

PERSPECTIVES IN PSYCHOSOMATIC MEDICINE: AN ORGANIZING STRATEGY

Thomas N. Wise, Deyadira Baez-Sierra, Amit P. Pradhan

Abstract

Psychosomatic Medicine has varied definitions and connotations but since 2005 Psychosomatic Medicine, previously denoted as consultation-liaison psychiatry has been approved as a formal subspecialty of psychiatry. Psychosomatic Medicine focuses upon the psychiatric aspects of the medically ill patient. Such clinical problems are complicated due to the interaction of medical; psychological issues and sociocultural elements. *The Perspectives of Psychiatry*, written by McHugh and Slavney offers an organizing principle for the Psychosomatic specialist. Considering the logic of the disease model; the life story; the role of dimensions, and the behavioral perspective the clinician can integrate the symptoms and behaviors that are seen within a psychiatric consultation service.

Key Words: psychosomatic medicine consultation-liaison psychiatry, personality dimensions

Declaration of interest: Thomas N. Wise is consultant and speaker's Bureau with Eli Lilly, Dr Deyadira Baez-Sierra and Dr Amit P. Pradhan have no financial interest to disclose.

Thomas N. Wise, M.D., Deyadira Baez-Sierra, M.D., Amit P. Pradhan, M.D.
From the Departments of Psychiatry at the Inova Fairfax Hospital and George Washington University School of Medicine

Corresponding author

Thomas N. Wise, M.D. thomas.wise@inova.org

Introduction

The term, *psychosomatic*, has multiple connotations (Lipowski 1984), in common parlance it suggests disorders characterized by physical complaints that have significant emotional underpinnings. This tends to reify a linear causality between emotional stress and somatic complaints rather than more complex multivariate phenomena. Secondly, the term describes a research approach that includes multiple variables, biologic, psychological and social that cause or maintain disease states. The next definition is that of a field of medicine. In North America, Psychosomatic Medicine is a psychiatric subspecialty that was formerly consultation-liaison psychiatry in the United States. In 2003, the American Board of Psychiatry and Neurology formally established Psychosomatic Medicine as a qualified sub-specialty of psychiatry. Since that time, over 1,000 psychiatrists in the United States have been granted such formal qualifications (Gitlin et al. 2004). In German speaking countries such as Germany and Austria, Psychosomatic Medicine is a separate specialty with its own inpatient and ambulatory programs. These Psychosomatic Departments are composed of Internal Medicine physicians; Psychiatrists and Psychologists and have a strong psychoanalytic tradition (Diefenbacher 2005).

Due to the multivariate nature of medical problems found in Psychosomatic Medicine¹, the clinician has little guidance with which to organize the clinical data he encounters in order to systematically organize both the problems and treatment approaches for such patients. The *biopsychosocial* model has been endorsed

by many consultation-liaison psychiatrists as an organizing approach both in teaching and practice. In fact, Engel coined this term in his seminal paper "The Need for a New Medical Model" in response to his many years of teaching medical students who became increasingly focused upon the molecular biology and altered pathophysiology of their patients without attention to psychosocial factors (Engel 1977). Another use of the term may be applied to the practice of Medicine in general which should consider psychological issues as well as biomedical. Fava would also argue that Psychosomatic Medicine denotes an approach that is essential to medical practice in general and must include a variety of domains including biologic, psychosocial and cultural issues (Fava et al. 2010; Fava, Sonino 2005). He suggests that the clinical domains of psychosomatic medicine address the impact of both early and recent life events, social support, chronic stress, and illness behavior including health attitudes. Each element, which demands clinical attention, has been a focus of research into disease causation from a psychosomatic viewpoint. For instance lack of social support has long been found to be associated with poor prognosis in cardiac disease (Amarasingham et al. 2010) while the impact of recent life events has a significant database to be associated with illness (Holmes 1978).

1. Psychosomatic Medicine in the rest of this paper will refer to either the psychiatric specialty or psychosomatic clinician previously denoted as consultation liaison.

