SOMATIZATION IN THE AUDIOLOGY SETTING

Thea Gilks MD FRCPC
Psychiatrist, St Paul's Hospital ENT and Complex Pain Clinics
Clinical Instructor, University of British Columbia

Outline

1. Terminology and history of somatization disorders
2. Diagnostic features and pathophysiology
3. Somatization within the audiology setting
4. Treatment approaches

Conflicts of Interest

- None to declare
- That being said, I approach this contentious and under-studied topic from the lens of a psychodynamically-oriented psychiatrist

A special thank you to Glynnis Tidball

WHAT'S IN A NAME?

Central Sensitization

Multiple Chemical Sensitivities

Hysteria

Interstitial Cystitis

Globus

Functional gastroparesis

PPPD

Somatic Symptom Disorder

Vulvodynia

Long COVID

POTS

Ehlers Danlos

Failed Back Surgery Syndrome

Non-epileptic Seizures

Chronic Lyme Disease

Functional Neurologic Disorder

Atypical Chest Pain

Temperomandibular Disorders

Irritable Larynx Syndrome

Tinnitus

IBS

Conversion Disorder

Chronic Headache

Myalgic Encephalitis

Chronic Fatigue Syndrome

"with emotional overlay"

Fibromyalgia

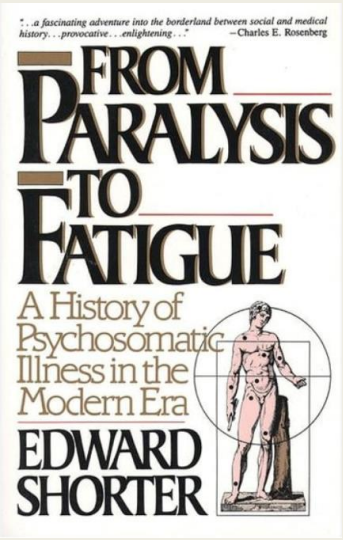
Endometriosis

Non-organic Hearing Loss

A Brief History

- **Hysteria** described by ancient Egyptians as early as 1900 BC
- Hippocrates (500 BC) attributes symptoms of hysteria to a migratory uterus
- There is persistent attribution of somatization to uterine and ovarian problems into the 20th century
- Hysteria wasn't removed from the DSM until 1980

"The unconscious, not wishing to make itself ridiculous, brings itself medically up to date."

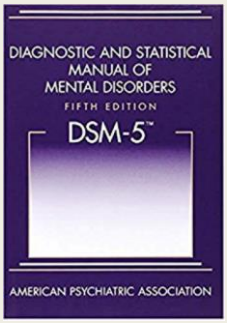


Psychiatric Term	Medical Term
Somatic Symptom Disorder	Central Sensitization
Conversion Disorder	Functional Neurologic Disorder

- Somatization is the mechanism whereby thoughts and/or emotions amplify underlying organic symptoms or manifest directly as physical sensations or physiologic changes
- *Somatic Symptom Disorder (SSD)* is an illness where patients are markedly impaired by somatization
- Symptoms in SSD typically *cannot* be demonstrated to be incompatible with organic illness (e.g. fatigue, pain, headache, “brain fog”)

Somatic Symptom Disorder Diagnostic Criteria

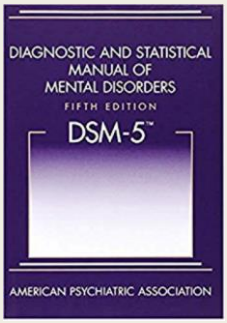
- One or more physical symptoms that are distressing or cause disruption in daily life
- Excessive thoughts, feelings or behaviors related to the physical symptoms or health concerns with at least one of the following:
  - *Ongoing thoughts that are out of proportion with the seriousness of symptoms*
  - *Ongoing high level of anxiety about health or symptoms*
  - *Excessive time and energy spent on the symptoms or health concerns*



- <u>Conversion</u> is the conversion of mental distress into physical symptoms
- ***Conversion Disorder*** refers to somatization that is *confined to the nervous system*, ie. affecting perception, sensation or movement
- Conversion symptoms are often demonstrably incompatible with organic illness (e.g. with use of an EEG or neurologic exam)

Conversion Disorder Diagnostic Criteria

- One or more symptoms of altered voluntary motor or sensory function
- Symptoms are incompatible with recognized neurological or medical conditions
- Subtypes:
  - *With weakness or paralysis*
  - *With abnormal movement (e.g. tremor, gait disorder)*
  - *With swallowing symptoms*
  - *With speech symptom (e.g. aphasia, slurred speech)*
  - *With non-epileptic seizures*
  - *With anesthesia or sensory loss*
  - *With special sensory symptom (e.g. blindness, hearing loss)*



