SOMATOFORM DISORDERS

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In addition to the Somatoform Disorders, as listed in DSM-IV, such as Somatization Disorder (SD), Conversion Disorder (CD), Hypochondriasis (HD), Body Dysmorphic Disorder (BDD), Pain Disorder, and Undifferentiated Somatoform Disorder (USD), there are a group of disorders called "Functional Somatic Syndromes" (4), such as Chronic Fatigue Syndrome, Irritable Bowel Syndrome, or Fibromyalgia. Factitious Disorder may also be included among these somatopsychic conditions. These conditions are of theoretical and clinical importance for a number of reasons. First they result in a great deal of suffering. Secondly they are important because they cross the concern of disciplines, being important to both psychiatrists and other medical physicians. And third they raise fundamental issues in medicine and psychiatry about the relationship of the mind to the body. Yet those specific Somatoform Disorders that are of interest to psychiatrist may only represent a small proportion of these conditions occurring clinically. Although the Somatoform Disorders listed in DSM-IV are of concern to psychiatrists, research shows that in primary care practices patients with Undifferentiated Somatoform Disorder or Somatoform Disorder NOS are far more common. There are also a high percentage of somatized psychiatric disorders, such as Major Depression or Panic Disorder that present in primary care. Thus there are three groups of patients with somatic presentations that are of interest to primary care physicians: those with multiple medically unexplained symptoms, hypochondriacal worries, and somatized presentations of other psychiatric conditions (4). The vast majority of these never see psychiatric care.

Studies within primary care show low rates of full Somatoform Disorders, but high rates of subthreshold conditions and high rates of medically unexplained symptoms, as high as 25 to 50% (5). In the setting of unexplained medical symptoms and high distress, medical physicians react first by exploring for medically treatable conditions. If this proves fruitless, then medical practitioners tend to get frustrated and may refer to psychological practitioners, causing the patient to feel abandoned and misunderstood. On the other hand, somatizing patients run a high risk of iatrogenic harm (8).

On the average about 45% of visits to primary care providers involve somatization. It has been demonstrated through a national survey that 70% of those patients who eventually end up in psychiatric care first presented to a primary care physician with a somatic complaint. In a 3-year study of 1000 primary care patients that the majority of symptoms presented were for unexplained medical problems. While diagnostic testing was done in 75% of patients, an identifiable medical cause of symptoms was found in only 16%. Therefore the cost of making a verified medical diagnosis was quite high – $7,778 per headache complaint and $7,263 per back pain complaint (8). This is not limited to primary care. Half of the patients attending a Gastrointestinal Clinic had no relevant organic disease (7).

Central to these disorders is the concept of somatization. Somatization can be defined as the "tendency to experience and communicate somatic distress and symptoms unaccounted by pathologic findings, to attribute them to physical illness, and to seek medical help for them" (10). Somatization can also be defined as "the focusing of attention on internal stimuli and the denial of psychological or interpersonal difficulties,

resulting in an increased tendency to report somatic symptoms, many of which cannot be medically explained" (28). There may be two forms, first a state type that is associated with culturally dictated help seeking behaviors, and a trait form that is activated in response to stress and may result in an increased risk for chronic pain, increased health utilization, and a poorer treatment outcome (28). Traditionally somatization has carried the stigma of not being as mature a way of communicating distress as through a psychological idiom. Anthropological research has come to show that most people throughout the world present their distress through a physical or somatic idiom. It is not seen as less than a psychological presentation, only different. Within medical settings however, it continues to be tied to illness. From this perspective, somatization may be seen as a dimensional construct with three separate dimensions: " (a) the tendency to experience and report functional symptoms, (b) the tendency to worry or to be convinced that one is sick, and (c) the tendency for some individuals with depression or anxiety to present clinically with predominantly somatic symptoms" (4:131). Within a primary care setting 75% of those with depression and/or anxiety present with exclusively somatic symptoms, but only about 10% persistently deny a relationship to psychological factors. Those that present somatically differ from those that present psychologically, primarily in their negative attitudes toward psychiatric illness (4). In the west, an emphasis on the Biomedical Health Care System may actually encourage somatic presentations. This may be further influenced by stigma against psychological problems (4).

Certain factors in the west tend to make somatization more common (8):

1) Anxiety and depression often present with physical symptoms.
2) Our medical system responds more effectively to physical problems than psychological problems.
3) The resolution of certain physical symptoms, especially pain, is often tied to financial issues such as workman's compensation and liability judgments.
4) (9) Insurance reimbursement patterns encourage physical expression of distress rather than a psychological expression.

In addition, the diagnosis of the Somatoform Disorders requires the delineation of norms for certain aspects of illness behavior (5). A criterion in many of the Somatoform Disorders is that the displayed distress is out of proportion to objective estimations of the problem. However, there are no established norms as to what level of distress is appropriate. Illness Worry varies between individuals and is not related to the severity of coexisting medical illness. Illness Worry may relate more to previous illness experience, personality traits, and sociocultural background. Thus there is a great deal of subjectivity in determining if someone's response to distress is appropriate or not. This allows for the influence of biases and differences in expectations. In the setting of unexplained medical symptoms and high distress, medical physicians react first by exploring for medically treatable conditions. If this proves fruitless, then medical practitioners tend to get frustrated and may refer to psychological practitioners, causing the patient to feel abandoned and misunderstood (5). In the west there is a tendency to attribute a person's difficulties to their individual characteristics, rather than as a result of their social situation. This may result in a tendency to see the tendency to somatize as related to an individual's character, rather than their social setting (4). Thus, the use of pejorative comments, blaming the person for their difficulties, such as calling them a "crock."

Initially a somatic presentation was seen to correlate with low intelligence, lack of psychological sophistication, immature personality, or defensiveness. As a consequence, psychological processes are assumed to be etiological in Somatoform Disorders, but this is difficult to demonstrate empirically. Somatoform Disorders reflect certain aspects of the health care system, in which psychological practitioners are asked to diagnose and treat those whose complaints are not attributed to a clear-cut medical condition (5). They involve a tendency toward all or nothing thinking – that something is either medical or psychological (5). Thus the relation between the mind and the body is central to an understanding of these disorders.

Nonetheless, a continuing question within medical and psychiatric research is why do some people present their distress using a physical expression and others use a psychological expression? A tendency to present distress somatically has been linked to a number of factors. Having parents that somatized correlates with the tendency to somatize. Those that somatized often had childhood experiences of significantly ill family members. There is also an association between childhood traumatic events and a tendency to somatize. All of these could promote a tendency to be preoccupied with bodily functioning. In addition, there is significant cross-cultural variation in the prevalence of unexplained medical symptoms, the type of somatic symptoms, and their relation to psychiatric disorders (4).

Various personality traits have been linked to Somatoform Disorders, such as "individual differences in physiological reactivity, symptoms perception, somatic attention, cognitive evaluation or the ability to cope with somatic distress, and propensity for help seeking" (1:126). It is assumed that there is a background level of somatic sensations that individuals selectively focus upon and possibly amplify, but there is no reason why this should be specifically somatic sensations, as opposed to other forms of distress. One possible element in Somatoform Disorders may be a labile or reactive physiological system. The personality trait Introversion has been associated with enhanced physiological reactivity (4). In addition, individuals may vary in their ability to perceive and discriminate various somatic sensations. It has been demonstrated that those with a high number of medically unexplained symptoms are less accurate in their ability to detect somatic sensations. The tendency to focus on the background of somatic sensations varies among people and has been linked to variation in the personality trait Neuroticism. It may also be related to Hypnotizability, which partially correlates with the personality dimension Openness. Both high and low Hypnotizability may contribute to somatic distress, with the former becoming deeply absorbed in sensations and the later being unable to block noxious sensations. An inability to cognitively elaborate emotional conflict or the suppression of emotional expression have been linked to somatization and psychophysiological disorders. The early experience of traumatic life events, which are not discussed or disclosed, has been linked to increased somatic symptoms. On the other hand alexithymia may result in attribution of somatic symptoms to somatic illness. Alexithymia has been linked to high Neuroticism and low Extraversion. A critical factor in Somatoform Disorders is an individual's ability to cope with somatic distress. A tendency to catastrophize or to make disease-related attributions may influence a person's ability to cope with distress (4).

Whereas psychiatric samples of patients with high levels of medically unexplained symptoms have been found to have from 30 to 60% Personality Disorder,

this is not true in community samples (4). Thus the high rate of Personality Disorders among the psychiatric samples may be a selection bias (4).

