Functional Ophthalmic Disorders

Ocular Malingering and Visual Hysteria

Robert Enzenauer
William Morris
Thomas O'Donnell
Jill Montrey

VIDEOS
springerimages.com

Springer

Functional Ophthalmic Disorders

Robert Enzenauer • William Morris
Thomas O'Donnell • Jill Montrey

Functional Ophthalmic Disorders

Ocular Malingering and Visual Hysteria

Springer

Robert Enzenauer
Department of Ophthalmology
University of Colorado
Aurora, CO, USA

Thomas O'Donnell
Department of Ophthalmology
University of Tennessee
Memphis, TN, USA

William Morris
Department of Ophthalmology
University of Tennessee
Memphis, TN, USA

Jill Montrey
Medical Writer/Editor
Denver, CO, USA

Videos to this book can be accessed at http://www.springerimages.com/videos/978-3-319-08749-8

ISBN 978-3-319-08749-8 ISBN 978-3-319-08750-4 (eBook)
DOI 10.1007/978-3-319-08750-4
Springer Cham Heidelberg New York Dordrecht London

Library of Congress Control Number: 2014946609

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

Introduction

Patients usually visit a healthcare provider because of specific signs or symptoms. In the general course of events, the provider:

- Conducts an examination and testing.
- Discovers an objective finding that explains the symptoms.
- Makes a diagnosis.
- Institutes appropriate treatment.
- Follows the patient over time, anticipating symptoms will improve.

Less often—and more frustrating for all—the provider does *not* discover an objective finding that leads to a diagnosis of an organic illness that explains the symptoms. In such a case, providers adopt a policy of watchful waiting, traditionally known as the "tincture of time." Time permits the symptoms of a minor malady to disappear. Time also allows for the development of an abnormal finding that eventually enables a diagnosis.

However, in *some* cases, time convinces a provider to consider the diagnosis of a *functional disorder*. In a functional disorder, the patient has symptoms or signs of illness, but there is *no* evidence of organic disease. The challenge is then to diagnose the type of functional disorder and prescribe the proper treatment and follow-up. The process is complicated because a functional disorder can overlay an organic illness and a small percentage of functional disorders ultimately are linked to an underlying medical etiology.

This treatise briefly reviews the historical and contemporary thought on functional disorders in general, functional ophthalmic disorders in particular, and provides a "how-to" manual on diagnostic testing for the different types of functional ophthalmic disorders.

Aurora, CO — Robert W. Enzenauer
Memphis, TN — William R. Morris
Memphis, TN — Thomas O'Donnell

Contents

Chapter 1
Terminology of Functional Disorders

Abstract In a functional disorder, the patient has symptoms or signs of illness, but there is no evidence of natural physical disease. After ruling out an organic cause for symptoms, the provider determines if the functional disorder is a conscious effort by the patient to cause the signs and symptoms (traditionally called malingering) or an unconscious occurrence of signs and symptoms produced by the unconscious mind (traditionally called hysteria). The terminology of functional disorders and their subtypes has evolved over time. Formal classification systems include those in the Diagnostic and Statistical Manual of Mental Disorders (DSM) and Medical Subject Headings (MeSH) of the National Library of Medicine.

Keywords Hysteria • Malingering • Nonorganic disease • Functional ophthalmic disorders • Ophthalmic functional overlay • Nomenclature • Ocular malingering • Visual hysteria • Conversion disorder

1.1 Nomenclature

Functional disorders (FD) refer to any disorder where symptoms or signs of disease occur but there is no evidence of organic disease. There has been long debate and evolution of the nomenclature used to describe these disorders, which complicates understanding the conditions (Bury, 1896; Ransom, 1895). Alternate terms in the literature for these disorders include "*nonorganic disease*" (Miller, 2004; Waddell & Richardson, 1980), "*medically unexplained symptoms*" (Deary, Chalder, & Sharpe, 2007; Jones & Wessely, 2005; O'Brien, 1998; Smith & Swamena, 2001; Werring, Weston, Bullmore, Plant, & Ron, 2004), and *abnormal illness behavior* (Prior & Bond, 2008).

Somatic symptoms and related disorders is the term for the redefined, pertinent category in the fifth and most recent edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) published by the *American Psychiatric Association)* (APA, 2013). The continued evolution of the terminology is generally a reliable sign that there has never been satisfaction with the nomenclature (Greco, 2012). This is one of the reasons, as discussed in Sec. 1.7, this text frequently will use the historical terms of hysteria and malingering.