McHugh and Schwartz criticize the biopsychosocial concept since it lacks a structure for examining each of the three domains within this model;

SUBMITTED FEBRUARY 2011, ACCEPTED MAY 2011

i.e., biologic, psychological and social (McHugh 2000, Schwartz 1986). They argue that the biopsychosocial model is “so broad in its scope and nonspecific in its relation to any particular disorder that it can do no more than remind psychiatrists to be prepared to look at everything and the interactions of everything.” Instead they advocate that psychiatric phenomena can be organized around four basic perspectives which are extensively elaborated in their book, *The Perspectives of Psychiatry* (McHugh, Slavney 1998). Each perspective is based upon specific premises, logical sequences and validating implications that can be utilized with the other perspectives, depending upon the nature of the clinical problem. Each perspective has a unique logic with strengths and weaknesses. This approach is clinically practical and allows psychosomatic clinicians to better integrate the various clinical problems which they face, such as psychological difficulties within very sick medical patients and the behavioral problems that often occur within such a combination. The use of “perspectivism” is a clinically heuristic strategy for psychosomatic medicine. The four perspectives are diseases, life stories, dimensions and behaviors.

The disease perspective

The disease model most familiar to physicians, is an approach to define a disease entity via operational definitions of both signs and symptoms that are demarcated from other disorders. The essential elements of a specific disease should be demarcated from other syndromes to foster diagnostic reliability; that is, precision, so that two separate observers would agree upon the individual disease. Reliability thus conveys the consistency with which subjects are classified, whereas validity is the utility of the system for its various purposes. Such syndromic categorization is well known in fields of medicine but psychiatry has been late to systematically develop such operational criteria. The purposes of reliability in any classification system are to enhance communication about clinical features and eventually help ascertain the etiology of a disease state (Spitzer, Fleiss 1974). A reliable syndrome with clearly defined characteristics should be demarcated from other syndromes. This allows reliability. Thus one has to be able to demarcate a major depressive disorder from obsessive compulsive disorder. This is mandatory to allow validation studies that can discover etiologic factors. Guze and Robins outline five phases for diagnostic validation that include careful clinical description utilizing demographic and clinical factors, laboratory studies, demarcation from other disorders, follow-up studies to ascertain the course of the disorder and responses to various treatments in family studies to look at both genetic and environmental causes (Robins, Guze 1970). The Diagnostic and Statistical Manual of Mental Disorders, (DSM) from its various iterations I through IV, has attempted to classify psychiatric entities (Thornton 2010 b) The Feigner criteria, based on operational criteria developed by systematic observation, became the forerunner of DSM III and IV (Kendler et al. 2010). As Regier notes, DSM-5 will provide an even better taxonomy for

psychiatric entities (Regier et al. 2009).

The disease model within psychiatry is limited because of the lack of specific laboratory or tissue testing to identify most psychiatric categories. Nevertheless, there are significant advances demonstrating altered pathophysiology in a variety of psychiatric disorders, such as schizophrenia and affective disorders. The psychosomatic physician will commonly evaluate patients with delirium or dementia. Delirium, the acute organic brain syndrome, can be identified by the electroencephalogram with its diagnostic global slowing (Lipowski 1992). This documents the organic basis of the disorder but not the specific cause. Dementing illnesses also may have imaging abnormalities to identify the syndrome (Montoya et al. 2006). These disorders demonstrate the initial identification of a basic syndrome; i.e., delirium or dementia, but also require the next step of focusing upon what caused the delirium or dementia so that possible curative measures can be instituted.

The current DSM taxonomy poses inherent problems for the psychosomatic clinician. The most salient challenge is how to identify and manage somatoform disorders. The term somatoform suggests that a somatic symptom is actually a proxy for a psychosocial problem or is an exaggeration of a “real” physical complaint. Such complaints, which may be medically unexplained, do not definitively rule out an underlying or occult medical disorder and perpetuate the organic versus psychogenic dichotomy (Kroenke 2003, Regier 2009). In the somatoform section of DSM IV there are various disorders where somatic complaints are essential features but are often viewed as medically unexplained. For example, somatization disorder is a polysymptomatic syndrome beginning at an early age and characterized by complaints within the pain, gastrointestinal, sexual and neurologic systems that appear to have no organic cause. It is rarely used by psychiatrists (Bass et al. 2001). To qualify for the full syndrome, there must be specific numbers of complaints in various bodily symptoms. The exact number of the complaints has varied from DSM-III to DSM-IV. To this end, the DSM-5 work group has made significant changes from previous iterations (www.dsm5.org). The “Somatoform Disorders” section is to be renamed “Somatic Symptom Disorders” to avoid mind-body dichotomization (Dimsdale, Creed 2009). A new entity, *complex somatic symptom disorder* will encompass somatization disorder, pain disorder, hypochondrias, and undifferentiated somatoform disorders into one category. In addition to the actual presence of such somatic complaints, the new criteria demand that such thoughts, feelings or behaviors due to these somatic complaints are “excessive.” The new entity does not demand the judgment that the somatic complaints have no organic basis, but that the reaction and dysfunction to them is “excessive” and this will require continued clinical judgment. Both the reliability of the new entity and subsequent constructs and descriptive validity have been reported (Voigt et al. 2010). Factitious disorders have been reclassified to somatic symptom disorders and involve sub-classifications of factitious disorders imposed upon self or others (previously factitious disorder by proxy).