Thus certain personality traits and styles, such as catastrophizing may contribute to who with somatizing tendencies will be identified by the primary care physicians (4). There may be an interaction between psychological factors and sociocultural factors determining somatic versus psychological presentations (4). Nonetheless, there are a group of patients with predominately physical symptoms, who are not able to be treated within the primary care setting and end up the responsibility of psychiatry. This then further enhances their distress (4). Yet psychiatrists are often not very willing to see these patients. Why are patients with Somatoform Disorders ignored by psychiatry (7)? There may be several reasons. First, since the majority of these patients have USD they tend to be on the margins of general psychiatric practice, which is more concerned with the more specific, but rarer Somatoform Disorders. Secondly, psychiatry is focused primarily on the "serious mental illnesses." And third, most psychiatrists are not in general hospitals, where those with Somatoform disorders constitute up to ½ of all psychiatric consultations.

In conclusion, the majority of patients in primary care settings tend to express their distress through somatic concerns, many of which are not clearly linked to identified medical illnesses. The greatest proportion of these people have self-limited or temporary stress related distress that is often dealt with successfully through a combination of reassurance, symptomatic treatment, and time. Out of these there is a small group whose somatic complaints are more persistent, often frustrating the primary care physician. A number of personality and sociocultural factors may influence who these people tend to be. A small number of them develop more severe, even disabling disorders that may eventually be seen within psychiatry. Many psychiatrists, however, are not very comfortable with these patients either. These patients may especially frustrate psychiatrists who take a more predominately psychological perspective. Yet, the management of patients with Somatoform Disorders requires a strong therapeutic alliance, including the negotiation of a common explanatory model. The concept of stress and stress-induced symptoms is often helpful. Effort should be directed a reduction of symptoms severity and normalization of distress. Treatment decisions should be based on objective evidence and conservative therapeutic interventions. Referral for psychiatric evaluation is often felt as rejection and needs to be handled carefully with reassurance that only a one-time evaluation is expected and that their primary care provider is not abandoning them (8). If a therapeutic relation becomes established then even more therapeutic work can be accomplished.

Somatization Disorder (SD):

Historically this disorder has been associated with Hysteria and in 1859 it was described as Briquet's Syndrome. DSM III defined it as Somatization Disorder (1), which is characterized by symptoms in multiple organ systems. It is usually chronic and associated with signs of psychiatric distress and functional impairment (1).

DSM-IV Diagnostic Criteria for Somatization Disorder

A. A history of many physical complaints beginning before age 30 years that occur over a period of several years and result in treatment being sought or significant impairment in social, occupational, or other areas of functioning.
B. Each of the following criteria must have been met, with individual symptoms occurring at any time during the course of the illness:
    1) Four pain symptoms: a history of pain related to at least four different sites or functions (e.g., head abdomen, back, joints, extremities, chest, rectum, during menstruation, during sexual intercourse, or during urination)
    2) Two gastrointestinal symptoms: a history of at least two gastrointestinal symptoms other than pain (e.g., nausea, bloating, vomiting other than during pregnancy, diarrhea, or intolerance of several different foods)
    3) One sexual symptoms: a history of at least one sexual or reproductive symptoms other than pain (e.g., sexual indifference, erectile of ejaculatory dysfunction, irregular menses, excessive menstrual bleeding, vomiting throughout pregnancy)
    4) One pseudoneurological symptoms: a history of at least one symptoms or deficit suggesting a neurological condition not limited to pain (conversion symptoms such as impaired coordination or balance, paralysis or localized weakness, difficulty swallowing or lump in throat, aphonia, urinary retention, hallucinations, loss of touch or pain sensation, double vision, blindness, deafness, seizures; dissociative symptoms such s amnesia, or loss of consciousness other than fainting)
C. Either 1) or 2):
    1) After appropriate investigation, each of the symptoms in criterion B cannot be fully explained by a known general medical condition or the direct effects of a substance
    2) When there is a related general medical condition, the physical complaints or resulting social or occupational impairment are in excess of what would be expected from the history, physical examination, of laboratory findings
D. The symptoms are not intentionally feigned or produced (as in factitious disorder of malingering)

Over the years the number of positive criteria to make the diagnosis has decreased, although they are still rather arbitrary. There is probably a spectrum of somatization with SD being at the extreme end. A lowering of the criteria to four for males and six for women results in a 100-fold increase in prevalence without loss of predictive validity (6). Escobar (6) advocates for such a spectrum, calling for use of a construct of Abridged Somatization. Using this concept results in a prevalence range of about 20% in primary care settings and that ½ of these have persistent symptoms (6).

Community studies show rates of 0.05 to 0.4%, while studies within primary care settings suggest rates of 1.0 to 1.4%. However, if the distressed frequent users of primary care services are examined 20% meet criteria for SD (5). Others have suggested that SD may be found in 0.1 to 0.5 % of the general population, with a female to male ration of 5-

20:1 (1). This gives a female lifetime prevalence of 1 to 2% (1). The gender ratio in SD varies greatly between cultures (4). Of the patients in a general practitioner's office 5 to 10% may meet criteria for SD. It increases in incidence in lower SES and with lower education. It often begins in adolescence, usually before age 30 years. Of patients with SD, 2/3 have other psychiatric symptoms and ½ have other psychiatric diagnoses, including personality disorder, but there is not an increased incidence of Bipolar Disorder of Substance Use Disorders when compared to the general population (1).

Patients with SD in the UK have been shown to have significant morbidity with 10% being confined to wheelchairs and on the average they spend 7 days per month in bed. They have an average functioning level below that of those with most chronic diseases (7).

The etiology is unknown but there may be an effort to symbolically communicate with others via physical symptoms in order to avoid responsibility, express emotions. Parental and cultural influences and a disturbed childhood have been identified as predisposing factors (1). For instance studies of community samples record that those with Abridged Somatization are significantly more likely to have a history of previous sexual or physical abuse. This is consistent with studies that shoe that people suffering acute traumas, such as in natural disasters, show high rates of physical symptoms (6).

In addition to early experiences, SD has been associated with certain psychological features – excessive distractibility, inability to habituate, impressionistic cognitive schema, partial or circumscribed associations, and lack of selectivity. Decreased frontal lobe and non-dominate hemisphere metabolism has been identified (1). In relation to possible frontal lobe dysfunction, those with SD tend to have impaired habituation to noxious stimuli (4). Those with SD tend to be more introverted and to be high in Neuroticism (4). Their tendency to have interpersonal difficulties both causes more stress and interferes with their doctor-patient relationship (4).

Personality features may be important in the etiology of SD. There appears to be some sort of genetic link between SD and Antisocial Personality Disorder, such that they may be gender specific expressions of an underlying diathesis. First-degree relatives of those with SD have a high rate of ASPD, especially fathers, even if the women were adopted out. The rate of ASPD in those with SD varies from 4 to 60% with the greatest percentage being in studies conducted with forensic populations. One study showed that 25% of males and 8.2% of females with SD met criteria for ASPD. Of patients with SD, 60% are diagnosed with a Personality Disorder: Avoidant PD – 27%, Paranoid PD – 21%, Self-defeating PD – 19%, Obsessive-Compulsive PD – 17%, ASPD – 12.8%, and Histrionic – 7.4% (4).

It tends to run in families, with 10 to 20% of 1st degree relatives having SD. Men in these families have high rates of SUD and ASPD. There is a 29% concordance rate between monozygotic twins and a 10% concordance rate between dizygotic twins (1).

Biologically, it has been hypothesized that cytokines to play a role, such as interleukins, tumor necrosis factor and interferons, which may cause increased sleep, decreased appetite, decreased energy, and decreased mood (1).

Patients with SD usually have long complicated medical histories given in an inconsistent, vague and circumstantial manner. They have multiple complaints, with the most common being nausea, vomiting, dysphagia, pain in limbs, shortness of breath,

amnesia, and various complications of pregnancy and menstruation. They may have a dramatic and exaggerated presentation. There is often a high rate of depression, anxiety and suicidal ideation and threats. They tend to be needy for attention, self-centered, dependent, and manipulative. There is a high rate of comorbid Major Depressive Disorder, Personality Disorders, Substance Use Disorders, Generalized Anxiety Disorder, and Phobias. About 50% have a comorbid psychiatric diagnosis. There are often interpersonal problems (1).

It tends to have a debilitating and chronic course, with exacerbations of symptoms, lasting 6 to 9 months and occurring every 9 to 12 months. Onset of an exacerbation is often triggered by stress (1).

On the other hand, certain medical problems may resemble SD, such as MS, Myasthenia Gravis, SLE, AIDS, Acute Intermittent Porphyria, hyperparathyroidism, hyperthyroidism, and chronic systemic infections. If it begins after the age of 40 then the likelihood of there being a medical problem is great (1).

Treatment should begin with establishing regular (monthly), brief visits with one physician. New complaints should be evaluated with a physical exam and minimal laboratory investigations. Slowly the idea of possible psychological factors can be introduced, leading to an eventual referral (1). This standard treatment of frequent visits with one consistent care provider has been shown to decrease medical usage, but does not affect the underlying psychological distress. On the other hand, psychotherapy has been shown to reduce overall medical expenses, especially incurred via hospitalizations and group therapy has been shown to not only reduce health care costs, but also to improve psychological status (5). The focus of therapy should be on the expression of emotions and increased coping. Medications are helpful for comorbid disorders only (1).