R. Enzenauer et al., *Functional Ophthalmic Disorders*,
DOI 10.1007/978-3-319-08750-4_1

An additional factor in the confusion over the concept of functional disorders is that names of the *subtypes* of functional disorders continue to change over time. These changes frequently coincide with new editions of the DSM ("DSM: History of the Manual," n.d.). For instance, the somatization disorder of DSM-IV-TR is now referred to as somatic symptom disorder in DSM-5, and similarly hypochondriasis is now called illness anxiety disorder (APA, 2000, 2013). Not surprisingly, the evolving DSM terminology is not accepted with universal enthusiasm (Frances, 2013).

1.2 Simple Classification of Functional Disorders

A World War II era physician offered his version of a clear-cut distinction between malingering and hysteria. "The malingerer lies, the other tells what he believes to be the truth, although it may be true that neither wants to return to duty." (Unsworth, 1945). Functional disorders, like all diseases, occur across a spectrum, but it is easier to grasp that spectrum if one has a thorough understanding of either end of the span of disease.

It is oversimplistic but useful to sort functional disorders into two ends of a spectrum: *conscious* and *unconscious*. The malingerer is conscious of his deception. The hysteric is not (Fig. 1.1).

In the *conscious* category (historically called *malingering*), the patient *intentionally manufactures signs and symptoms of disease to achieve a specific benefit or to avoid an undesirable circumstance.* In the *unconscious* category (historically called *hysteria*), the patient's mind *unconsciously deals with untenable circumstances by producing symptoms and signs of organic illness in an attempt to escape the untenable situation*. The symptoms are very real to the patient; they are not consciously created.

Symptoms and Signs without Organic Disease	
CONSCIOUS MANUFACTURE OF SIGNS AND SYMPTOMS (Traditional Malingering)	**UNCONSCIOUS MANIFESTATION OF SIGNS AND SYMPTOMS (Traditional Hysteria)**
TYPES and MOTIVATION	TYPES
Malingering – Secondary Gain from the Semblance of Illness	**Conversion Disorder**
Factitious Disease – The Illness Experience	**Illness Anxiety Disorder**
	Somatic Symptom Disorder

Fig. 1.1 Categorization of functional disorders

One of the reasons various authors prefer terms such as "nonorganic disease" or "medically unexplained symptoms" is that these labels are more descriptive of the phenomenon than the more nebulous "functional" label. Many also use these general diagnostic categories as the most specific level of diagnosis to be made in functional disorders and make no determination or judgment about the conscious or unconscious intent on the part of the patient. In fact, this school of thought believes it frequently impossible and/or inadvisable to make such a judgment (Beatty, 1999; Griffiths & Eddyshaw, 2004). Many emphasize the indisputable fact that, like all disease, the spectrum of functional disorders occurs across a continuum and therefore precise categories and sometimes arbitrary labels do not apply (Cunnien, 1988).

Other authors emphasize the need to sort out the intent of the patient when possible. "Understanding the patient's motivation or incentive … and the degree to which he or she is conscious of it may be the most difficult part of the diagnostic process, but it may be the most crucial." (Miller, 2004). It is not always necessary or recommended to apprise the patient of every nuance of the diagnosis, particularly with regard to the patient's motivation, but when possible, reaching a more detailed level of diagnosis in the examiner's mind is important in decisions regarding appropriate disposition of the patient.

1.3 Types of Conscious Functional Disorders (Traditional Malingering)

Factitious disorder refers to the psychiatric condition in which the patient deliberately produces the illusion of illness for the sole purpose of assuming the sick role. The older terminology for this condition is Munchausen Syndrome, or Munchausen Syndrome by Proxy, when a person with the disorder victimizes a child (Bauer & Boegner, 1996; Elwyn & Ahmed, 2006; Kalivas, 1996).

Malingering is the conscious production of false or exaggerated symptoms motivated by external incentives, such as obtaining compensation or drugs, avoiding work or military duty, or evading criminal prosecution (APA, 2013). Some authors believe it may be a manifestation of an underlying personality disorder (Kucharski, Toomey, Fila, & Duncan, 2007; Spratt & DeMaso, 2006). The term malingering usually refers to the concept of *positive malingering*: creating symptoms of a disease that is not really present. *Negative malingering*, where a patient attempts to hide the signs and symptoms of actual organic disease, is less common (Duke-Elder & Abrams, 1970).

