

# Sound Rage: A Review of the Implications of Misophonia for College Age Students

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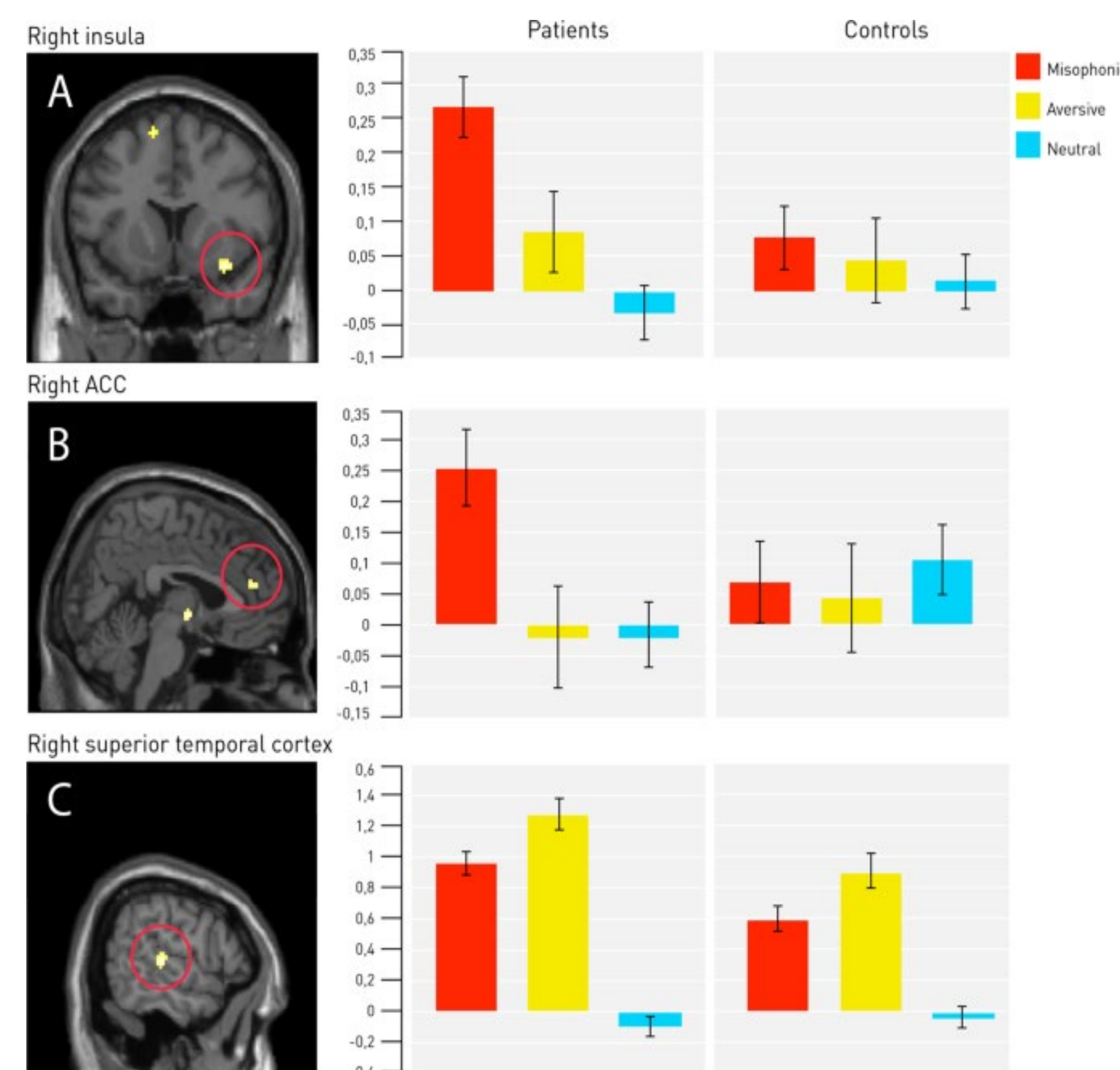
## INTRODUCTION

### What is misophonia?

- A relatively recently identified disorder in humans, only recognized as a medical disorder since 2001
- Individuals have low tolerance and extreme sensitivity to certain sound stimuli (*mouth sounds, eating, nasal sounds, rustling or crinkling, repetitive tapping, etc.*)
  - Many act on this sensitivity by outbursts, rage, avoidance, or other uncontrollably negative emotions
- Familiarity component: misophonic reactions typically worsen when the sounds are produced by parents or siblings