Conversion Disorder (CD):

It is traditionally seen to be the result of repression and to be a compromise solution to unconscious conflict. Therefore the presentation is felt to be symbolic, allowing the expression of distress and control of circumstances (1). As a consequence, there may be both primary and secondary gain (1).

DSM-IV Diagnostic Criteria for Conversion Disorder:

A. One or more symptoms or deficits affecting voluntary motor or sensory function that suggest a neurological or other general medical condition.
B. Psychological factors are judged to be associated with the symptom or deficit because the initiation or exacerbation of the symptom or deficit is preceded by conflicts or other stressors.
C. The symptom of deficit is not intentionally produced or feigned.
D. The symptoms or deficit cannot, after appropriate investigation, be fully explained by a general medical condition, or by the direct effects of a substance, or as a culturally sanctioned behavior or experience
E. The symptom or deficit causes clinically significant distress or impairment in social, occupational, or other important areas of functioning or warrants medical evaluation.

F. The symptom or deficit is not limited to pain or sexual dysfunction, does not occur exclusively during the course of a somatization disorder, and is not better accounted for by another mental disorder.

It is interesting that ICD-10 places Conversion Disorders with Dissociative Disorders (5). Previously in DSM-II Conversion Disorder and Dissociative Disorders were combined under one category, but they have been separated in DSM-III and DSM-IV. Conversion Disorder was placed with the Somatoform disorders, because of it primary somatic presentation.

The lifetime prevalence of conversion symptoms (not the full disorder) is high at about 30%, but the incidence in the general population of CD is about 22/100,000 (1), ranging in various studies from11 to 31/100,000 (5). One community study suggests that there is a rate of 50/100,000 conversion (7). In medical settings the prevalence has been reported as 0.7 and 5% (5). CD is the diagnosis in about 5 to 15% of general hospital psychiatric consultations and 25 to 30% of VA hospital consultations (1). The female to male ratio is 2-5:1. It may occur at any age, but tends to decrease in frequency with age. CD may be more common in rural versus urban settings and correlates with low education, low IQ, low SES, and the experience of combat. There may be comorbid MDD, Anxiety DOs, and Schizophrenia (1). Previously there was felt to be a high rate of undiagnosed neurologic disorders among those initially diagnosed with Conversion Disorder, but this incidence of false positives has decreased with time and efficiency of diagnosis (5). A history of a previous or concurrent neurological or systemic illness does occur in 18 to 64%(1).

CD is a significant percentage of cases in child and adolescent psychiatry in developing countries. In one study from Oman, the principle form of CD was pseudoseizures. This is seen as culturally compatible with beliefs that emphasize the influence of *jinn*, possession and the "evil eye" as causes of distress (17). Zeharia et al. (14) present a series of 47 children with conversion disorder emphasizing how early diagnosis, confidence in the diagnosis, and family intervention result in rapid recovery.

Conversion has often been linked to dissociation and autohypnosis, but there has not been a great deal of empirical support for this. One study (15) comparing 50 patients with CD and 50 matched controls with an affective disorder found that those with CD showed a greater hypnotic susceptibility than controls and that this hypnotic susceptibility correlated with the number of conversion symptoms. Patients with pseudoseizures have also been shown to have increased hypnotic susceptibility. Patients with CD score higher on the DES than other psychiatric patients (15).

Janet in the 19th century linked CD with childhood trauma. Conversion symptoms are seen as involving a dissociation of sensory and motor processes in that there is an inhibition of conscious, voluntary control and information processing, while implicit or automatic information processing remains intact. This has traditionally been understood as a process of autohypnosis, which assumes that there is a relationship between conversion symptoms and hypnotic susceptibility. This relationship has been demonstrated. Another assumption of the autohypnosis theory is a connection between CD and childhood trauma. In this study the trauma reports of patients with CD were compared with those with affective disorders and a comparable level of psychopathology. Furthermore they examined the relationship between the severity of conversion

symptoms and the degree of childhood abuse. Finally the relationship between childhood trauma and CD may be mediated by hypnotic susceptibility. They found that those patients with CD reported a larger number of different types of abuse, longer duration of sexual abuse, and a higher incidence of incest that the control group. Those with CD had more severe and frequent experiences of abuse. Dissociative symptoms increased especially with maternal dysfunction. However, of those with CD about 15% did not report any abuse history. Hypnotic susceptibility was associated with a history of abuse and conversion symptoms, but it appears to only provide partial mediation (18).
On the other hand, a study comparing a group of patients with pseudoseizures and a matched control sample with epilepsy found no significant difference in the social background or developmental history, including histories of trauma and abuse, between the groups. Two patients with histories of sexual abuse were identified, both with pseudoseizures, but this was not significant (19).

There is evidence of decrease cerebral metabolism in the dominant hemisphere and increased metabolism in the non-dominant hemisphere, suggesting impaired hemispheric communication. There is also evidence that increased cortical arousal resulting in increased corticofugal output results in decreased awareness (1). Several pieces of evidence suggest right hemisphere disorganization (13). Neuropsychological testing may reveal subtle neurocognitive deficits (1).

The most common manifestations are paralysis, blindness, and mutism (1). Sensory symptoms include anesthesia and parasthesias of the limbs, deafness, blindness, and tunnel vision. Motor symptoms include abnormal movements, gait disturbance, weakness, paralysis, tremors, choreaform movements, tics, jerks and "astasia-abasia." They tend to increase with attention and the rarely cause falls and injury. Pseudoseizures are common. Of those with pseudoseizures 1/3 also have verified seizures. They may be very difficult to separate, since pseudoseizures may have all the hallmarks of real seizures, except that papillary and gag reflexes are intact ant there is a normal prolactin level after the seizure (1). Conversion disorder is classically said to be accompanied by *la belle indiff9rence*, which is a sense of unconcern (1).

La belle indiff9rence is not specific for conversion (21). Pseudoseizures have also been reported in those with anxiety disorders, psychosis, and impulse control problems associated with ADHD. These patients with pseudoseizures are much less likely to have experienced childhood abuse (21).

Most are very brief, with at least 90 % resolving in a few days. In these though there may be a 25% recurrence rate. The more sudden the onset, the more easily identified the stressors, the better the pre-morbid personality, the lack of comorbid medical or psychiatric conditions, and the lack of litigation, the more likely there will be a quick resolution. The longer the symptoms last the less likely they are to resolve (1).

In a series of 50 patients with CD, 66% had comorbid psychiatric disorders – 38% mood disorders, 32% panic or agoraphobia, 26% dissociative disorders, 24% PTSD, 18% Social or Specific Phobia, 4% GAD, 2% Eating Disorder and OCD. IN addition 38% were felt to have a Personality Disorder – 16% Avoidant, 12% OCPD, 6% Borderline, 4% Paranoid, and 1% each Antisocial and Dependent (15). There is little support for the traditional association between Conversion Disorder and Histrionic Personality Disorder. Histrionic Personality Disorder is diagnosed in only 10 to 20% of those with Conversion Disorder. Dependent Personality Disorder is more common. Patients with Conversion

Disorder have been shown to have increased difficulty expressing emotions and tend to deny personal and emotional problems. There is also evidence that those with persistent conversion disorders have impaired habituation and more labile autonomic responsivity. There may be a link between conversion symptoms and dissociation. Specifically conversion symptoms may be seen as a type of dissociation. Both Hypnotizability and childhood trauma have been linked to dissociative phenomena, including conversion (4).

Conversion disorder presenting as coma may often be distinguished for neurologically impaired coma by the fact that the etiology of the coma is often difficult to determine. Eye movements that are horizontal, saccadic jerking movements, rather than roving nystagmus. They may exhibit forceful eyelid closing, whereas in physiological coma the eyelids close (if at all) with a slow, gradual descent. Occulovestibular testing may result in spontaneous vomiting, grimacing or other symptoms of discomfort, whereas in coma there is a sustained deviation away from the tested ear or no response. There is usually a normal EEG. Lower leg paralysis conversion symptoms are often accompanied by *la belle indiff9rence*, normal reflexes, the absence of fasiculations, dragging the leg during ambulation, nocturnal movement, normal postural trunk adjustments to maintain balance, and an absence of flexion of the upper extremity on the affected side. In conversion blindness there are usually normal bilateral papillary reactions, unless there is a preexisting abnormality. The blindness may be selective and they do not bump into objects or harm themselves (13). During the interview the use of suggestion, hypnosis, or an Amytal of Ativan interview may be helpful (1). The use of Sodium Amytal and a series of case reports are described by Fackler, Anfinson, and Rand (12).