1.4 Types of Unconscious Functional Disorders (Traditional Hysteria[1])

S*omatization disorder* is a chronic condition with physical complaints in more than one part of the body in persons younger than 30 years of age and results in unnecessary medical treatment, causes significant impairment in functioning, or both ("Somatization Disorder (Briquet Syndrome)," 2012; Spratt & DeMaso, 2006).

Conversion disorder is a loss of neurologic sensory or physical function, usually quite suddenly at times of psychological stress and not fully explained by organic disease (Marsden, 1986; Nason, 1994).

Hypochondriasis is a disorder characterized by unexplained physiologic symptoms related to fear of a specific medical condition, such as a complaint of a headache perceived as being due to a brain tumor when all investigations show that there is no tumor present. Hypochondriacal patients worry that symptoms portend serious illness and have difficulty accepting reassurance (Barsky et al., 2001; Cely-Serrano & Floet, 2006; Hilty, Marks, Bourgeois, & Yellowlees, 2005).

Pain disorder is a focused pain complaint that cannot be entirely attributed to a specific medical disorder. Criteria of pain disorder include the following: (1) Pain in one or more anatomical sites producing a predominant clinical focus, (2) Psychological factors felt to play an important role in the onset, severity, or course of the pain, and (3) Pain symptom that is not feigned or intentionally produced (Main, 2003; Protagoras-Lianos, 2006; Yates, 2005).

Body Dysmorphic Disorder is a condition where the patient focuses on a physical defect that is not evident to others. Specific characterizations of body dysmorphic disorder include the following: (1) Preoccupation with an imagined defect in appearance. (2) May be associated with multiple, frantic, and unsuccessful attempts to correct imagined defect by cosmetic surgery (Bjornsson, Didie, & Phillips, 2010; Ericksen & Billick, 2012).

Functional Overlay is a situation where the patient has organic illness but also has functional symptoms unexplained by the organic illness (Agatston, 1944; Bromberg, 1979; Fava, 1996; Main & Spanswick, 1995; Spaeth, 1930; Walsh & Hoyt, 1969; Weinberger, 1979).

1.5 Ophthalmic Functional Disorders

This publication will concentrate on functional disorders where there are specific visual or ocular symptoms without any apparent pathology.

Ocular malingering is the conscious manufacture of ocular symptoms, most often poor vision, in the absence of any apparent pathology with the goal of gaining

[1] Many of these terms were recently eliminated, reclassified, or renamed in DSM-V. They are included here as the terms exist throughout the medical literature.

some compensation or avoiding some responsibility (Agatston, 1944; Kramer, La Piana, & Appleton, 1979; Spaeth, 1930).

Visual Hysteria is a subconscious process where an ocular symptom and/or diminished visual acuity occurs and cannot be explained on an organic basis. With reassurance and occasional psychiatric evaluation and treatment, it often reverts to normal (Barris, Kaufman, & Barberio, 1992; Keane, 1982; Krill & Newell, 1968).

Ophthalmic Functional Overlay is a condition where abnormal structural ophthalmologic or neuroophthalmologic findings exist but there are visual loss and/or other ocular symptoms either out of proportion to or unexplained by the abnormality noted on the examination (Lim, Siatkowski, & Farris, 2005).

1.6 DSM-5 and MeSH Classification of Functional Disorders

As mentioned in Sect. 1.2 Nomenclature of Functional Disorders, the lexicon of functional disorders has evolved over time. The APA is the main organization that defines, standardizes, and updates the concepts of functional disorders. The APA first published a categorization of mental disorders in 1952 in the DSM ("DSM: History of the Manual," n.d.). The most recent edition, DSM-5, includes the corresponding diagnostic codes from the ninth and tenth International Statistical Classification of Diseases and Related Health Problems (ICD-9 and ICD-10) (APA, 2013; Centers for Medicare and Medicaid Services 2014a).