Adjustment disorders in DSM IV TR are marked

by distressing symptoms as a response to a stressor. It is thus not surprising that adjustment disorders are the most common category found in consultation psychiatry cohorts (Strain, Diefenbacher 2008). The reliability and boundaries of this diagnosis have been questioned (Semprini et al. 2010). Jerome Frank introduced the term demoralization to identify a failure to cope with stressors rather than the more severe major depressive disorder or melancholic disorder (de Figueiredo 2007). Clarke and colleagues argue that the concept of demoralization is a more useful in the medically ill than the taxon of adjustment disorder (Clarke et al. 2000, Clarke et al. 2005). Slavney conceptualizes demoralization within the framework of a depressive continuum rather than rigid demarcation from the DSM-IV depressive disorder (Slavney 1999). It is doubtful whether demoralization will be introduced as a category in DSM-5. A weakness of disease model categorization is the inherent objectification of the individual. Is the person just a “case of Huntington’s Disease” or are they a unique individual with an essential life story that is subjectively important to him and his support system. Secondly there is the issue of how many categories should be developed in any DSM iteration. By having an increasing number of disorders do we miss the essential elements of the major category? This is the problem with the East European system of diagnosing schizophrenias that has many subtypes that are clearly unique to the overall disease category of Schizophrenia (Ban et al. 1984).

Life Story

The second perspective in Psychiatry is the *life story* (Slavney, McHugh 1985). This perspective, often called the life history method, considers the individual as a unique subject in contradistinction to the disease model where the individual is viewed as a biologic organism. In the life history approach, the physician attempts to understand how the patient has reacted to the circumstances, both past and present, in their lives. The individual’s developmental vicissitudes, such as early trauma or losses, help the clinician understand the patient’s reaction to current difficulties. Utilizing empathic listening, the physician tries to link meaningful connections that begin to correlate current emotional and cognitive situations of the patient, as well as behaviors, with past experiences (Hengeveld 2006). Such connections, however, do not explain in a causal sense, as do the natural sciences. The life history perspective does help the clinician “understand” the patient’s reactions. The life story method demands careful and empathetic listening to the individual’s personal autobiography but it has significant methodological limitations. The approach is ideographic, which denotes looking at one person in depth (Phillips 2005). Every individual is viewed as a unique individual buffeted about by environmental and psychosocial triumphs and tragedies, rather than a mere organic object. Clinician’s often use various theories to organize the data in an individual’s life story. Whether viewed from a behavioral theory or a psychodynamic approach, such theories give the clinician confidence that they can better understand how their patient’s life

was effected and shaped by his experiences. Adherence to one theory of development however can lead to rigid opinions and dogmatic interpretations of reactions to life events (McHugh 2008). Thus the life story or idiographic method essentially differs from the disease approach. Exclusive focus upon spondylosis as a cause low back pain may limit investigation of augmenting or maintaining factors such as the role of sympathy from significant others or avoiding work demands. The use of a life narrative described by Viederman into life story investigations is a useful strategy for the psychosomatic clinician (Viederman, Perry 1980). This method assesses how the individual’s medical illness affects the course of the patient’s life. For example, development of leukemia in a college student may force the student to quit his education. A myocardial infarction can derail an ambitious executive’s chance of promotion. By understanding the phase of life in which the patient exists and their hopes and future aspirations, the impact of illness will become more evident.