Various neurological disorders such as dementia, tumors, basal ganglia disease, Myasthenia Gravis, polymyositis, myopathies and MS need to be evaluated. Medical conditions such as Guillain-Barr9, Creutzfeldt-Jakob Disease, periodic paralysis, and AIDs may appear as conversion symptoms (1).

Most treatment studies have involved individual case reports of uncontrolled series. Most of these show significant improvement of 70 to 90 % that is maintained with time. Beside CBT, other treatments that have been reported include: biofeedback, behavioral reinforcement, hypnosis, and the use of sedatives such as Lorazepam and Amobarbital in interviews. Physical therapy with behavioral reinforcement, stress management, and hypnosis is often recommended. Family therapy has also been reported as successful (5). Recovery may be hampered by being told that the symptoms are imaginary (1).

Hypnosis is not benign and complications have ranged from 2 to 49% depending on the population. They may include such transient discomforts as headache, drowsiness, a feeling of heaviness, anxiety, dizziness, and difficulty in returning to the prehypnotic state (11). More serious clinical complications, including fear, panic, depression, sleep disturbance, impulsive or compulsive behavior, excessive dependency, the formation of new symptoms, decompensation, and psychosis have all been reported (11).

Pseudoseizures:

Pseudoseizures are a common form of CD and have been fairly extensively studied. Pseudoseizures may be defined as "(p)seudoepileptic seizures are paroxysmal changes in behavior that resemble epileptic seizures but are without organic

causes" (16:188). Of inpatient epilepsy visits 50% are due to pseudoseizures and they are 20% of outpatient visits. Pseudoseizures have been closely linked to dissociation.

Studies of case samples with pseudoseizures show a considerable overlap with dissociative symptoms (25). One study (24) showed a 91% co-morbidity of pseudoseizures and Dissociative Disorders (DDNOS - 62%, DID - 16%, DA/PA - 13%) and a high rate of lifetime dissociative symptoms (Fugue - 36%, Derealization - 56%, Depersonalization - 87%, Amnesia of childhood - 73%, Adult amnesia, beyond seizures - 82%). Mean DES scores (25):

Normal Adults	3-10
Epilepsy Patients	10.7
Pseudoseizure Patients	20.2
DDNOS	29-40
DID	42-55

Although patients with pseudoseizures have been found to have high DES scores, they are not significantly higher than those found in patients with seizures. This study examined 19 patients with pseudoseizures, 20 patients with seizures, and 21 patients with both. They showed that DES scores were significantly higher in those with pseudoseizures, next highest in those with both, and lowest in those with seizures. Those with pseudoseizures also had significantly more psychopathology, although the scores were high for all three groups. The most common symptoms in all three groups were depression, anxiety, and obsessive-compulsions. This data suggests that dissociation may play a role in the development of pseudoseizures, but the exact etiology remains unclear. The fact there is also an associated high degree of psychopathology of significant heterogeneity further suggests that the relationship between dissociation, psychopathology and pseudoseizures is complex. Furthermore, there are patients who develop pseudoseizures that have minimal dissociative symptoms (16).

The definitive diagnosis is made by use of video EEG, observing both ictal and interictal recordings in addition to corroborating data. Not all nonepileptic episodes are pseudoseizures, but may represent syncope, narcolepsy, migraines, startle disease, Tourette's Syndrome, panic or hyperventilation attacks, rage attacks, factitious or malingering disorders, or dissociative trance (23). Pseudoseizures cannot be reliably clinically differentiated from epilepsy. Many of the traditional means that have been used to separate pseudoseizures form epilepsy do not hold up under investigation. For instance, Histrionic Personality Disorder is found in only 8 to 34% of those with pseudoseizures. Only 30 to 50% exhibit *la belle indiff9rence*. On the other hand of those with reliably diagnosed epilepsy 22% demonstrated secondary gain and 14% showed *la belle indiff9rence*. Frontal lobe partial complex seizures can appear quite bizarre and can be easily misdiagnosed as pseudoseizures. Both epilepsy and pseudoseizures may increase with stress. Of those with pseudoseizures inappropriately placed on anticonvulsants 43% showed a reduction in frequency. In those with pseudoseizures 19 to 53% will have some sort of EEG abnormality, including spike and wave phenomenon. Up to half (10 to 66%) of those with VEEG documented pseudoseizures will also have epilepsy. Pseudoseizures can appear as any form of epilepsy, some simply have unresponsiveness with amnesia, without motor movement. Dissociative episodes and atypical panic attacks may mimic pseudoseizures. Standard EEGs I those with ictal

epileptic episodes are only positive in 44%. A 2 to 3x increase in Prolactin level after a seizure occurs in 80 to 90% of those with generalized tonic-clonic seizures, but in only 40 to 60% of those with partial complex seizures (23). Having a history of tongue biting was found in 27% of the patients with pseudoseizures and incontinence occurred in 21%. About half of the patients recorded that stress brought on their episodes (20). Induction by suggestion fails in 10 to 25% of those with pseudoseizures (23).

Besides trying to differentiate pseudoseizures form epilepsy, some cases of pseudoseizures are more accurately panic attacks with syncope, cataplexy, or dissociative trance (23). The diagnosis of pseudoseizures is often not made. Two thirds of those with pseudoseizures become chronic and the median delay in diagnosis at a tertiary care epilepsy center is 3 to 10 years. Many of these patients have been on anticonvulsants for years (23). If continuous EEG monitoring is not available, a placebo-infusion test has been used to diagnose pseudoseizures. Of those who were diagnosed using placebo-infusion, 80% experienced a cessation or significant reduction in their seizure frequency (19). The use of the placebo-infusion test is controversial and considered by some to be unethical (21, 22).

Simply making the diagnosis of pseudoseizures is not adequate. Continuing care is still important as illustrated in a follow-up study of 56 cases of pseudoseizures, 51.8% had a full resolution of their episodes and they decreased in another 42.9% at an average of 18 months. However of those that resolved 42.9% were rehospitalized for either a recurrence of their pseudoseizures of other medical conditions, many of which were suspected to be somatoform disorders. Yet regardless of resolution of pseudoseizures or not, 51.8% had significant depressive symptoms, 39.3% had suicidal ideation, and 19.6% had made suicide attempts, including 21% of those whose pseudoseizures had resolved. Acceptance of the diagnosis of pseudoseizures, having a self-perception of good health and good occupational functioning correlated with resolution of pseudoseizures. Having received psychotherapy did not correlate with resolution of symptoms (20).

Hypochondriasis (HD):

Hypochondriasis is usually understood as deriving from a misinterpretation of physical symptoms (1). People who develop Hypochondriasis may have a lower pain threshold than the average person. It is also seen as an unconscious effort to obtain the sick role and avoid responsibility. Others see it as a somatized version of depressive and anxiety disorders, since there is an 80% comorbidity with these. Traditionally it is seen as the displacement of aggressive wishes into physical complaints, allowing the sufferer to at first attract and then reject help. It can also be understood as an effort to displace guilt, a low sense of self-esteem, or a sense of innate badness through pain into a sense of deserved punishment (1).

DSM-IV Diagnostic Criteria for Hypochondriasis:

A. Preoccupation with fears of having, or the idea that one has, a serious disease based on the person's misinterpretation of bodily symptoms.
B. The preoccupation persists despite appropriate medical evaluation and reassurance.

C. The belief in criterion A is not of delusional intensity (as in delusional disorder, somatic type) and is not restricted to a circumscribed concern about appearance (as in body dysmorphic disorder).
D. The preoccupation causes clinically significant distress or impairment in social, occupational, or other important areas of functioning
E. The duration of the disturbance is at least 6 months.
F. The preoccupation is not better accounted for by generalized anxiety disorder, obsessive-compulsive disorder, panic disorder, a major depressive episode, separation anxiety, or another somatoform disorder.

Clinically these patients cannot be reassured by medical data or the focus of attention may shift to another symptom (1). There is a great deal of comorbidity with depressive and anxiety disorders (1). Given the high comorbidity of HD with depressive and anxiety disorders, if the occurrence of the hypochondriacal worries is limited in time to periods of significant depression or anxiety, then it is not a separate disorder. Panic Disorder may also appear as Hypochondriasis, if there is fear of having a cardiac condition. It may also be so severe as to actually qualify as a Delusional Disorder (1). These need to be distinguished from HD.

In general it tends to be episodic, lasting months to years, with long periods in between of no symptoms. These episodes may be stress induced and they improve gradually over time. The higher the person's SES the better the prognosis. The prognosis is also better if there is comorbid and treatable depression or anxiety, there is sudden onset of symptoms, there is an absence of personality disorder, and there is an absence of non-psychological medical conditions (1).