ICD is the standardized system of diagnoses developed by the World Health Organization and modified for use by most countries, including the United States of America (USA) (World Health Organization, n.d.). Implementation of ICD-10 codes was planned in the USA for the Fall of 2014, but has recently been postponed to 2015 (Centers for Medicare and Medicaid Services, 2014b). Table 1.1 adapts and summarizes pertinent information from DSM-5 on the categories of mental disease pertinent to functional disorders.

The National Library of Medicine standardizes medical terminology in its "controlled vocabulary thesaurus" called Medical Subject Headings (MeSH) (U.S. National Library of Medicine, 2013). It places medical terms in a hierarchy that assists with searching medical databases. The MeSH terminology concerning various functional disorders is helpful because it includes terms used in the preceding decades that are not all included in DSM-5 (U.S. National Library of Medicine, 2012a, b) (see Table 1.2).

Table 1.1 DSM-5 classification, criteria, and coding of functional disorders

ICD-9	ICD-10*	Somatic Symptom and Related Disorders (309)
300.82	*F45.1*	**Somatic Symptom Disorder** *With predominant pain and/or persistent; mild, moderate, or severe*
300.7	*F45.1*	**Illness Anxiety Disorder** *Care seeking or care avoidant type*
300.11		**Conversion Disorder (Functional Neurological Symptom Disorder)**
	F44.4	*With weakness or paralysis, abnormal movement, swallowing symptoms, or speech symptom*
	F44.5	*With attacks or seizures*
	F44.6	*With anesthesia, sensory loss, or special sensory symptom*
	F44.7	*With mixed symptoms, acute episode or persistent, with psychological stressor, or without psychological stressor*
316	*F54*	**Psychological Factors Affecting Other Medical Conditions** *(mild, moderate, severe, extreme)*
300.19	*F68.10*	**Factitious Disorder** *(includes Factitious Disorder imposed on self and Factitious Disorder imposed on Another; single episode or recurrent episodes)*
300.89	*F45.8*	**Specified Somatic Symptom And Related Disorder**
300.82	*F45.9*	**Unspecified Somatic Symptom And Related Disorder**
		Other Conditions That May be a Focus of Clinical Attention
Section 726, Other Circumstances of Personal History, Nonadherence to Medical Treatment		
V65.2	*(Z76.5)*	**Malingering**

--adapted from American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Arlington, VA, American Psychiatric Association, 2013.

** ICD-10 code sets will be implemented October, 2014. http://www.cms.gov/Medicare/Coding/ICD10/index.html accessed Nov 22, 2013.*

Table 1.2 Selected portions of MeSH tree related to functional disorders

Behavior and Behavior Mechanisms [F01]	
MALINGERING [F01.145.126.925]	Scope note: simulation of symptoms of illness or injury with intent to deceive in order to obtain a goal, e.g., claiming illness to avoid jury duty
Mental Disorders [F03]	
FACTITIOUS DISORDERS [F03.400]	Scope note: disorders characterized by physical or psychological symptoms that are not real, genuine, or natural Differentiate from *somatoform disorders*: factitious are physical or psychological symptoms under voluntary control, somatoform are physical symptoms linked to psychological factors but not under voluntary control
MUNCHAUSEN SYNDROME [F03.400.600]	Scope note: a factitious disorder characterized by habitual presentation for hospital treatment of an apparent acute illness, the patient giving a plausible and dramatic history, all of which is false Disease symptoms fabricated by a person seeking hospitalization repeatedly; *Munchausen by Proxy*[a] is available
SOMATOFORM DISORDERS [F03.875]	Scope note: (1) Disorders having the presence of physical symptoms that suggest a general medical condition but that are not fully explained by a general medical condition, by the direct effects of a substance, or by another mental disorder. The symptoms must cause clinically significant distress or impairment in social, occupational, or other areas of functioning. In contrast to *factitious disorders* and *malingering*, the physical symptoms are not under voluntary control (*APA, DSM-iV*). (2) Pain disorder. (3) Somatization disorder Differentiate from *factitious* and *psychophysiologic disorders*
BODY DYSMORPHIC DISORDERS [F03.875.149]	Scope note: preoccupations with appearance or self-image causing significant distress or impairment in important areas of functioning
CONVERSION DISORDER [F03.875.300]	Scope note: a disorder whose predominant feature is a loss or alteration in physical functioning that suggests a physical disorder but is actually an expression of a psychological conflict or need Use Cat F3 qualif; X ref *globus hystericus*: of psychogenic origin but globus sensation of nonpsychogenic origin is indexed under deglutition disorders or specific organ/dis or other disease heading
HYPOCHONDRIASIS [F03.875.450]	Scope note: preoccupation with the fear of having, or the idea that one has, a serious disease based on the person's misinterpretation of bodily symptoms (*APA, DSM-IV*)
NEURASTHENIA [F03.875.600]	Scope note: a mental disorder characterized by chronic fatigue and concomitant physiologic symptoms Remember also *neurocirculatory asthenia* exists