Dimensions

The next perspective is that of the use of dimensions. Dimensions are a quantitative approach to an identifiable variable. Whether measuring intelligence or personality traits, such variables exist along a dimension. An individual’s height may place him taller or shorter than a comparative group. This may be considered a nomothetic perspective in that the variable to be studied is compared quantitatively to a group along the measurable dimension (Thornton 2010a). Thus, an individual’s blood pressure measurement or serum sodium level has meaning when viewed in the context of a distribution wherein a normative range has been derived from a larger population. Personality characteristics or traits can be measured in a similar manner. A person is more or less extroverted or prone to anxiety, hostility or depression (denoted by the trait neuroticism) than others. Identification of the magnitude of an individual’s specific level of a particular personality trait in relationship to others will give the clinician an indication of how the person will react to a stimulus. Thus a patient who is high on the dimension of neuroticism will often become quite anxious in a setting of illness and perception of personal threat from the disease. There are certain traits such as alexithymia which help in describing the somatizing patient. Alexithymia measures the individual’s ability to have more or less capacity in communicating emotional distress, as well as their ability to identify discretely the nature of the emotional distress, such as guilt, anxiety or depression (Fabbri et al. 2007; Mangelli et al. 2006). Personality is best understood in terms of such trait dimensions. When an individual with a certain personality vulnerability is stressed, they will have characteristic reactions. Specifically, a person who tends to be high on neuroticism and prone to anxiety may become increasingly anxious and depressed when developing a symptom or disorder.

Besides *traits* the dimensional perspective can also quantify dysphoric *states* such as depression or anxiety. This is especially useful in clinical settings. Measures of depression or anxiety can be quantified via visual

analogue scales (a line with verbal tags at each end) or via more sophisticated psychometric multi item inventories using nominal; ordinal or interval measures. The use of such scales helps to identify phenomena (construct validity) but also can allow ongoing measurement to change. Such measurements and their use in clinical medicine have been termed “clinimetric” (Fava et al. 2004). Clinimetric assessment is useful in many areas of Psychosomatic Medicine. The Illness Attitudes Scale developed by Kellner demonstrates such a clinimetric approach due to its sensitivity to change which is better than many other inventories that do not have the ability to measure severity (Sirri et al. 2008).

Attitudes towards illness can be measured dimensionally utilizing either the Illness Behavior Questionnaire or Illness Attitudes Questionnaire (Pilowsky, Katsikitis 1994; Starcevic et al. 1992). The dimensions of abnormal illness behavior denote an individual’s fears of developing a disease, their ability to deny problems, their conviction that they have a dread disease, and the tendency to view their somatic problems as being of emotional origin rather than caused by somatic etiology demonstrates such a dimensional approach.

The psychosomatic specialist will see patients facing the challenges of physical illness. Some patients experience significant distress, while others cope with minimal dysphoria. What causes “resilience” to stress (Wolff 1995)? The personality dimensions of emotional stability, extroversion, openness, agreeableness and conscientiousness are considered to fit a resilient personality profile as well as trait optimism; i.e., having expectations of good outcomes. Such dimensions have been identified as strong predictors of such resilience (Friborg et al. 2005). Yet dimensions of personality are not independent of life events or disease models. It is clear that various perspectives overlap and resilience demonstrates such an overlap. An enduring question which the life story raises is why some individuals will develop significant distress and cannot cope while others adapt to similar stressors. Resilience has been defined as a process of adaptation, a capacity to cope well under adversity. Resilience has been focused most upon life story issues during childhood (Kim-Cohen 2007, Moffitt et al. 2004). Rutter’s classic study of the effects of childhood adversity demonstrated that children with psychopathology were more likely to have experiences of parental discord; have low socioeconomic status; come from a larger family; have a mother with psychiatric illness and be subject to foster home placement (Berger et al. 1975, Rutter et al. 1975). These variables all could be associated with the protective role of social support which can improve coping ability of individuals. Social support provides a layer of security to enhancing self-esteem, which can be lost during life’s vicissitudes such as a threatening medical illness or death of a loved one (Ozbay et al. 2008). Resilience also has putative biological underpinnings. Reduced levels of Neuropeptide Y may allow elevated sympathetic autonomic nervous system tone that is anxiogenic which could theoretically diminish effective coping due to increased levels of anxiety. Another biological mechanism, genetically mediated, is the serotonin transporter polymorphism. Subjects with two copies of the shorter allele are at

risk for major depressive disorder, by increasing susceptibility to stressful life events (Caspi et al. 2010).