- <u>Central Sensitization</u> is a term used by Anesthesia, Internal Medicine, Gynecology, and other medical and surgical specialists
- Central sensitization is described in the literature as the amplification of pain by central nervous system mechanisms, and is considered the cause of pain in fibromyalgia
- Common symptoms include fatigue, low mood, cognitive problems, sleep disturbances, and multisensory hypersensitivity
- It is associated with adverse childhood experiences and non-specific immune changes

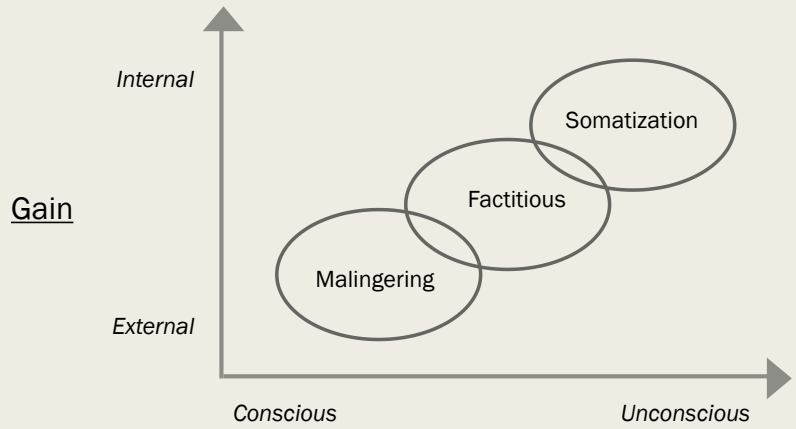
Harte et al. 2018

Non-Medical Terminology

- Psychosomatic
- Stress-related
- With emotional overlay
- Language such as “activation of the nervous system” or describing it as a “hardware vs. software” issue can be more acceptable to the patient
- I use the patient’s own term or language

Related Disorders

- Factitious Disorder and Malingering exist on a continuum with somatization
- Patients with factitious disorder are unconsciously using illness to resolve psychological needs through the “sick role”. This role is helpful in that it generates sympathy from others; reduces society’s expectations; allows access to illness communities; etc.
- Many patients with somatization benefit from this same “sick role”, which can perpetuate symptoms



DIAGNOSTIC FEATURES

Somatization Risk Factors

- Female
- Adverse childhood experiences (ACEs)
- Social stressors: loneliness, job strain, caregiving burden, poverty
- Victim of discrimination
- Other psychiatric illness (personality disorder, PTSD, depression, anxiety)
- Stigmatization of psychological distress, limited capacity to mentalize distress
- Greater suggestibility/hypnotisability
- Health care worker

COVID-Linked Risk Factors

- Higher prevalence of stress, depression, anxiety and loneliness
- Increased caregiving burden and financial strain
- Frequent scanning for physical symptoms due to COVID-19
- Greater anxiety and uncertainty about physical symptoms
- Confinement/lock-down as a trigger for prior trauma
- Reduced access to healthcare providers
- COVID-19 infection as a psychologically destabilizing event

Diagnosis

- Frequency of misdiagnosis of FND is consistently low (~4%) since 1970s
- Diagnostic features include:
  - *Symptoms not consistent with organic processes or objective tests*
  - *Symptoms clearly evoked by trauma/emotions*
  - *Multiple physical systems involved*
  - *Functional disability out of proportion with symptoms, rapid attainment of maximum disability*
  - *Atypical response to treatment (e.g. resolution of symptoms with placebo interventions)*
- Timeline of symptom onset can be helpful

Harms of Non-Diagnosis

- Perpetuation of mind-body duality
- Side effects from interventions and medications that are not indicated
- Creation of more entrenched, refractory somatic symptoms and illness behaviours
- “Negative counselling” (e.g. in tinnitus) can lead to demoralization and increased distress

PATHOPHYSIOLOGY

The Power of the Mind

Human physiology is highly sensitive to thoughts and emotions, many of which are outside of conscious awareness

"It's all in your head"

- Symptoms that are driven by psychological processes are no less real than those driven by auto-immunity, malignancy, tissue injury, etc.
- Examples:
  - *Diarrhea before a big exam*
  - *Feeling light-headed after being given bad news*
  - *Crying when sad*