Community studies a prevalence of about 0.2%, and a prevalence within primary care settings internationally of 0.8%. Less stringent criteria that include cases of acute hypochondriacal worry suggest an incidence of 3 to 9% in medical settings. These later tend to short-term reactions to immediate changes in circumstances and are less associated with psychopathology (5). There is a 6-month prevalence of 4 to 6% in general medical clinics. It is felt to occur equally among men and women. Although it may occur at any age, it appears to be most common in the 20s and 30s. It may occur more in African Americans than in whites, but it does not appear to correlate with SES, educational status, or marital status (1). Most examples are brief, transient occurrences in the face of significant stress, in which case most remit, but some go on to become chronic (1).

There is evidence that those with HD may have high rates of Personality Disorder, almost 2/3s, but the variety of related Personality Disorders is also high. Certain traits, such as "health consciousness, attention to somatic symptoms, obsessionality, and anxiety may relate to HD more specifically (4). HD has been closely linked to high Neuroticism. HD has been linked to preoccupation with the maintenance of health, magnified perception of minor ailments, and rigidity of beliefs about health. It is not clear if these are traits that directly contribute to the appearance of HD or merely cause increased visibility in the eyes of their caretakers and thus more likely to be labeled with HD. Therefore, those with HD may be low in the personality trait Agreeableness. IN

addition it can be imagined that those with high degrees of the personality trait Conscientiousness may exhibit the rigidity seen in those with HD (4).

It is important to consider in the differential diagnosis possibly subtle, but indolent and serious disorders such as AIDS, endocrinopathies, Myasthenia Gravis, neurodegenerative disorders, SLE, and occult neoplasms (1).

People who have HD are not usually open to psychotherapy per se, but may be accepting of medically oriented behavioral therapy, such as stress reduction training. Group therapy may be helpful. The standard approach is to establish frequent, regular medical examinations for reassurance, control and minimize laboratory studies and procedures unless clearly indicated. Medications are useful if there is a comorbid disorder that is medically treatable (1).

Several studies using primarily CBT show significant improvement in symptoms, illness behavior, and health care usage compared to waitlist control groups, which is maintained at follow-up. Booster sessions appear to preserve improvement for longer. Cognitive treatments that are symptom-focused appear of greater benefit than generalized stress management (5).

Body Dysmorphic Disorder (BDD):

BDD is essentially a preoccupation with an imagined physical defect or the distortion of a minor defect. It was originally called "Dysmorphophobia" by Kraepelin and "Obsession de la honte du corps" by Janet. It first appeared in American diagnostic nomenclature as BDD in DSM-III (1).

DSM-IV Diagnostic Criteria for Body Dysmorphic Disorder:

A. Preoccupation with an imagined defect in appearance. If a slight physical anomaly is present, the person's concern is markedly excessive.
B. The preoccupation causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
C. The preoccupation is not better accounted for by another mental disorder (e.g., dissatisfaction with bodily shape and size in anorexia nervosa).

There are frequent references to BDD and BDD-like disorders in the dermatological and cosmetic surgical literature under such terms as dermatological Hypochondriasis or poly surgery addicts (26). ICD-10 classification system sees BDD as a subtype of Hypochondriacal Disorder (5).

People with BDD present with concerns and worries about acne, scarring, facial marks and lines, paleness, thinning hair, excessive body hair, large or crooked nose. They perceive themselves as unattractive, even severely so, such that it causes much anxiety and distress. There may be a concern with body appearance in general, especially in men with "muscle dysmorphia" who see their actually large and muscular bodies as small and puny. These concerns are very distressing and time consuming, occupying a lot of mental space with persistent worries. They usually lack insight into the fact that they are over concerned or exaggerating their situation. Similar to OCD, they often engage in repetitive behaviors, which are compulsive and time consuming, such as extensive grooming, checking, covering-up, comparing with others, or seeking

reassurance or treatment. It has been estimated that 1/3 of patients with BDD pick at their skin and some may spend 8 to 12 hours a day doing this. They sometimes use instruments, may cause dermatological damage, and there have been cases of it being life threatening. These symptoms may cause severe impairment in functioning, decrease concentration, and limit social and occupational interactions. Like the severity of the symptoms the degree of functional impairment varies. On the average, their mental health-quality of life has been shown to be worse than those with depression, MI, or DM Type II (26).

Most commonly are involved concerns about face and head, compromising 70% of complaints. On average there are concerns about 4 body parts and the focus may change with time. They may also have ideas or delusions of reference. There may be either excessive checking or avoidance of reflections. There is usually an attempt to hide the feature. As a consequence many avoid social and occupational exposure, with 1/3 being housebound. As many as 20% of those with BDD make suicide attempts (1).

It must be distinguished from the body distortion involved in Anorexia Nervosa and Gender Identity Disorder. It may also be mimicked by Neglect as a consequence of cerebral damage. If severe it may be diagnosed as a Delusional Disorder (Somatic Type). Some people with Narcissistic Personality Disorders may be highly appearance conscious and even dissatisfied with certain features, but it is usually a small part of the overall clinical picture. It may also occur as a secondary aspect of MDD, OCD, and Schizophrenia (1).

The gender ratio is usually about one to one, but there are some gender related differences in manifestation. Women are more often preoccupied with their hips and weight, to pick their skin, camouflage with makeup, and have comorbid bulimia nervosa, while men are more likely to be concerned with their body build, their genitals, and their hair thinning, and to use a hat for camouflage. There is an equal frequency of cosmetic surgery. This reflects cultural concerns (27). On the other hand, women may experience increased symptoms premenstrually (26).

Studies in the general population show rates of 0.7 to 2.3%. Rates within cosmetic surgical clinics have been recorded at 11.9 t 15.8%. The majority of patients with BDD have sought medical or surgical help before seeking psychiatric care. Although there have been no prospective dermatological or cosmetic surgical studies, they are usually seen as doing poorly with these interventions. They may respond to the disappointment and dissatisfaction with lawsuits or violence toward their physicians (26).

Community studies show that 50% of college students have some sort of physical preoccupation and that 25% feel emotionally or functionally affected by this preoccupation. Surveys in Plastic Surgery Clinics find that 2% of the patients meet criteria for BDD. There is a typical onset between 15 and 20 years of age. It may occur more in women than in men and they are more often unmarried. Of those diagnosed with BDD, 90% have a history of MDD, 70% have a history of an anxiety disorder, and 30% have histories of psychotic disorders (1). It has also been described as being comorbid with Social Phobia, SUD, and OCD. The majority of those with BDD have been felt to have personality disorders (26). About 1/3 meet criterion for OCD, but this can only be given if there are obsession and compulsions beyond those involved with BDD (5).

It is seen to develop as a gradual concern until it increases to the point where it affects functioning, resulting in the persons seeking medical help. There is a high

likelihood of its becoming chronic, although it may wax and wane in intensity, if not treated (1).

The actual cause is unknown. There is an increased family history of MDD and OCD. There may be cultural influences as to ideals of beauty. Traditionally it has been understood as the displacement of sexual and emotional conflicts, involving repression, dissociation, distortion, symbolization, and projection (1).

Medical or surgical interventions are usually not successful. Serotonin drugs, such as Anafranil and the SSRIs, have been shown to be effective. In addition MAOIs, TCAs, and Pimozide have shown effectiveness. At best though there is often only a 50% response rate. It is important to treat coexisting psychiatric disorders (1). One open-label study with fluvoxamine there was a 63% response rate (26). Clomipramine has been shown to be superior to desipramine in a double-blind cross-over study (26).

CBT has been shown to be effective, especially using the techniques designed to work with OCD – Exposure and Response Prevention (26). Treatment with CBT shows better results than control groups. Group CBT has also been shown to be effective. Both individual and group CBT have been demonstrated to have positive effects that are maintained with time. Neither has been shown to be superior (5).

Pain Disorder (PD):

In DSM-III there was the category Psychogenic Pain Disorder, which connoted severe and prolonged pain that occurred in the absence of any organic pathology, or in excess of what could be expected based on objective findings. There was assumed to be a psychological etiology to the pain. In DSM-IIIR the disorder became Somatoform Pain Disorder and again was intended for those patients with little or no organic pathology. Investigation revealed though that these diagnoses were little used because it was usually considered very difficult to ascribe a psychological etiology to pain with much certainty. In DSM-IV the term was simplified to Pain Disorder, with two types, one associated with psychological factors (which resembled the older diagnosis) and one associated with both psychological and general medical factors. Furthermore, the criteria were broadened so that psychological factors could be seen as playing "an important role in the onset, severity, exacerbation, or maintenance of the pain," rather than the previous emphasis on etiology alone.

DSM-IV Diagnostic Criteria for Pain Disorder:

A. Pain in one or more anatomical sites is the predominant focus of the clinical presentation and is of significant severity to warrant clinical attention.
B. The pain causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
C. Psychological factors are judged to have an important role in the onset, severity, exacerbation, or maintenance of the pain.
D. The symptom or deficit is not intentionally produced or feigned.
E. The pain is not better accounted for by a mood, anxiety, or psychological disorder and does not meet criteria for dyspareunia.