The Behavioral Perspective

The final perspective is that of *behavior*. Behavior denotes a goal-directed activity that is directed towards reducing a subjective craving or obtaining a specific choice (Molteni 2010). Some behaviors may be “hard wired” and termed motivated behaviors such as hunger or sexual drive (Richter 1947). Others are not clearly linked to physiologic phenomena but still are directed towards reducing anxiety. A common behavior, such as eating to satiety, demonstrates a physiologic phenomenon that is satisfied when the activity of eating is accomplished (Robinson et al. 1988, Moran et al. 1992). For the bulimic individual, however, satiety can promote sufficient anxiety so that the individual must purge themselves gain relief. Within hospital systems, aggressive behaviors such as pulling out intravenous lines or nasogastric tubes, as well as noncompliance such as refusal to remain at bed rest or the alternative, refusal to help in convalescence by going to physical therapy, often mandate psychiatric consultations. These behaviors may have disease states that cause such activity but it is the behavior that often alerts the physician to a problem. A behavioral issue frequently found in psychosomatic medicine is that of addictive disorders. Alcohol demonstrates how individuals may be motivated to drink to reduce the cravings enhanced by withdrawal. Addiction exemplifies a behavior that leads to cravings to reduce any withdrawal symptoms. Thus the alcoholic may wish to leave the hospital against medical advice to reduce such withdrawal symptoms via drinking. The behavior of wishing to leave the hospital is the perspective that must first be addressed (Wise 1974). The goal of treating maladaptive behaviors is to interrupt or stop the unwanted action. In the above example, attention must be directed to keeping the patient in the hospital.

In the ambulatory arena, behaviors, such as excess healthcare utilization for patients with illness anxiety or noncompliance in individuals with chronic diseases such as diabetes, are sources of interest in Psychosomatic Medicine. Normative illness behavior has been idealistically described by Talcott Parsons (Parsons 1951). Parsons viewed the sick person as adopting a socially sanctioned new role that exempts him from working or even caring for himself. During the illness episode the patient is expected to cooperate with medical care. When the illness has abated, the person is to relinquish this “sick role” and return to normal activities. Mechanic expanded upon the complexities of sick role issues as being more complex as they include financial and social support elements (Mechanic 1995). These broad sociological descriptions of being sick have evolved into the concept of abnormal illness behaviors. Abnormal illness behaviors include excess healthcare utilization or the unwillingness or inability to carry out normative roles whether it be earning a living or taking care of one’s family in a maternal fashion. Pilowsky has catalogued both cognitive and emotional elements that lead to such behaviors with his concept of abnormal illness

behaviors and utilizes an Illness Behavior Questionnaire to measure such phenomena (which is a dimensional approach). These include general hypochondriasis, disease conviction, the belief that one has a somatic illness versus psychologically caused and the emotional elements of inhibiting emotional expression, emotional disturbance, irritability and denial that something is wrong (Pilowsky 1993, 1996).

To manage behavioral issues, the psychosomatic medicine specialist often needs to do a careful behavioral analysis which demands identification of a specific behavior, whether it be excess healthcare utilization or disruptive behavior such as angrily demanding narcotic medication while in the hospital for a painful symptom (Kanfer, Saslow 1965). Once the behavior is clarified between physician and patient, the antecedents leading to the behavior, such as going to an emergency department for pain that has been previously identified as not being life threatening or significant, should be investigated, while the consequences of such behavior, such as transient reassurance or belief that the physicians were not telling the patient the truth, should also be discovered. This careful assessment of the chain of events leading to an identified behavior will allow interventions to be developed. It is important to be aware that patients may feel stigmatized if they are called “fakers” or “hypochondriacal” (Stone et al. 2002). If an individual repeatedly misinterprets somatic symptoms of tension such as chest pain and dizziness as a cardiac event when they in fact are having a panic attack, it is imperative to properly diagnose the condition as a panic disorder. It is now well demonstrated that individuals with panic disorder have excess healthcare utilization and such an anxiety disorder can foster hypochondriacal concerns (Roy-Byrne et al. 1999).

Discussion

The perspectives within psychiatry allow an orderly and logical review of psychosomatic issues. The nexus between psychiatric conditions and cardiovascular disease demonstrates how perspectives may allow organization of the complex factors in such an association. For centuries, the relationship between strong emotional arousal and cardiac disease has been demonstrated. The famous British surgeon, John Hunter, noted that, “My life is in the hands of the hooligans who choose to irritate me.” which denoted that when he became angry his angina became worse. In fact, Hunter died during an argument at a Hospital Board meeting (Moore 2005). During the past 50 years significant advances have better explained the relationship between psychiatric and cardiac disorders (Herrmann-Lingen 2011) From the disease perspective, the presence of a major mood disorder or anxiety disorder increases mortality following an uncomplicated myocardial infarction (Fiedorowicz et al. 2011). Various etiologic factors include reduced heart rate variability in depressed individuals that could lead to life threatening arrhythmias in the cardiovascular patient; aberrant thrombotic mechanisms via serotonergic abnormalities; and, finally, inflammatory factors which may impair endothelial function also