A Story of Two Nails

The Unconscious

- The conversion of mental distress into somatic symptoms occurs within the unconscious mind
- This is why people do not have control over their symptoms

REVIEW

OPEN

Psychological Stress and Mitochondria: A Conceptual Framework

Martin Picard, PhD, and Bruce S. McEwen, PhD

ABSTRACT

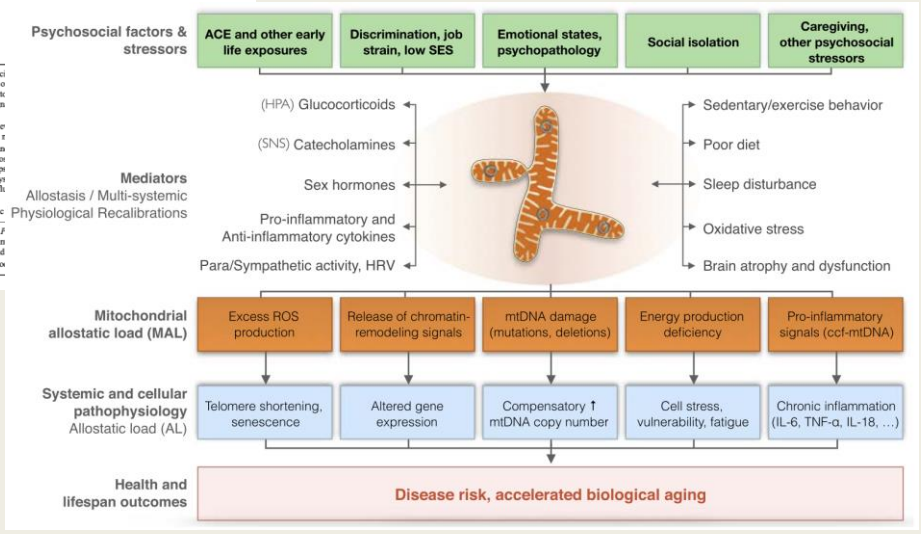
Background: The integration of biological, psychological, and soci
response biomarkers. Mitochondria, a subcellular organelle with its o
that enable stress adaptation. An emerging concept proposes that mit
factors into cellular and molecular modifications. Mitochondrial sign
logical states.

Methods: A narrative literature review was conducted to evaluate e
response, and its implementation in behavioral and psychosomatic r

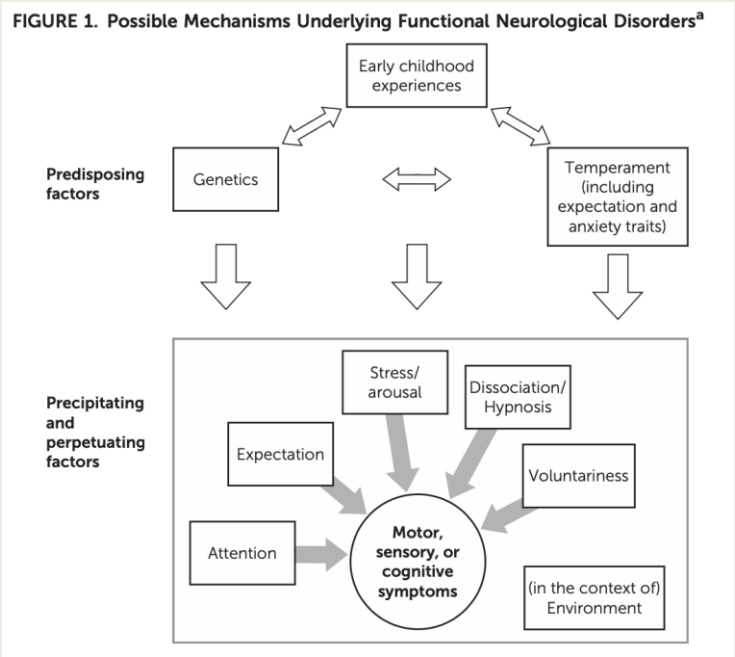
Results: Chronically, psychological stress induces metabolic an
recalibrations of mitochondria, which constitutes mitochondrial allo
the endocrine system, and the immune systems that play a role in ps
basis. Mitochondrial function and dysfunction also contribute to sys
other metabolites. At the cellular level, mitochondrial signaling infl
the rate of cellular aging.

