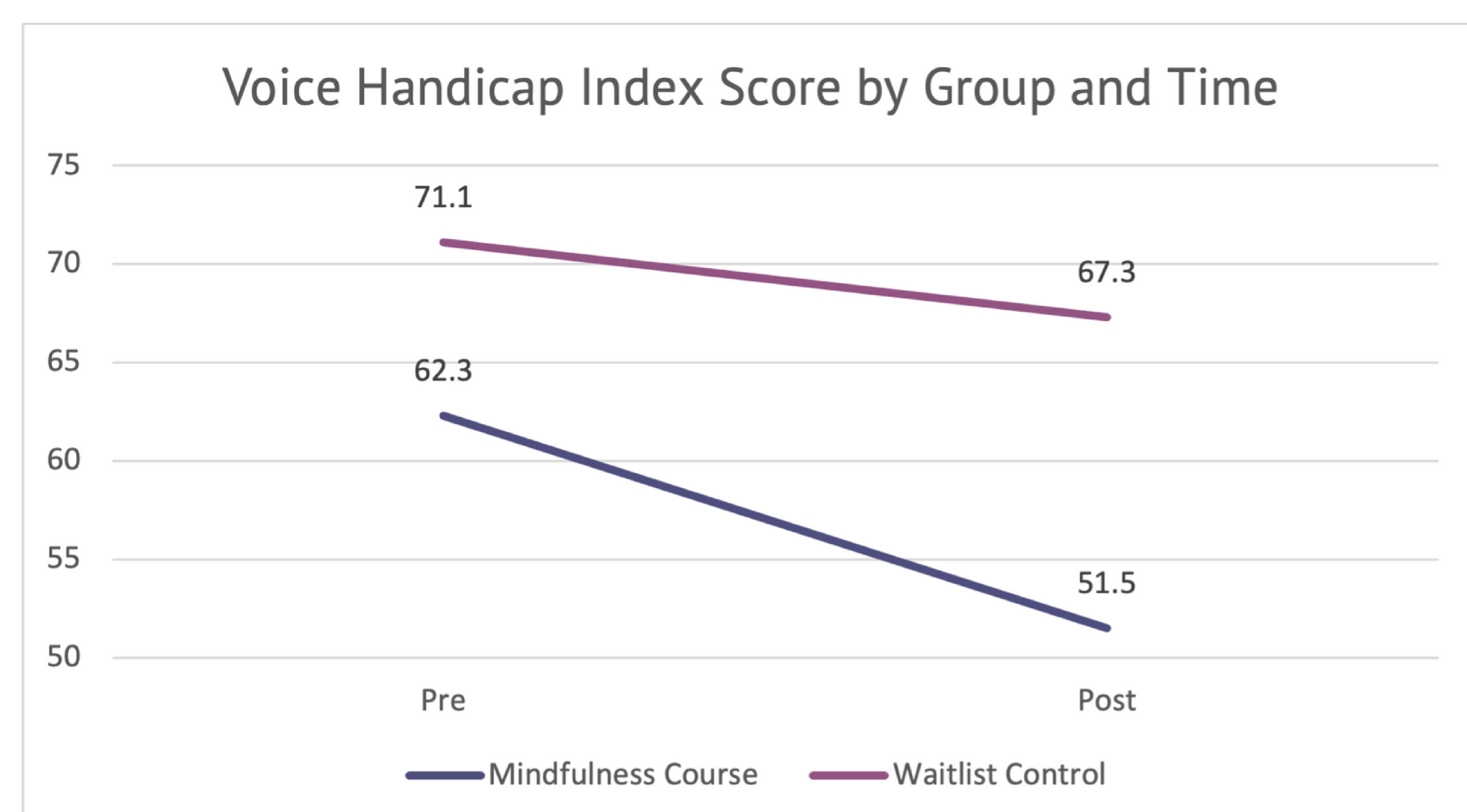
QUANTITATIVE RESULTS

In the mindfulness course participants (n=39), paired t-tests were used to assess the differences in mean outcomes from pre- to post-test. **Each of the outcomes significantly changed in the direction hypothesized: MAAS (P= 0.000*), PSS-10 (P= 0.007), VHI (P= 0.000), and SVHI (P= 0.021, n=22).**

Two-way repeated measures ANOVA tests examined whether the outcomes were statistically different between groups (mindfulness vs. control) and over time (pre- vs. post-intervention). **The group-by-time interactions were significant for the MAAS and VHI (illustrated below), but not for the PSS-10 or SVHI.** The SVHI had a smaller sample size than the other measures, as not all participants identified as singers.