associated with both depression and cardiovascular disease (Hughes et al. 2010, Kop et al. 2010). Data is now accumulating that serotonin reuptake inhibitors are safe treatments for such depressed cardiac patients (Lesperance et al. 2007, O’Connor et al. 2010). From a dimensional or personality perspective, the role of Type A personality has attracted a great deal of interest (Blumenthal et al. 1987). The hostile cynical component of the Type A personality may be the noxious variable to account for elevated rates of cardiovascular disease (Siegel et al. 1990). Group therapy intervention has demonstrated that such personality characteristics can be modified which theoretically could help in modifying cardiovascular disease risk (Littman et al. 1993, Fava et al. 1991). Recently, a Type D personality has been described which may confer increased risk of poor outcomes if a person has cardiovascular disease. Type D denotes a propensity towards negative dysphoria and social isolation (Martens et al. 2010). A problem with dimensional descriptions of personality is whether various typologies really differ from one another. Thus, is Type D truly different from Type A? The life story approach is also important as reduced social support may be a problem in such patients. The effect of psychosocial therapy may modify such isolation but the long term contribution to this intervention is not clear (Joynt, O’Connor 2005). Finally, behaviors in the depressed individual with cardiovascular disease may contribute to excessive morbidity and mortality (Albus 2010). Increased sedentary lifestyle; poor diet; lack of adherence to medical regimens; and elevated rates of tobacco use may all contribute to such poor outcomes (Ziegelstein, Howard 2010). When confronted with a cardiac patient, the psychosomatic specialist can make use of each of these perspectives to individualize an appropriate treatment plan.

Putting it all together: the psychosomatic clinician is often faced with a variety of problems that are confusing and multivariate. The use of perspectives allows isolation of each dimension and consideration of how they overlap but also prevents omitting important elements that contribute to the patient’s problems.

The authors gratefully acknowledge the editorial assistance of Suzanne Phillips

References

- American Psychiatric Association (2000) *Diagnostic and Statistical Manual for Mental Disorders Fourth Edition Text Revision* American Psychiatric Association Washington.
- Albus C (2010) Psychological and social factors in coronary heart disease. *Ann Med* 42, 7, 487-494.
- Amarasingham R, Moore BJ, Tabak YP, Drazner MH, Clark CA, Zhang S, Reed WG, Swanson TS, Ma Y, & Halm EA (2010) An automated model to identify heart failure patients at risk for 30-day readmission or death using electronic medical record data. *Med Care* 48, 11, 981-988.
- Ban TA, Guy W, & Wilson WH (1984). Leonhard’s classification of the chronic schizophrenias. *Can J Psychiatry* 29, 6, 467-472.
- Bass C, Peveler R, House A (2001). Somatoform disorders: severe psychiatric illnesses neglected by psychiatrists. *Br J Psychiatry* 179, 11-14.
- Berger M, Yule W, & Rutter M (1975). Attainment and