Conclusions: This evidence suggests that mitochondrial allostatic
psychosocial experiences and the resulting emotional responses–
and physiological changes. The associated article in this issue of P
of psychological stress on mitochondria. Integrating mitochondria in
to investigate how psychosocial factors influence human health and

Key words: psychosomatic medicine, mitochondrion, psychoneuro



Ric Arseneau 2022



Voon et al. 2016

SPECIFIC MANIFESTATIONS OF SOMATIZATION

Non-Organic Hearing Loss (NOHL)

- NOHL encompasses patients with somatization, factitious, and malingering disorders. It simply refers to hearing test results that show greater deficits than can be explained by organic pathology
- Conversion hearing loss is exceedingly rare, although more common in centres that offer CI
- Conversion/functional hearing loss or pseudohypoacusis shares many common themes with other somatization disorders:
  - *Often co-occurs with organic hearing loss*
  - *More common in women*
  - *Frequent psychiatric comorbidity*
  - *Onset after a stressful life event*

Features of NOHL

- Exaggerated listening behavior
- Low false-positive response rate
- Low test-retest reliability
- Lack of a shadow curve
- Discrepancies between tests, e.g. speech recognition threshold and pure tone threshold average

- Some conditions that may be mistaken for NOHL: King-Kopetzky syndrome (obscure auditory dysfunction), auditory neuropathy/auditory dyssynchrony, auditory processing disorders, and cortical auditory disorders.

Lin & Staeker 2006

Sub-types of NOHL

- Patients with conversion hearing loss tend to test more consistently and be more aligned with a "deaf identity" than those with malingering or factitious processes
- Patients can move between categories over time, e.g. experiencing transient organic hearing loss, enjoying sympathy or other benefits, which then leads to a factitious or malingered hearing loss
- Differentiating between factious, malingering and conversion processes is difficult and requires working with the unconscious mind
- All presentations of NOHL are manifestations of distress

Tinnitus as a Somatization Disorder

BOX 2 Hypothetical pragmatic definition aligning with DSM diagnostic criteria for pain disorder

According to the criteria for somatic symptom disorder specified as "with predominant tinnitus"

A. Tinnitus that is distressing or results in significant disruption of daily life.

B. Excessive thoughts, feelings, or behaviors related to tinnitus or associated health concerns as manifested by at least one of the following:
   a. disproportionate and persistent thoughts about the seriousness of one's tinnitus,
   b. persistently high level of anxiety about tinnitus.
   c. excessive time and energy devoted to tinnitus.

C. Although the tinnitus sound may not be continuously present, the state of being symptomatic is persistent (typically more than 3 months).

Persistent: A persistent course is characterized by severe symptoms, marked impairment, and long duration (more than 3 months).

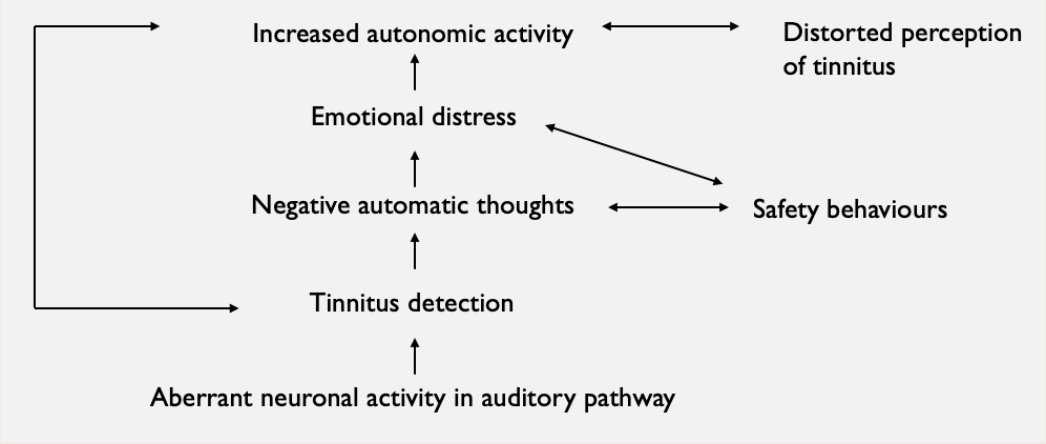
Mild: Only one of the symptoms specified in Criterion B is fulfilled.

Moderate: Two symptoms specified in Criterion B are fulfilled.

Severe: Two or more of the symptoms specified in Criterion B are fulfilled, plus there are multiple somatic complaints (or one very severe somatic symptom).