### How is it classified or diagnosed?

- Misophonia has disordered aspects in audiology, with the sound sensitivity, as well as psychological components: anxiety, rage, and common co-occurrent disorders such as OCD or eating disorders
- Currently many assessments created to diagnose/study misophonia among researchers (not standardized)
- Variation in definition and diagnostic criteria → no official diagnostic formulation within the DSM-V or ICD-10



**Increased Activation of Brain Regions for Misophonic Reactions<sup>4</sup>**  
(A) Right Insula, (B) Right ACC, (C) Right Superior Temporal Cortex

## AIM

To investigate existing literature, synthesizing research on misophonia in the population of college age students in order to understand any patterns. Particularly, our interest lies in the potential negative effects misophonia has on college students' learning.

## LITERATURE SEARCH

We conducted a review of already-published articles on misophonia. This was done in this sequence.

### Initial UIUC Library Database Search

- Search term "misophonia"
- 2006 – 2022
- Academic Journal Articles (534)
- Main Databases: 122 Complementary Index, 112 MEDLINE, 105 Academic Search Ultimate
- Expository information gained

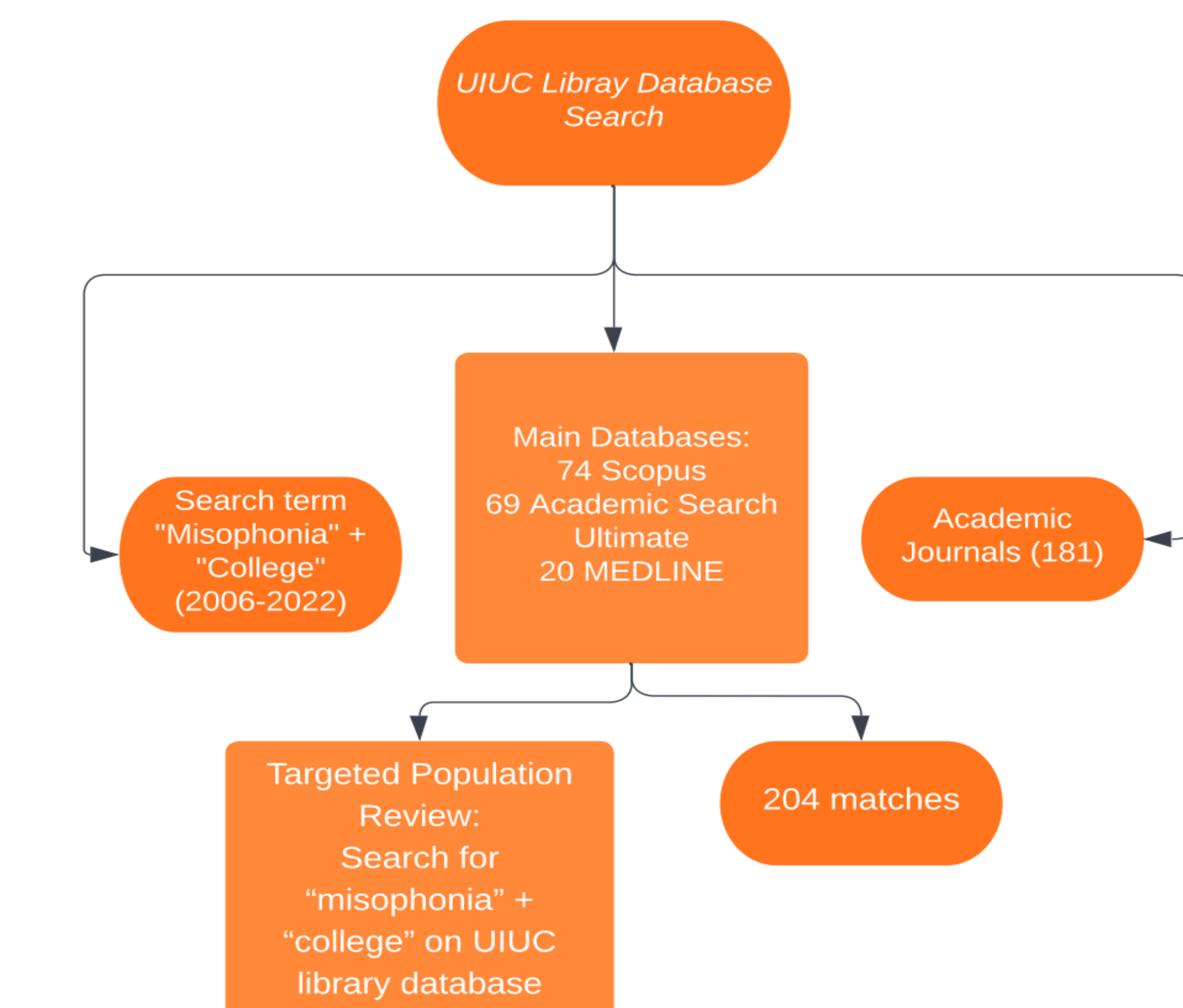
### Targeted UIUC Library Database Search