U.S. National Library of Medicine (2012a, b)

[a]Munchausen by Proxy not included in mental or behavioral; under social sciences/sociology/social welfare/child welfare/child abuse (Ref NLM, MeSH, Munchausen Syndrome by Proxy)

1.7 Terminology in This Text

At a meeting of the Wigan Medical Society in 1896, a physician from Manchester, England, addressed the assembly on the topic of distinguishing *functional* from *organic* disease. Judson S. Bury spent the initial 20 % of his address discussing shortcomings of the terminology, but then he conceded. "In my further remarks,

however, *I must use for the sake of convenience* the terms 'functional' and 'organic' in their usually understood sense." (Bury, 1896).

During the writing of this text, the authors struggled with a way to refer to the subtypes of functional disease traditionally understood as hysteria and malingering. The goal was to be uniform throughout the text and to use terms that would not distract the reader from the discussion of important details of these disorders. Category names such as conscious and unconscious make it easier to understand motivational aspects of the disorders, but become cumbersome in a long discussion of functional disorders.

We ultimately conceded. Even though the terms have fallen out of disfavor, *for the sake of convenience*, we humbly follow the lead of W.M. Beaumont and Sir Stewart Duke-Elder and frequently use the terms "*hysteria*" and "*malingering*" in their usually understood sense.

Lastly, this text arbitrarily uses masculine pronouns in reference to individuals such as the examiner or the patient, and the term 'ophthalmologist' for the examiner, though the testing and techniques are useful for any eye care professional. In discussion of a patient with suspected functional monocular ophthalmic disease, the patient's eye with the alleged ocular problem will be called the "*bad eye*" and the eye that is not the subject of the patient's complaint will be called the "*good eye*."

References

Agatston, H. (1944). Ocular malingering. *Archives of Ophthalmology, 31*, 223–232.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., p. 943). Washington, DC: American Psychiatric Association. Text Revision.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5* (5th ed., p. 947). Arlington, VA: American Psychiatric Association.

Barris, M. C., Kaufman, D. I., & Barberio, D. (1992). Visual impairment in hysteria. *Documenta Ophthalmologica, 82*(4), 369–382.

Barsky, A. J., Ahern, D. K., Bailey, F. D., Saintfort, R., Liu, F. B., & Peckna, H. M. (2001). Hypochondriacal patients' appraisal of health and physical risks. *American Journal of Psychiatry, 158*(5), 783–787.

Bauer, M., & Boegner, F. (1996). Neurological syndromes in factitious disorder. *Journal of Nervous and Mental Disease, 184*(5), 281–288.

Beatty, S. (1999). Non-organic visual loss. *Journal of Postgraduate Medicine, 75*, 201–207.

Bjornsson, A. S., Didie, E. R., & Phillips, K. A. (2010). Body dysmorphic disorder. *Dialogues in Clinical Neuroscience, 12*(2), 221–232.

Bromberg, W. (1979). Functional overlay: An illegitimate diagnosis? *Western Journal of Medicine, 130*, 561–564.

Bury, J. S. (1896). An address on the diagnosis of functional from organic disease of the nervous system. *British Medical Journal, 2*(1856), 189–192.

Cely-Serrano, M. S., & Floet, A. M. W. (2006). Somatoform disorder: Hypochondriasis. *eMedicine Journal (Serial Online)*, 1–13, from http://www.emedicine.com/ped/t.

Centers for Medicare and Medicaid Services. (2014a). ICD-10. Retrieved Jan 19, 2014 from http://www.cms.gov/Medicare/Coding/ICD10/index.html. Aug 13, 2014.

Centers for Medicare and Medicaid Services. (2014b). ICD-10: latest news. Retrieved Aug 19, 2014 from http://www.cms.gov/Medicare/Coding/ICD10/Latest_News.html. Aug 14, 2014.

