

Factors Associated with Singers' Perceptions of Choral Singing Wellbeing

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Background

Choral Singing

- Prevalence of Choral Singing
- World Choir Games, Cincinnati 2012
- Choral vs. Solo Singing
 - concern for solo singers



Background

Choral Singing Behaviors

- Suboptimal Vocal Behaviors
 - too softly for blend
 - too loudly to carry section
 - outside pitch range

- Vocal Warm-Ups (WU)
 - determine prevalence of vocal WU
 - observe relationship: WU and vocal fatigue



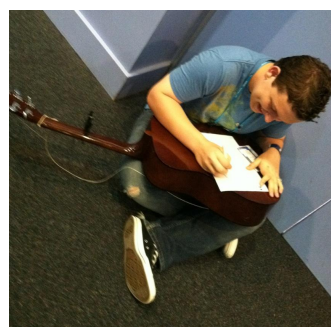
Background

Singing and Improved Wellbeing

- WHO definition of health

- Psychological and Physical Benefits
 - Cohen et al, 2006
 - Clift and Hancox, 2001

- Psychoneuroimmunological Benefits
 - Kreutz et al, 2004
 - Gale et al, 2012



Purpose

- (1) To identify relationships between typical suboptimal vocal behavior and vocal fatigue
- (2) To evaluate the relationships between suboptimal choral singing behavior and singing-related wellbeing
- (3) To determine if a preference for solo singing has any impact on reported singing technique



Methodology

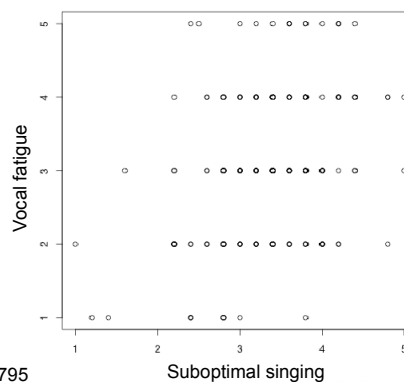
- Participants: 196 Attendees
 - 143 Female, 53 Male
 - Age Range: 10-70
 - Mean: 24
 - Mode: 17
- Measure: Self-Report Questionnaire
- Analysis: Pearson correlations, Chi square



Results

Purpose 1: Suboptimal Vocal Behavior and Vocal Fatigue

- Suboptimal Singing and Vocal Fatigue
 - 31% reported vocal fatigue
 - $r = 0.34$, $p < 0.0001$
- Secondary Analysis
 - 35% sing outside pitch range
 - $r = 0.34$, $p < 0.0001$
 - 51% sing too loudly
 - $r = 0.23$, $p = 0.0015$
 - 52% sing too softly for blend
 - $r = 0.13$, $p = 0.0666$
- Vocal Warm-Ups
 - 81% reported feeling warmed
 - Vocal WU and vocal fatigue: $r = -0.13$, $p = 0.0795$

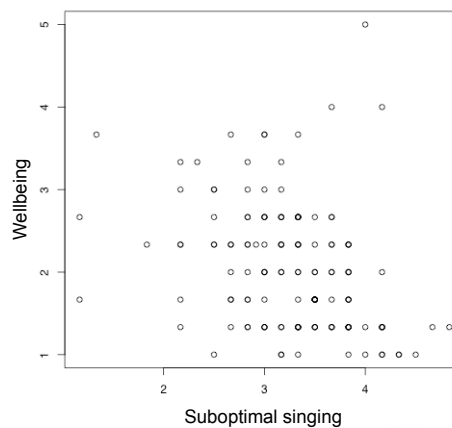


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Results

Purpose 2: Singing and Wellbeing

- Suboptimal singing and wellbeing
 - Moderate negative correlation
 - $r = -0.32$, $p < 0.0001$ (N=141)
- Wellbeing and vocal fatigue
 - Moderate negative correlation
 - $r = -0.37$, $p < 0.0001$ (N=141)



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Results

Purpose 3: Choral Singing and Solo Singing

- Overall preference for choral singing
 - $\chi^2(1, N=196) = 22.93, p < 0.0001$
 - 67.37% preferred choral singing
 - 19.47% preferred solo singing
 - 13.16% no preference
- Solo singers in the choral setting
 - 50% of participants
 - 72% of these use different technique
 - Sing both styles and use different technique:
 - $\chi^2(1, N=196) = 13.66, p = 0.0002$



Discussion

- Suboptimal singing and vocal fatigue
 - Correlated in combined statistical analysis
 - Absence of correlation
 - Limitation: wide scope of subjects
- Suboptimal singing and wellbeing
 - Preliminary data
 - Wellbeing restricted by vocal health
 - Limitation: latent variables
- Choral singing and solo singing
 - Preference for choral singing
 - Solo singers reported using different technique
 - Limitation: unable to account for effect on wellbeing

Limitations

- Psychometrics under development
- Findings reliant on participant awareness
- Large heterogeneity of subject pool
- Unmeasured factors



Directions for Further Research

- Perceptions of professional solo singers
- Vocal health as a factor of wellbeing



Conclusions

- Suboptimal choral singing behaviors may result in vocal fatigue
- Suboptimal choral singing negatively affects choral singing wellbeing
- Differences in choral vs. solo singing contribute to different technique



References

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Thank you!