- Search term "misophonia" + "college"
- 2006 – 2022
- Academic Journal Articles (181)
- Main Databases: 74 Scopus, 69 Academic Search Ultimate, 20 MEDLINE
- Specific, college-age population information gained

### Inclusion and Exclusion of Articles

- Inclusion was then based on a main focus of misophonia as the subject of research, and any level of description of college age population relating to misophonia
- Type of study was irrelevant: we used case studies, experiment/intervention designs, other scoping reviews, etc.
- Exclusion of studies occurred for articles which returned key terms yet did not discuss the college age population specifically

### Targeted Literature Search Flowchart



## RESULTS

### Findings on Prevalence

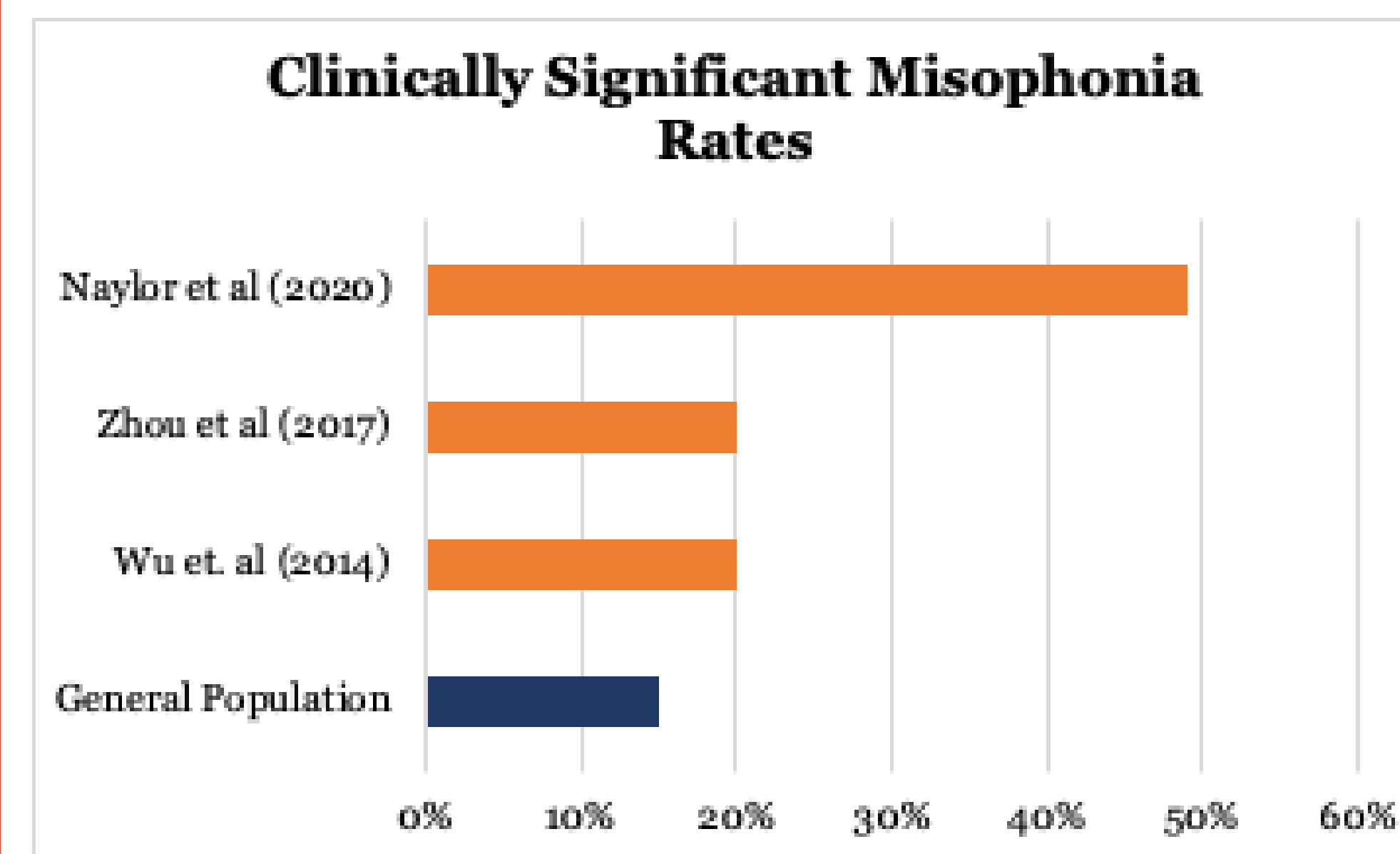
- No widely endorsed guidelines – different definitions of misophonia result in different prevalence reports
- Three main studies focus on prevalence of misophonia among college-aged students