- **MAAS (P= 0.006, ES= 0.107**)**
- **PSS-10 (P= 0.057, ES= 0.053)**
- **VHI (P= 0.034, ES= 0.065)**
- **SVHI (P= 0.084, ES= 0.086) (n=22 for mindfulness, n=14 for waitlist)**

*p<.05; **ES= interaction effect size (partial eta squared)



CONCLUSION

Mindfulness shows promise for reducing stress in people with voice disorders, lowering their voice handicap scores, and improving their quality of life. Future research should evaluate mindfulness in specific patient populations: patients with higher or lower VHI scores; patients with specific voice disorders; singers; and, given the data on mindfulness and pain management (Kabat-Zinn, 1982), patients who experience throat pain and/or pain while speaking. Mindfulness should also be evaluated within a standard voice therapy protocol. The study is being run again in 2023 with the addition of objective voice measures.

QUALITATIVE RESULTS

In follow-up interviews, participants expressed experiencing:

- **increased somatic awareness:** "My biggest takeaway is noticing when I start to feel tense." "I can stop myself as that tension starts to build."
- **reduced physical tension:** "The overall level of physical tension has definitely gone down." "I don't have that grabbing feeling [around the throat]."
- **fewer vocal symptoms:** "I noticed a stronger voice and also fewer spasms and greater vocal clarity." "It was easier to sing. I was able to sing high notes." "I started to feel a greater sense of control in the voice." "I noticed when I sing, that, too, is stronger."
- **increased vocal stamina:** "My voice is much stronger, and I'm able to talk to people for a long time." "I'm no longer afraid that I will not be able to produce voice at least four days a week."
- **increased confidence while speaking:** "My voice just sounds a little more confident." "It's really helped me get that strength back in the voice — and confidence."
- **increased acceptance of their disorder:** "Mindfulness helped me feel more accepting of having the disorder." "I do feel a decrease in this resistance, this protest about having this disorder."
- **reduced stress:** "I'm not as stressed about little things."
- **community:** "I can't articulate enough how monumental just being in this group was." "Seeing other people with similar conditions, and hearing their stories: it was incredible. I wasn't so alone. I was around my people. They understood me."

LIMITATIONS

The study relied on self-report measures. Participants reported the diagnoses received from their otolaryngologists and filled out self-report questionnaires. Ideally, participants would receive a diagnosis from a specialty voice center and objective voice measures would be taken pre- and post-intervention. The data revealed, and interviews confirmed, that highly trained singers (who typically started out with mild to moderate VHI scores) did not experience much benefit from the mindfulness course. Unfortunately, the sample size was too small to draw statistically significant comparisons between those in the three VHI severity categories: mild (0-30), moderate (31-60), and severe (61-120). The researchers hypothesize that highly trained singers saw less benefit because their training has already provided them with a high level of somatic awareness.

RELATED LITERATURE

- Dietrich M, Verdolini Abbott K, Gartner-Schmidt J, Rosen CA. The frequency of perceived stress, anxiety, and depression in patients with common pathologies affecting voice. *J Voice*. 2008;22:472-488.
- Misono S, Meredith L, Peterson CB, Frazier P, et al. New perspectives on psychosocial distress in patients with dysphonia: The moderating role of received control. *J Voice*. 2016;30(2):172-176.
- Rosen DC, Sataloff JB, Sataloff RT. *Psychology of voice disorders*. Plural Publishing, Inc. 2021.
- Becker DR, Shelly S, Kavalieratos D, Maira C, Gillespie AI. Immediate Effects of Mindfulness Meditation on the Voice [published online ahead of print, 2022 Nov 22]. *J Voice*. 2022;S0892-1997(22)00342-3. doi:10.1016/j.jvoice.2022.10.022
- Kabat-Zinn J. An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: theoretical considerations and preliminary results. *Gen Hosp Psychiatry*. 1982;4(1):443-447.