Misophonia: a narrative review about an elusive neuropsychiatric condition

Francisco Coutinho, Isabel Brandão
Clínica de Psiquiatria e Saúde Mental – Centro Hospitalar Universitário de São João

Corresponding author: francisco.coutinho89@gmail.com

Objectives

To review the literature concerning the clinical picture, therapeutic approach and future research goals concerning misophonia

Background and aims

Misophonia is a neurobehavioural syndrome defined by a heightened autonomic nervous system arousal and negative emotional reactivity towards specific sounds. It is important to make a differential diagnosis with other auditory conditions such as hiperaccusis or tinnitus.

Materials and methods

Bibliographic search in Medline, with the keywords “misophonia” and “selective sound sensitivity syndrome”

Results

Despite being recently described, there are some proposed diagnostic criteria for misophonia, including those recently published by Dozier et al. There are still many doubts concerning both the etiology and therapeutic approach of misophonia, as we highlight:

Proposed diagnostic criteria for misophonia

- The presence or anticipation of a specific sensory experience such as a sound, sight, or other stimulus, provokes an impulsive, aversive physical and emotional response which typically begins with irritation or disgust that may quickly become anger.
 - The stimulus elicits an immediate physical reflex response. The physical response cannot always be identified, but the presence of an immediate physical response may be used to more clearly identify the condition as misophonia
 - A moderate duration of the stimulus (e.g., 15 s) elicits general physiological arousal
 - Dysregulation of thoughts and emotions with rare but potentially aggressive outbursts. Aggressive outbursts may be frequent in children
 - The negative emotional experience is later recognized as excessive, unreasonable, or disproportionate
 - The individual tends to avoid the misophonic situation, or if he/she does not avoid it, endures the misophonic stimulus situation with discomfort or distress.
- The individual’s emotional and physical experience, avoidance, and efforts to avoid cause significant distress or significant interference in the person’s life

Etiological hypothesis and associations with other syndromes

- Association with other neuropsychiatric conditions (obsessive-compulsive disorder, attention deficit and hyperactivity disorder, Autism spectrum disorders, X-fragile syndrome, Tourette syndrome)
- Trigger sounds cause activation of the anterior insular cortex
- Abnormal connectivity between anterior insular cortex and pre-frontal cortex, hippocampus and amygdala

Possible therapeutic approaches of misophonia

- Psychoeducation about the condition
- Use of headphones and earplugs
- Exposure and response prevention
- Acceptance and commitment therapy
- Pharmacologic treatment based on agents with dopaminergic or serotonergic action

Conclusions

There is currently little information concerning misophonia, both related to its clinical characteristics, neurobiological basis and therapeutic approach. In the future, it will be important to have a better characterization of the symptoms among those who report impairment from misophonia and clarify whether it occurs as a specific syndrome or as part of other psychiatric disorders. Also, studies concerning psychotherapeutic and pharmacologic approaches with large samples will be necessary to define its preferential approach.

Bibliography: Taylor S. Misophonia: A new mental disorder?. Med Hypotheses. 2017;103:109-117; Dozier TH, Lopez M, Pearson C. Proposed Diagnostic Criteria for Misophonia: A Multisensory Conditioned Aversive Reflex Disorder. Front Psychol. 2017;8:1975.;Cavanna AE, Seri S. Misophonia: current perspectives. Neuropsychiatr Dis Treat. 2015;11:2117-23; Palumbo DB, Alsalman O, De ridder D, Song JJ, Vanneste S. Misophonia and Potential Underlying Mechanisms: A Perspective. Front Psychol. 2018;9:953.