There are still difficulties with this diagnostic criteria, although it is utilized a great deal more than the older versions. First it still assumes a mind-body dichotomy, inferring that the physician should be able to determine the relative contribution of physical and psychological components. However, little guidance is given as to how to do this. Secondly, it is such now that all patients with chronic pain could be conceivably be diagnosed with a Pain Disorder (31). Although there has been little research examining the use of the Pain Disorder criteria, what research there is suggests that the division into two types lacks validity, because it has been very difficult to demonstrate any meaningful differences between the two categories as to intensity, duration, or consequent disability of the pain. Other research suggests tat there is little to be gained by separating pain from the other somatoform disorders. Other ways to measure pain rely on the behavioral characteristics of the pain or the effects on a person's functioning. A dimensional model of pain sees pain as having three dimensions: objective, perception, and presentation. Such a dimensional model allows the differentiation of various effects on the pain experience, i.e., the presence of a comorbid psychiatric disorder may have its greatest impact on the individual's perception of pain. Or the somatization of pain may be considered as the manifestation of an altered presentation of pain (31).

The essence of the disorder is the experience of pain that is not fully accounted for by medical or neurological conditions that causes distress and impaired functioning (1). It can be understood as a symbolic expression of an intrapsychic conflict. It may bear some relation to alexithymia, which results in the somatic expression of emotions. A social prohibition against experiencing and communicating psychological distress and emotional pain may also contribute. Chronic pain may sometimes be perceived as a punishment for sins, that the person deserves to suffer. There are often interpersonal, factors, such as efforts to control and manipulate others to obtain power, attention, or love. There may sometimes be identification with a loved one who has pain. Interpersonal reinforcement may occur (1). Serotonin and endorphins play a role in pain control (1).

Low back pain affects about 7 million people in the U.S. and accounts for 8 million office visits per year. The female to male ration in chronic pain is about 2:1. It occurs most frequently in the 4^{th} and 5^{th} decades when there is a natural lowering of pain tolerance. It is more frequent in relation to blue-collar occupations, possibly secondary to the increased risk of job related trauma. There is an increased percentage among first-degree relatives, as well as increased rates of depression, anxiety, and substance use problems in the families of those with Pain Disorder (1). An international study of primary care patients found that 22% complained of persistent pain and that these patients were more likely than those patients not complaining of pain to also suffer from depression and anxiety and to have more limited activity (7).

It is important to understand the connection between chronic pain and psychopathology, because unrecognized and untreated psychopathology may interfere with rehabilitation and psychopathology may also increase pain intensity and disability. The relation between chronic pain and psychopathology may vary with the source of pain. In studies of those with chronic pain, especially chronic lower back pain, 77% have a lifetime psychiatric diagnosis and 59% have current symptoms for a psychiatric diagnosis. The most common comorbid psychiatric diagnoses are MDD, SUD, and anxiety disorders. In addition 51% meet criteria for at least one personality disorder.

There are gender differences, with females more likely to have current and lifetime diagnoses of MDD and lifetime diagnoses of anxiety disorders, while males are more likely to have current SUD. Of those patients with a history of MDD, SUD and anxiety disorders, 54% of those with MDD, 94% of those with SUD, and 95% of those with anxiety disorders had the disorders before the onset of their back pain. Therefore certain disorders appear to precede back pain (anxiety disorder and SUD), while others may occur before or after the onset of pain, such as depression. However, a prospective study of a sample of patients with acute back pain and then following them to see who developed chronic back pain, did not find that initial major psychopathology predicted the development of chronic pain. In another study comparing acute back pain with chronic back pain, those with chronic lower back pain had higher rates of MDD, SUD, and personality disorders, while those with acute lower back pain had higher rates of anxiety disorders. From this perspective, psychiatric disorders may play a role in chronicity, but not onset of pain (28).

Gatchel's 3-stage model (28):

1) Stage #1 – acute phase of onset of pain associated with normal reactions of fear, anxiety, and worry. If the pain persists past the acute phase, usually 2 to 4 months, then Stage #2 occurs.
2) Stage #2 – There are a wider set of psychological and behavioral reactions, such as learned helplessness, distress, anger, and Somatization. The specific form is largely determined by the person's pre-morbid personality and psychological characteristics, as well as such factors as SES and other environmental conditions. The presence of psychological distress, depressed mood, and somatization may influence the transition to chronic lower back pain (20).
3) Stage #3 – This occurs when the person's life becomes centered on the pain and habituation to a "sick role" occurs.

This implies a stress-diathesis model of chronic pain, especially in Stage #2 (28). Follow-up studies have shown that neither the type nor the degree of psychopathology predicts return to work. Furthermore, successful rehabilitation has been shown to decrease psychopathology. Anger, which is a common emotional reaction to pain, is not addressed in DSM-IV. High rates of psychiatric disorder are associated with other forms of chronic pain than lower back pain, such as headaches, temporomandibular disorders, pelvic pain, and Fibromyalgia (28). Chronic medical problems in general are associated with high rates of psychiatric disorders (28).

Current rates of depression in chronic pain, depending on the form of pain range from 30 to 80%. The diagnosis of depression in the face of chronic pain though is difficult, because chronic pain and depression share many features in common, such as sleep disturbance, motor retardation, loss of energy and change in appetite and weight. Several relationships between chronic pain and depression have been proposed: #1 Depression precedes chronic pain, #2 Depression is a consequence of chronic pain, #3 Previous episodes of depression predispose an individual to depression when in chronic pain, #4 Cognitions associated with pain mediate the development of depression, #5 They have a common pathogenesis. There is little research support for the first, but that #2 and #4 have support. There is some support for #5, since pain regulation and affect regulation involve the same neurotransmitters, and their pathways coincide anatomically,

but they are clearly not completely the same, since one can occur without the other. A stress-diathesis model is consistent with #3. Chronic pain may be even more stressful than other chronic illnesses, because of the unique nature of it, involving continuous aversive stimuli, impairment and disability, and much secondary loss. Numbers 2 and #4 are also consistent with this model (28).

Chronic pain is associated with high rates of substance use disorders, with current rates from 15 to 28% and lifetime rates from 23 to 41%. The exact relationship is complicated. On the one hand substance use problems may predispose a person to developing chronic pain, because of the increased risk of traumatic injury. Over 90% of those patients with chronic pain and lifetime rate of substance use problems developed their substance use problem before the onset of chronic pain. However, some studies show that the rate of current substance abuse in chronic pain is no higher than that seen in other primary care patient. There is a slight increased risk of new substance use problems in the first 5 years after the onset of chronic pain. Problems with alcohol and narcotics are the most common problem substances. Current addiction to narcotics in chronic pain is 3 to 16%, which is associated with previous history of substance use disorder and a childhood history of physical or sexual abuse. In addition having a substance use disorder is associated with higher rates of MDD, anxiety disorders, and personality disorders (28).

There is a high rate of anxiety disorders associated with chronic pain, including panic disorder and generalized anxiety disorder. Lifetime rates of anxiety in chronic pain are similar to those seen in the general population, while current prevalence rates are higher than in general. However, 95% of those diagnosed with an anxiety disorder in the face of chronic pain had their anxiety disorder prior to the onset of the pain. Thus it appears that those with pre-pain anxiety disorders are at increased risk for an exacerbation of the anxiety with pain. Cognitive factors associated with pain may greatly enhance anxiety, resulting in a self-defeating cycle (28).

Certain people may be more "pain prone." They tend to have histories of unmet dependency needs, emotional neglect, physical or sexual abuse, and hyper-responsibility at an early age. They may be saying symbolically "it is my turn to be taken care of." Their situation then becomes complicated by depression and other emotional distress (9). High rates of personality disorders have been identified in chronic pain, with a prevalence rate of 31 to 81%. However, there is no consistent identification of any one personality disorder with chronic pain, but histrionic, dependent, paranoid, and borderline have all been identified. There are higher rates of personality disorders in chronic lower back pain than in acute lower back pain. The presence of a personality disorder is predictive of acute lower back pain becoming chronic and disabling, although the results of this are not consistent. Successful rehabilitation of chronic pain appears to decrease the rate of personality disorders in the sample. It thus appears that a style of poor coping manifest as a personality disorder predisposes a person with acute pain to its becoming chronic and that the other manifestations of the personality disorder may heighten as a consequence of the chronic pain, while successful rehabilitation lowers the manifestations of a personality disorder and enhances coping (28). In addition, constant pain may alter personality. A high rate of Alexithymia has been demonstrated in those with PD. Critical to PD may be an individual's ability to cope with discomfort and pain. Consequently hypochondriasis and a tendency to catastrophize have been linked to Pain

Disorder. Hypnotizability may play a role in either allowing someone to block out pain, or by causing an intense focus on the pain. There is some evidence that women with chronic pelvic pain have a high incidence of sexual abuse and dissociative symptoms. Thus a high degree of Hypnotizability or absorption may interact with early trauma to enhance pain sensations (4).