Cunnien, A. J. (1988). Chapter 2. Psychiatric and medical syndromes associated with deception. In R. Rogers (Ed.), *Clinical assessment of malingering and deception*. New York, NY: The Guilford Press.

Deary, V., Chalder, T., & Sharpe, M. (2007). The cognitive behavioral model of medically unexplained symptoms: A theoretical and empirical review. *Clinical Psychology Review, 27*(7), 781–797.

DSM: History of the Manual. (n.d.). American Psychiatric Association. Retrieved from http://www.psychiatry.org/practice/dsm/dsm-history-of-the-manual.

Duke-Elder, S., & Abrams, D. (1970). Malingering (chapter XI). In S. Duke-Elder (Ed.), *Ophthalmic optics and refraction* (Vol. V, pp. 487–501). St. Louis, MO: The C.V. Mosby Co.

Elwyn, T. S., & Ahmed, I. (2006). Factitious Disorders. *eMedicine Journal (Serial Online)*, 1–13, from http://www.emedicine.com/med/t.

Ericksen, W. L., & Billick, S. B. (2012). Psychiatric issues in cosmetic plastic surgery. *The Psychiatric Quarterly, 83*(3), 343–352. doi:10.1007/s11126-012-9204-8.

Fava, G. A. (1996). Beyond the biopsychosocial model: Psychological characterization of medical illness. *Journal of Psychosomatic Research, 40*(2), 117–120.

Frances, A. (2013). The new somatic symptom disorder in DSM-5 risks mislabeling many people as mentally ill. *British Medical Journal, 346*, f1580.

Greco, M. (2012). The classification and nomenclature of "medically unexplained symptoms": Conflict, performativity and critique. *Social Science and Medicine, 75*(12), 2362–2369. doi:10.1016/j.socscimed.2012.09.010.

Griffiths, P. G., & Eddyshaw, D. (2004). Medically unexplained visual loss in adult patients. *Eye, 18*(9), 917–922. doi:10.1038/sj.eye.6701367.

Hilty, D. M., Marks, S. L., Bourgeois, J. A., & Yellowlees, P. M. (2005). Hypochondriasis. *eMedicine Journal (Serial Online)*, 1–27, from http://www.emedicine.com/med/t.

Jones, E., & Wessely, S. (2005). War syndromes: The impact of culture on medically unexplained symptoms. *Medical History, 49*, 55–78.

Kalivas, J. (1996). Malingering versus factitious disorder. *American Journal of Psychiatry, 153*(8), 1108.

Keane, J. R. (1982). Neuro-ophthalmic signs and symptoms of hysteria. *Neurology, 32*(7), 757–762.

Kramer, K. K., La Piana, F. G., & Appleton, B. (1979). Ocular malingering and hysteria: Diagnosis and management. *Survey of Ophthalmology, 24*(2), 89–96.

Krill, A. E., & Newell, F. W. (1968). The diagnosis of ocular conversion reaction involving visual function. *Archives of Ophthalmology, 79*(3), 254–261.

Kucharski, L. T., Toomey, J. P., Fila, K., & Duncan, S. (2007). Detection of malingering of psychiatric disorder with the personality assessment inventory: An investigation of criminal defendants. *Journal of Personality Assessment, 88*(1), 25–32.

Lim, S. A., Siatkowski, R. M., & Farris, B. K. (2005). Functional visual loss in adults and children patient characteristics, management, and outcomes. *Ophthalmology, 112*(10), 1821–1828. doi:10.1016/j.ophtha.2005.05.009.

Main, C. J. (2003). Chapter 13. The nature of chronic pain: A clinical and legal challenge. In P. W. Halligan, C. Bass, & D. A. Oakley (Eds.), *Malingering and illness deception*. Oxford, England: Oxford University Press.

Main, C. J., & Spanswick, C. C. (1995). "Functional overlay", and illness behaviour in chronic pain: Distress or malingering? Conceptual difficulties in medico-legal assessment of personal injury claims. *Journal of Psychosomatic Research, 39*(6), 737–753.

Marsden, C. D. (1986). Hysteria: A neurologist's view. *Psychological Medicine, 149*, 28–37.