- adjustment in two geographical areas II—The prevalence of specific reading retardation. *Br J Psychiatry* 126, 510-519.
- Blumenthal JA, Barefoot J, Burg MM, & Williams RB Jr (1987). Psychological correlates of hostility among patients undergoing coronary angiography. *Br J Med Psychol* 60, Pt 4, 349-355.
- Caspi A, Hariri AR, Holmes A, Uher RM, & Moffitt TE (2010). Genetic sensitivity to the environment: the case of the serotonin transporter gene and its implications for studying complex diseases and traits. *Am J Psychiatry* 167, 5, 509-527.
- Clarke DM, Cook KE, Coleman KJ, & Smith GC (2006). A qualitative examination of the experience of 'depression' in hospitalized medically ill patients. *Psychopathology* 39, 6, 303-312.
- Clarke DM, Kissane DW, Trauer T, & Smith GC (2005). Demoralization anhedonia and grief in patients with severe physical illness. *World Psychiatry* 4, 2, 96-105.
- Clarke DM, Mackinnon AJ, Smith GC, McKenzie DP, & Herrman HE (2000). Dimensions of psychopathology in the medically ill A latent trait analysis. *Psychosomatics* 41, 5, 418-425.
- de Figueiredo JM (2007). Demoralization and Psychotherapy: A Tribute to Jerome D Frank MD PhD, 1909-2005. *Psychother Psychosom* 76, 3, 129-133.
- Diefenbacher A (2005). Psychiatry and psychosomatic medicine in Germany: lessons to be learned? *Aust NZ J Psychiatry* 39, 9, 782-794.
- Dimsdale J, & Creed F (2009). The proposed diagnosis of somatic symptom disorders in DSM-V to replace somatoform disorders in DSM-IV—a preliminary report. *J Psychosom Res* 66, 6, 473-476.
- Engel GL (1977). The need for a new medical model: a challenge for biomedicine. *Science* 196, 4286, 129-136.
- Fabbri S, Fava GA, Sirri L, & Wise TN (2007). Development of a new assessment strategy in psychosomatic medicine: the diagnostic criteria for psychosomatic research. *Adv Psychosom Med* 28, 1-20.
- Fava GA, Belaise C, & Sonino N (2010). Psychosomatic medicine is a comprehensive field not a synonym for consultation liaison psychiatry. *Curr Psychiatry Rep* 12, 3, 215-221.
- Fava GA, Ruini C, & Rafanelli C (2004). Psychometric theory is an obstacle to the progress of clinical research. *Psychother Psychosom* 73, 3, 145-148.
- Fava GA, & Sonino N (2005). The clinical domains of psychosomatic medicine. *J Clin Psychiatry* 66, 7, 849-858.
- Fava M, Littman A, Halperin P, Pratt E, Drews FR, Oleshansky M, Knapik J, Thompson C, & Bielenda C (1991). Psychological and behavioral benefits of a stress/type A behavior reduction program for healthy middle-aged army officers. *Psychosomatics* 32, 3, 337-342.
- Fiedorowicz JG, He J, & Merikangas KR (2011). The association between mood and anxiety disorders with vascular diseases and risk factors in a nationally representative sample. *J Psychosom Res* 70, 2, 145-154.
- Friborg O, Barlaug D, Martinussen M, Rosenvinge J H, & Hjemdal O (2005). Resilience in relation to personality and intelligence. *Int J Methods Psychiatr Res* 14, 1, 29-42.
- Gitlin DF, Levenson JL, & Lyketsois CG (2004). Psychosomatic medicine: a new psychiatric subspecialty. *Acad Psychiatry* 28, 1, 4-11.
- Hengeveld MW (2006). [The psychopathology of Karl Jaspers: then and now]. *Tijdschr Psychiatr* 48, 11, 835-842.
- Herrmann-Lingen C (2011). Steps towards integrated psychosomatic medicine—The example of psychocardiology. *J Psychosom Res* 70, 2, 111-115.
- Holmes TH (1978). Life situations emotions and disease. *Psychosomatics* 19, 12, 747-754.
- Hughes JW, Casey E, Doe VH, Glickman EL, Stein PK, Waechter D, Josephson R, & Rosneck J (2010). Depression and heart rate variability in cardiac rehabilitation patients: exploring the roles of physical activity and fitness. *Percept Mot Skills* 111, 2, 608-624.
- Joynt KE, & O'Connor CM (2005). Lessons from SADHART ENRICHED and other trials. *Psychosom Med* 67, Suppl 1, S63-S66.
- Kanfer FH, & Saslow G (1965). Behavioral analysis: an alternative to diagnostic classification. *Arch Gen Psychiatry* 12, 529-538.
- Kendler KS, Munoz RA, & Murphy G (2010). The development of the Feighner criteria: a historical perspective. *Am J Psychiatry* 167, 2, 134-142.
- Kim-Cohen J (2007). Resilience and developmental psychopathology. *Child Adolesc Psychiatr Clin N Am* 16, 2, 271-83 vii.
- Kim-Cohen J, Moffitt TE, Caspi A, & Taylor A (2004). Genetic and environmental processes in young children's resilience and vulnerability to socioeconomic deprivation. *Child Dev* 75, 3, 651-668.
- Kop WJ, Stein PK, Tracy RP, Barzilay JI, Schulz R, & Gottdiener JS (2010). Autonomic nervous system dysfunction and inflammation contribute to the increased cardiovascular mortality risk associated with depression. *Psychosom Med* 72, 7, 626-635.
- Kroenke K (2003). Patients presenting with somatic complaints: epidemiology psychiatric comorbidity and management. *Int J Methods Psychiatr Res* 12, 1, 34-43.
- Lesperance F, Frasere-Smith N, Koszycki D, Laliberte MA, van Zyl LT, Baker B, Swenson JR, Ghatavi K, Abramson BL, Dorian P, & Guertin MC (2007). Effects of citalopram and interpersonal psychotherapy on depression in patients with coronary artery disease: the Canadian Cardiac Randomized Evaluation of Antidepressant and Psychotherapy Efficacy, (CREATE) trial. *JAMA* 297, 4, 367-379.
- Lipowski ZJ (1984). What does the word "psychosomatic" really mean? A historical and semantic inquiry. *Psychosom Med* 46, 2, 153-171.
- Lipowski ZJ (1992). Update on delirium. *Psychiatr Clin North Am* 15, 2, 335-346.
- Littman AB, Fava M, Halperin P, Lamon-Fava S, Drews FR, Oleshansky MA, Bielenda CC, & MacLaughlin RA (1993). Physiologic benefits of a stress reduction program for healthy middle-aged Army officers. *J Psychosom Res* 37, 4, 345-354.
- Mangelli L, Semprini F, Sirri L, Fava GA, & Sonino N (2006). Use of the Diagnostic Criteria for Psychosomatic Research (DCPR) in a community sample. *Psychosomatics* 47, 2, 143-146.
- Martens EJ, Mols F, Burg MM, & Denollet J (2010). Type D personality predicts clinical events after myocardial infarction above and beyond disease severity and depression. *J Clin Psychiatry* 71, 6, 778-783.
- McHugh PR (2008). *Try to Remember: Psychiatry's Clash Over Meaning Memory and Mind*. Dana Press, Washington.
- McHugh PR, & Slavney PR (1998). *The Perspectives of Psychiatry*. Johns Hopkins, Baltimore.
- Mechanic D (1995). Sociological dimensions of illness behavior. *Soc Sci Med* 41, 9, 1207-1216.
- Molteni M (2010). Behavior human. *Clin Ter* 161, 1, 91-92.
- Montoya A, Price BH, Menear M, & Lepage M (2006). Brain imaging and cognitive dysfunctions in Huntington's disease. *J Psychiatry Neurosci* 31, 1, 21-29.
- Moran TH, Ameglio PJ, Schwartz GJ, & McHugh PR (1992). Blockade of type A not type B CCK receptors attenuates satiety actions of exogenous and endogenous CCK. *Am J Physiol* 262, 1 Pt 2, R46-R50.
- O'Connor CM, Jiang W, Kuchibhatla M, Silva SG, Cuffe MS, Callwood DD, Zakhary B, Stough WG, Arias RM, Rivelli SK, & Krishnan R (2010). Safety and efficacy of sertraline for depression in patients with heart failure: results of the SADHART-CHF (Sertraline Against Depression and Heart Disease in Chronic Heart Failure) trial. *J Am Coll Cardiol* 56, 9, 692-699.