Various studies have shown rates of 24 to 48% of chronic pain sufferers have histories of childhood physical and sexual abuse. One study comparing chronic low back pain and chronic headaches found no difference between them in the rates of childhood sexual and physical abuse (4.8% and 12.5%, and 24.3% and 28.1% respectively), but did find higher rates of childhood neglect in those with chronic headaches compared to those with chronic lower back pain (41.4% and 28.1% respectively). Several of these rates are high than those found in the general population, which are sexual abuse 10.7%, physical abuse 13.5% and neglect 16.5% (30).

Clinically it is quite heterogeneous, including many various complaints, such as low back pain, headaches, atypical facial pain, and chronic pelvic pain. The original source of the pain can be traumatic, neuropathic, neurological, iatrogenic, and musculo-skeletal. They may have a long history of medical and surgical care and may continue to insist on medications or surgical procedures. They are completely preoccupied by the pain, usually denying other sources of distress. There may be high rates of substance use problems. It tends to be chronic. Those with chronic pain have been found to have MDD at a rate of 25 to50% and Dysthymic DO or subthreshold depressive symptoms at a rate of 60 to 100%. They especially experience anergia, anhedonia, decreased libido, insomnia, and irritability, but less often have diurnal variation, decreased weight, and psychomotor retardation (1). More typically predominately physical pain tends to vary with external influences, while pain that is more Psychogenic tends to be consistent (1).

It usually begins abruptly and increases in severity over weeks and months, often becoming chronic and disabling. There is a variable prognosis. There is more likely to be a bad prognosis if there are pre-pain characterological issues, such as passivity, litigation issues, financial compensation issues, substance use problems, and a long history of pain (1).

Pain is more likely to have a significant psychopathological component warranting a referral to psychological services when (9):

1) Significant stressors are present.
2) The degree of disability or pain severity is disproportionate to the physical findings.
3) The patient evidences significant depression, anxiety, or adjustment problems.
4) There is significant discord or physical or emotional abuse in primary relationships
5) Evidence of substance abuse or addiction.

Treatment usually begins with a rehabilitation model. It is good if there is an opening to the appreciation of the role of emotional factors. Pharmacological treatment consists of avoiding analgesics, sedatives, and anti-anxiety medications. SSRIs, TCAs, and sometimes stimulants have been shown to be helpful. Biofeedback, hypnosis, transcutaneous nerve stimulation, and dorsal column stimulation may be helpful. In some situations psychotherapy may be help, usually through building a solid relationship,

emphasizing their suffering and the affects of the pain on their lives. Specifically CBT may be helpful (1).

Classes of medications for pain treatment:

1) TCA's--usually amitriptyline or imipramine; very sedating; helpful for pain even at low doses (as opposed to antidepressant effects, which need higher doses).

2) Anticonvulsants-- effective for pain syndromes, again at lower doses than anticonvulsant or mood stabilization activity; dose carbamazepine at 50-100 bid, valproate at 250 bid, and neurontin goal dose 1 gram tid (Neurontin more sedating and more expansive, but no better efficacy; also have to titrate up slowly).

3) Benzodiazepines-- all make chronic pain worse, except Klonopin.

4) SSRI's-- in studies, Paxil actually no better than placebo for pain control; when they are effective, may be treating underlying depression.

5) NSAID's-- work at level of peripheral nerves to decrease inflammatory component; all good choices, but no advantage to Celebrex or Vioxx over ibuprofen; ketorolac offers advantage in pain control but difficult to use due to renal effects.

6) Opiates--best one to use is methadone--- half-life of 72 hrs, works on both nosiceptive pain and neuropathic pain, less euphoria than other opioids, less constipating, dose usually stays constant (often do not need to escalate dose to continue to get pain relief.

7) Anesthetics-- a) Mexilitine- a "pro-drug" which is converted to lidocaine in liver; must check QT interval prior to starting medication. Start 150 mg qHS X 1 week; if tolerates, then titrate 150 bid, then 150/300, then 300 bid; need to check EKG for QT interval with each increase of 300 mg
Side effects include hyper somnolence, profound nausea, and occasional psychosis.

b) Ketamine- NMDA antagonist; good for peripheral neuropathy (blocks peripheral NMDA receptor), but also blocks central NMDA receptor (this is the reason it is hallucinogenic); has good oral absorption; typical dose is 25 mg qid, but effects are not necessarily dose-responsive; no known physiological addiction.

8) Atypical antipsychotics-- some new interest in effects on chronic pain, but not widely used.

Undifferentiated Somatoform Disorder (USD):

As mentioned above this diagnosis is very common in primary care setting, but is overlooked within psychiatry, compared to the more specific Somatoform Disorders.

DSM-IV Diagnostic Criteria for Undifferentiated Somatoform Disorder:

A. One or more physical complaints (e.g., fatigue, loss of appetite, gastrointestinal or urinary complaints)
B. Either 1) or 2):

1) After appropriate investigation, the symptoms cannot be fully explained by a known general medical condition or by the direct effects of a substance (e.g., the effects of injury, medication, drugs, or alcohol)
2) When there is a related general medical condition, the physical complaints or resulting social or occupational impairment is in excess of what would be expected from the history, physical examination, or laboratory findings

C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
D. The duration of the disturbance is at least 6 months.
E. The disturbance is not better accounted for by another mental disorder (e.g., another somatoform disorder, sexual dysfunction, mood disorder, anxiety disorder, sleep disorder, or psychotic disorder).
F. The symptoms is not intentionally produced or feigned.

There appear to be two types of USD – one involving the autonomic nervous system with cardiovascular, respiratory, urogenital, or dermatological symptoms, and another with primarily systemic symptoms such as fatigue or weakness (1).

It has been demonstrated that 20 to 50% of patient visits in primary care settings are by patients with medically unexplained symptoms, many of which might qualify for USD. Most common complaints include chest pain, fatigue, dizziness, headache, back pain, shortness of breath, insomnia, and numbness. In most cases these resolve spontaneously, but in a small percentage of cases they persist and eventually interfere with functioning (5).

Treatment, similar to what is usually recommended for SD, frequent regular contact with a consistent provider, again shows reduction in health care costs, but no change in general health, mental health or functioning. Use of both individual and group CBT in both outpatient and inpatient settings, result in decreased somatic complaints, improved general health, and improved functioning. There are mixed results as to psychological improvement. The high rate of spontaneous improvement results though in a decreased treatment effect, because many in the control groups improve (5).

Neurasthenia:

George Miller Beard first described this in the 1860s. It has been incorporated into ICD-10 criteria and defined as a neurotic disorder, recognized in Europe and Asia, characterized by fatigue, headaches, insomnia and various other vague somatic complaints. It is felt to be due to chronic stress (2).

ICD-10 gives criteria for two types: 1) fatigue after mental effort, and 2) fatigue after brief physical effort. Many people diagnosed with Neurasthenia, would meet criteria for UDSD under DSM-IV (2).

Studies from Switzerland give a rate of 12%. Although there is mention that it occurs more in those that are economically deprived, it has actually been shown to increase with increasing SES (2). Children with "growing pains," fatigue and sleep disturbance may be predisposed to the development of Neurasthenia. It appears to have

peaks in both childhood and middle-age (2). It often becomes chronic and may be disabling (2).

Beard felt that it was due to neuronal depletion secondary to chronic or prolonged stress in combination with a constitutional vulnerability. This is very similar to the modern "Depletion Hypothesis," which hypothesizes a decrease in neurotransmitters secondary to chronic stress (2).

Treatment involves the use of antidepressants and stimulants (2).

Functional Somatic Syndromes:

In addition to the Somatoform Disorders listed in DSM-IV, there are the "Functional Somatic Syndromes:" such as Fibromyalgia, Irritable Bowel Syndrome, and Chronic Fatigue Syndrome (4). There are a large number of syndromes in which medically unexplained symptoms predominate, such as irritable bowel syndrome, dyspnea, sick building syndrome, and mitral valve prolapse. About 1/3 of patients seen in primary care settings have complaints that cannot be explained by medical conditions. Of these psychiatric disorders may account for 1/3. In specialty clinics the rate may be as high as 20%. These conditions all share certain features (6):

1. The absence of a gold standard against which a specific diagnosis can be confirmed or ruled out.
2. The presence of multiple unexplained physical symptoms originating from several different organ systems.
3. Psychiatric comorbidity.
4. No clearly articulated pathophysiology.
5. No consistent explanation emanating from physical and laboratory assessments.
6. No good fit with the rules of allopathic medicine.
7. Comparable responses to certain psychologic and pharmaologic interventions.
8. The emergence of emotionally charged, highly politicized patient advocacy groups.