De Ridder et al. 2021

Cognitive Model of Tinnitus Distress



TREATMENT

Treatment of Somatization

- The treatment plan must be **individualized**, depending upon:
  - *The patient's capacity and willingness to engage*
  - *The patient's psychological-mindedness*
  - *Severity of other psychiatric symptoms (e.g. if a patient is suicidal, this must be addressed first)*

Treatment Components

- **Education and reassurance**
- Lifestyle changes: gradual return to avoided activities, sleep hygiene, healthy diet, regular exercise
- Physiotherapy and/or occupational therapy
- Psychotherapy
  - *Cognitive behavioural therapy (CBT)*
  - *Psychodynamic psychotherapy*
  - *Couples or family therapy*
- Mindfulness
- Psychiatric medications targeted to the symptom profile

CBT for Somatization/Tinnitus

- Identify automatic thoughts about the symptom:
  - *"this will never get better"*
  - *"I can't handle this"*
  - *"tinnitus will make me deaf"*
- Aim to develop ***balanced*** thinking
- Recognize and change emotion-driven behaviours:
  - *avoidance*
  - *over-control/perfectionism*
  - *substance misuse*
- Learn to understand and tolerate difficult emotions

Psychodynamic Therapy

- Brings the unconscious into conscious awareness
- Unstructured, open-ended dialogue between patient and therapist
- Explores defenses used against "unacceptable" emotions
- Draws connections between the therapy relationship and other relationships
- Use of symbolism and metaphor when communicating
- Explore ways in which somatic symptoms serve to resolve dilemmas, support important relationships, or escape interpersonal conflicts

Mindfulness

- Requires motivation
- Effective for tinnitus, depression, anxiety and somatization
- Helps to reduce judgment of negative emotions and physical symptoms
- Resources:
  - *Breathr, Calm iPhone apps*
  - *www.self-compassion.org*
  - *"Full Catastrophe Living" by John Kabat-Zinn*

The Burden of Somatization

- Individuals with somatization disorders incur approximately 9x average health care costs
- The cost of somatization disorders in the US is approximately $20 billion/year
- Significant indirect costs:
  - *2-7 days bed-bound per month*
  - *40% on disability, 60% unemployed*
- Up to 20% of GP visits are attributable to somatization
- Even with optimal treatment, many patients taking a chronic, relapsing and remitting course

PRACTICAL TIPS FOR AUDIOLOGISTS

- Ask about stress, mental health issues or adverse childhood experiences when taking a history
- Consider drawing attention to the role that stress and emotions can play in a variety of audiologic presentations
- Maintain healthy boundaries
- Remember that malingering is both rare and a manifestation of distress
- Where possible, strive for collaborative, interdisciplinary care, e.g. by involving the patient's family physician in addressing mental health concerns

TAKE HOME POINTS

- Somatization is both normal and a cause of remarkable suffering, disability and cost to the healthcare system
- We are currently experiencing an epidemic of somatization disorders due to sociocultural factors and failures of the medical system
- You can play an important role in the treatment of somatization through early recognition and the compassionate provision of information
- There is an urgent need for better understanding, improved treatments, and greater collaboration to address the unmet needs of patients with somatization disorders

Sources

1. Shorter, Edward. *From paralysis to fatigue: a history of psychosomatic illness in the modern era*. Simon and Schuster, 2008.
2. Harte, Steven E., Richard E. Harris, and Daniel J. Clauw. "The neurobiology of central sensitization." *Journal of Applied Biobehavioral Research* 23.2 (2018): e12137.
3. https://www.nytimes.com/2023/02/21/podcasts/ezra-klein-show-transcript-rachel-zoffness.html
4. Images are from a private lecture "The Argument Against Long Covid as a Psychological Condition" delivered by Dr. Ric Arseneau, similar to this freely available talk: https://painbc.ca/health-professionals/webinars/long-covid-and-chronic-pain
5. Voon, Valerie, et al. "Functional neuroanatomy and neurophysiology of functional neurological disorders (conversion disorder)." *The Journal of neuropsychiatry and clinical neurosciences* 28.3 (2016): 168-190.
6. Lin, James, and Hinrich Staecker. "Nonorganic hearing loss." *Seminars in neurology*. Vol. 26. No. 03. Copyright© 2006 by Thieme Medical Publishers, Inc., 333 Seventh Avenue, New York, NY 10001, USA., 2006.
7. De Ridder, Dirk, et al. "Tinnitus and tinnitus disorder: Theoretical and operational definitions (an international multidisciplinary proposal)." *Progress in brain research* 260 (2021): 1-25.