# Scientific Article



### Title

Toward a Multidimensional Understanding of Misophonia Using Cluster-Based Phenotyping

## Language: EN

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## Abstract

Misophonia clinical presentations are relatively complex and reflect individualized experiences across clinical populations. Like some overlapping neurodevelopmental and neuropsychiatric disorders, misophonia is potentially syndromic where symptom patterns rather than any one symptom contribute to diagnosis. The current study conducted an exploratory k-means cluster analysis to evaluate symptom presentation in a non-clinical sample of young adult undergraduate students (N = 343). Individuals participated in a self-report spectrum characteristics survey indexing misophonia, tinnitus severity, sensory hypersensitivity, and social and psychiatric symptoms. Results supported a three-cluster solution that split participants on symptom presentation: cluster 1 presented with more severe misophonia symptoms but few overlapping formally diagnosed psychiatric co-occurring conditions; cluster 3 was characterized by a more nuanced clinical presentation of misophonia with broad-band sensory hypersensitivities, tinnitus, and increased incidence of social processing and psychiatric symptoms, and cluster 2 was relatively unaffected by misophonia or other sensitivities. Clustering results illustrate the spectrum characteristics of misophonia where symptom patterns range from more "pure" form misophonia to presentations that involve more broad-range sensory-related and psychiatric symptoms. Subgroups of individuals with misophonia may characterize differential neuropsychiatric risk patterns and stem from potentially different causative factors, highlighting the importance of exploring misophonia as a multidimensional condition of complex etiology.



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