There is usually a strong rejection that their symptoms could be related to psychological distress and that the lack of a medicalized label suggests lack of legitimacy or personality weakness. A psychiatric perspective may be appropriate if one of more of the following is present (6):

1. Symptoms are numerous and represent several different organ systems.
2. Symptoms coexist with symptoms of a major psychiatric disorder.
3. Symptoms closely follow traumatic events.
4. Symptoms lead to psychological gratification.
5. Symptoms represent a predictable personality trait for the subject.
6. Symptoms become persistent, join a conglomerate of other symptoms, and convey such attitudes as overuse of medical services and dissatisfaction with medical care.

<u>Noncardiac Chest Pain</u>:

About half the patients seen in cardiac clinics do not receive a medical diagnosis for their chest pain. One third of these are found to have significant depression and

anxiety. Chest pain usually continues despite reassurance that it is not cardiac in origin (5).

Using CBT, more than 50 % have symptomatic improvement, increased function, and decreased psychological stress. There is about a15% improvement in control groups, due to spontaneous resolution. Poor response correlates with insistence in a cardiac origin to the pain (5).

Chronic Fatigue Syndrome:

Community studies suggest a rate of 1/1000. It occurs primarily in young adults, age 20 to 40, with a female to male ratio of 2:1. Examination of patients in a primary care setting shows that 24% experience chronic fatigue of over a year's duration (2). Within primary care settings, depending on the strictness of the diagnostic criteria, rates of 2.6 to 11.3 % have been obtained. In addition to the characteristic myalgias, arthralgias, lymphadenopathy, impaired memory, and headache, patients with CFS have high rates of psychological stress and comorbid psychiatric disorders, resulting in significant functional disability and economic loss (5).

Using CDC criteria it is a diagnosis of exclusion, in that other conditions need to be ruled out. There are no pathognomonic features or clear physical symptoms or signs on physical examination. Of those with CFS, 80% meet criteria for MDD, but they usually do not display guilt, suicidal ideation, anhedonia, or decreased weight. There is often a negative family history for depression. There is often a lack of precipitating events (2).

The course is one of a gradual onset, but occasionally abrupt onset of worsening fatigue. It is usually chronic, although it may gradually improve. After 4 years, 63% show improvement. The prognosis is better if there is no preceding or concurrent psychiatric diagnosis, if they maintain social connections, and if they continue to work (2).

The etiology for it is unknown, but there have been speculation as to a possible viral etiology. For instance there was a suggestion that EB virus may have a role, but the majority of those with CFS do not have EBV antibodies or atypical lymphocytes. There is some nonspecific evidence for a generalized weakening of the immune system (2). CFS, like neurasthenia before it, can be seen as the combination of a set of people with an identifiable psychiatric disorder, psychophysiological symptoms secondary to psychosocial stress, or a form of culturally sanctioned illness behavior (33).

There is no effective medical treatment. There should be support for decreasing their workload. Psychotherapy, whether supportive, insight oriented, or CBT, has shown positive effect. Non-sedating antidepressants, especially Wellbutrin, have been shown to be helpful. Stimulants may also have a role (2). Treatment studies utilizing CBT have shown a positive effect, with 70 to 75% having a good outcome. This is true for both individual and group CBT. These CBT treatments involved graded activity, as opposed to exercise treatments, which show high dropout rates. The concomitant cognitive therapy may allow toleration of the increased activity (5).

Fibromyalgia:

The study of this condition has been made difficult by differing criteria, small samples, a tendency to report more severe sufferers who may not be representative, lack

of controls, and a lack of prospective and longitudinal studies (32). The 1990 ACR criteria are: 1) presence of widespread pain for more than 3 months and 2) pain, not just tenderness, that can be elicited by manual pressure of approximately 4 kg/cm^2 at 11 or more defined tender points (32). Using the American College of Rheumatology criteria, Fibromyalgia can be diagnosed in 3 to 5% of women and 0.5 to 1.6% of men. In one survey 25% of those diagnosed with Fibromyalgia were on some type of disability or compensation. The number of tender points correlates with the degree of psychological distress. Almost 60% of those with Fibromyalgia meet criteria for CFS. There appears to be a 10:1 female to male ratio. There are high rates of comorbid psychiatric disorder, with an 81% lifetime rate and a 48% concurrent rate. And 50 to 75% of those with depressive and anxiety symptoms with Fibromyalgia report that the psychological symptoms began before the Fibromyalgia. The higher the number of tender points the more likely the person is to report childhood trauma, especially sexual abuse (32).

Factitious Disorder (FD):

Factitious disorder shares a number of things in common with the previous diagnostic entities. There is assumed to be severe psychopathology that is sometimes manifesting itself in the appearance of physical illness.

DSM-IV Diagnostic Criteria for Factitious Disorder:

A. Intentional production or feigning of physical or psychological signs or symptoms.
B. The motivation for the behavior is to assume the sick role.
C. External incentives for the behavior (such as economic gain, avoiding legal responsibility, or improving physical well-being, as in malingering) are absent.

Males have a greater occurrence of Factitious Disorder than females. It is also more frequent among hospital workers and health care professionals. They may constitute up to 9% of all hospital patients (3). It is felt to often begin early in adulthood, but sometimes may appear in children or adolescents. It is generally incapacitating and has a poor prognosis (3). In order to diagnose this condition it is important to have outside informants and to try and verify the person's story in minute detail. Over half of cases end up getting a psychiatric consultation. They tend to have high IQs, but poor identity, poor psychosexual adjustment, decreased frustration tolerance, increased dependency needs, and narcissism. They usually do not have a thought disorder (3).

There is often a history of child abuse and/or neglect in their background. It has been suggested that they may unconsciously view the hospital as a substitute family. Their parents were often experienced as rejecting. Many are seen as having a personality disorder. For instance some are diagnosed with a Masochistic Personality Disorder if they seek medical procedures. It has been speculated that they have a need to suffer. Many are seen as having a Borderline PD, especially of the "as if" type, in which they are not able to differentiate themselves from the patients that they come in contact with (3). Other personality disorders have been described as comorbid with FD – histrionic, antisocial, and NOS (3). There is often comorbid substance abuse (3).

They may present with predominately psychological symptoms, most often depression, hallucinations, dissociation or conversion symptoms, or bizarre behavior. They do not improve with conventional treatment and may even undergo ECT. The act of deception is sometimes understood as being ego supporting in that it prevents further deterioration. Those that present with psychosis have a poor prognosis. Those that present with depression often give a history of the violent death of a loved one. They may exhibit "pseudologia phantastica," which is the mixing of small bits of factual material with extensive fabrications. They often take on the position of an imposture, describing himself or herself as someone famous or heroic (3).

FD is different from malingering, which is behavior done for a specific purpose, such as financial compensation, evasion of the police, to avoid work, or to get room and board. It is not motivated solely by a desire to assume the sick role (3). Ganser's Syndrome is possibly also different. It is the presentation of a pseudo-thought disorder, by answering questions with answers that are wildly incorrect. It is often seen in the setting of prisons. It has been considered alternatively a dissociative phenomenon or malingering (3).

There are those that present primarily physical symptoms as in the classical Munchausen Syndrome. They often present with hematomas, hemoptysis, abdominal pain, fever, hypoglycemia, Lupus-like symptoms, nausea and vomiting, dizziness, or seizures. They may create these signs and symptoms by self-contaminating their urine with feces, taking anticoagulants, injecting insulin or contaminated liquids (i.e., fish tank water). They may have multiple abdominal scars from multiple surgeries. They may often demand narcotics. They may present in a very demanding, intimidating, difficult, even abusive manner. They may threaten litigation if they do not get their way (3).

There are some who present with both psychological and physical problems. There is also a group considered "Factitious by Proxy," usually being mothers who try to convince medical facilities of their child's illness (3).

Treatment is primarily management via early recognition with avoidance of procedures. They should be understood as "ill." There needs to be an intentional effort to avoid Countertransference anger and acting out toward them, such as an abrupt discharge. Gentle, but clear confrontation usually has to occur at some point. It can sometimes be seen as a "cry for help" (3).

Conclusion:

These various disorders represent the extremes of more usual and commonplace medical and psychological phenomenon. In some cases the seriousness and the destructiveness of the suffering increase to severe proportions, often becoming disabling, unless treated. Various factors contribute to this progression to severity. Cultural factors, personality traits, previous abuse, and some aspects of comorbidity with other psychiatric conditions all influence the progression toward a more severe disorder. They have links to affective, anxiety, dissociative, and psychotic disorders. There is increasing evidence that no longer is containment the goal of treatment, but that in many cases treatment can greatly diminish, if not relieve suffering. Theoretically, they challenge old notions of mind-body separation, while at the same time challenging the structure of medical care organization.

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