### Of these 3 studies:

- Wu et. al (2014) study found 20% with clinically significant misophonia
- Zhou et. al (2017) found 20% with clinically significant misophonia
- Naylor et. al (2020) found 49.1% with clinically significant misophonia

- Compared to general population with about 15% prevalence of misophonia<sup>1</sup>, on average misophonia may affect between 20-25% of the college student samples

- Generalizability is not strong



Comparison of findings on misophonia prevalence (blue) compared to prevalence of misophonia in college population (orange)

### Findings on Academic Environment

- Survey of 686 professors in the state of Florida<sup>3</sup>
- Only 18.4% self-reported knowledge of misophonia
- Only 2.3% reported that a student requested accommodations for misophonia
- Those with knowledge indicated taking misophonia more seriously than those without knowledge
- General willingness to provide accommodations if requested
- Students with misophonia in college classes will likely be negatively impacted without proper accommodations
  - Separate testing for exams
  - Excused absences from lectures

## DISCUSSION

### Problems

- Few studies available which focus on misophonia and college-age students
- Even fewer give data on incidence/prevalence
- Very different diagnostic criteria or assessments → different prevalence findings
- External validity unreliable → no conclusion can be drawn on increased prevalence of misophonia for college students vs. general population

### Implications on Academic Success

- While there is currently limited information, prevalence rates of misophonia in college-age population may either mirror or be at higher levels than the general population
- Very few professors reported knowledge of misophonia, reflecting a lack of awareness about possible accommodations
- Students with misophonia not likely to get accommodations → academics will suffer
- However, there is a willingness to accommodate these students that may be even greater when education is provided to non-knowledgeable professors
- Educating professors about misophonia is a priority

## REFERENCES

- [1] Cash, T. V. (2015). Decreased sound tolerance (DST): Prevalence, clinical correlates, and development of a DST assessment instrument. [Thesis: Virginia Commonwealth University].
- [2] Naylor, J., Cairmino, C., Scutt, P., Hoare, D. J., & Baguley, D. M. (2021). The Prevalence and Severity of Misophonia in a UK Undergraduate Medical Student Population and Validation of the Amsterdam Misophonia Scale. *PSYCHIATRIC QUARTERLY*, 92(2), 609–619.
- [3] Porcaro, C. K., Alavi, E., Gollery, T., & Danesh, A. A. (2019). Misophonia: Awareness and Responsiveness among Academics. *Journal of Postsecondary Education and Disability*, 32(2), 107–118.
- [4] Schröder, A., Wingen, G., Eijsker, N., San Giorgi, R., Vulink, N. C., Turbyne, C., & Denys, D. (2019). Misophonia is associated with altered brain activity in the auditory cortex and salience network. *Scientific Reports*, 9(1).
- [5] Wu, M. S., Lewin, A. B., Murphy, T. K., & Storch, E. A. (2014). Misophonia: Incidence, phenomenology, and clinical correlates in an undergraduate student sample. *Journal of Clinical Psychology*, 70(10), 994–1007.
- [6] Zhou, X., Wu, M. S., & Storch, E. A. (2017). Misophonia symptoms among Chinese university students: Incidence, associated impairment, and clinical correlates. *Journal of Obsessive-Compulsive and Related Disorders*, 14, 7–12.

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