Miller, N. R. (2004). Neuro-ophthalmologic manifestations of nonorganic disease. In N. R. Miller & N. J. Newman (Eds.), *Walsh & Hoyt's clinical neuroophthalmology* (6th ed., pp. 1315–1334). Baltimore: Lippincott Williams and Wilkins.

Nason, F. E. (1994). Chapter 304: Somatic preoccupations, factitious illness, and noncompliance. In D. M. Albert, F. A. Jakobiec, & N. L. Robinson (Eds.), *Principles and practice of ophthalmology* (Vol. 5, pp. 3747–3751). Philadelphia, PA: WB Saunders, Co.

O'Brien, M. D. (1998). Medically unexplained neurological symptoms: The risk of missing organic disease is low. *British Medical Journal, 316*, 564–565.

Prior, K. N., & Bond, M. J. (2008). The measurement of abnormal illness behavior: Toward a new research agenda for the Illness Behavior Questionnaire. *Journal of Psychosomatic Research, 64*(3), 245–253. doi:10.1016/j.jpsychores.2007.10.013.

Protagoras-Lianos, D. (2006). Somatoform disorder: Pain. *eMedicine Journal (Serial Online)*, 1–10, from http://www.emedicine.com/ped/t.

Ransom, W. B. (1895). Hysterical or functional disease. *British Medical Journal, 1*(1792), 972–973.

Smith, R. C., & Swamena, F. C. (2001). Classification and diagnosis of patients with medically unexplained symptoms. *Journal of General Internal Medicine, 22*(5), 685–691.

Somatization Disorder (Briquet Syndrome). (2012). *A.D.A.M. medical encyclopedia*. National Library of Medicine. Retrieved from http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001951/.

Spaeth, E. B. (1930). Differentiation of ocular manifestations of hysteria and of ocular malingering (review). *Archives of Ophthalmology, 8*, 911–936.

Spratt, E. G., & DeMaso, D. R. (2006). Somatoform disorder: Somatization. *eMedicine Journal* (Serial Online) (medscape.com), 1–20. Retrieved Feb 19, 2014 from http://www.emedicine.com/ped/t. Updated Mar 14, 2014.

Unsworth, A. C. (1945). A discussion of ocular malingering in the armed services. *American Journal of Ophthalmology, 28*, 148–160.

U.S. National Library of Medicine. (2013). Fact Sheet: Medical Subject Headings (MeSH®). National Institutes of Health, U.S. National Library of Medicine. Retrieved Jan 4, 2014 from http://www.nlm.nih.gov/pubs/factsheets/mesh.html. Updated Dec 9, 2013.

U.S. National Library of Medicine. (2012a). MeSH Tree Structures 2013: F03 mental disorders. National Institutes of Health, U.S. National Library of Medicine. Retrieved Jan 4, 2014 from http://www.nlm.nih.gov/mesh/2013/mesh_trees/F03.html. Updated Aug 21, 2012.

U.S. National Library of Medicine. (2012b). MeSH Tree Structures 2013: F01 behavior and behavior mechanisms. National Institutes of Health, U.S. National Library of Medicine. Retrieved Jan 4, 2014 from http://www.nlm.nih.gov/mesh/2013/mesh_trees/F01.html. Aug 21, 2012.

Waddell, G., & Richardson, J. (1980). Nonorganic physical signs in low-back pain. *Spine, 5*, 117–125.

Walsh, F. B., & Hoyt, W. F. (1969). The ocular signs of neurasthenia, hysteria, malingering, and the psychoses. Chapter 14. In *Clinical neuro-ophthalmology* (3rd ed., Vol. 3, pp. 2519–2537). Baltimore, MD: The Williams & Wilkins Co.

Weinberger, L. M. (1979). Another view of functional overlay (Letter). *Western Journal of Medicine, 131*(3), 251–252.

Werring, D. J., Weston, L., Bullmore, E. T., Plant, G. T., & Ron, M. A. (2004). Functional magnetic resonance imaging of the cerebral response to visual stimulation in medically unexplained visual loss. *Psychological Medicine, 34*(4), 583–589. doi:10.1017/S0033291703008985.

World Health Organization. (n.d.). International classification of diseases. Retrieved Jan 5, 2014 from http://www.who.int/classifications/icd/en/

Yates, W. R. (2005). Somatoform Disorder. *eMedicine Journal (Serial Online)*, 1–15, from http://www.emedicine.com/med/t.