- Ozby F, Fitterling H, Charney D, & Southwick S (2008). Social support and resilience to stress across the life span: a neurobiologic framework. *Curr Psychiatry Rep* 10, 4, 304-310.
- Parsons T (1951). Illness and the role of the physician: a sociological perspective. *Am J Orthopsychiatry* 21, 3, 452-460.
- Phillips J (2005). Idiographic formulations symbols narratives context and meaning. *Psychopathology* 38, 4, 180-184.
- Pilowsky I (1993). Aspects of abnormal illness behaviour. *Psychother Psychosom* 60, 2, 62-74.
- Pilowsky I (1996). Diagnostic criteria and classification in psychosomatic research. *Psychother Psychosom* 65, 3, 115-116.
- Pilowsky I, & Katsikitis M (1994). A classification of illness behaviour in pain clinic patients. *Pain* 57, 1, 91-94.
- Regier DA, Narrow WE, Kuhl EA, & Kupfer DJ (2009). The conceptual development of DSM-V. *Am J Psychiatry* 166, 6, 645-650.
- Richter CP (1947). Biology of drives. *J Comp Physiol Psychol* 40, 3, 129-134.
- Robins E, & Guze SB (1970). Establishment of diagnostic validity in psychiatric illness: its application to schizophrenia. *Am J Psychiatry* 126, 7, 983-987.
- Robinson PH, McHugh PR, Moran TH, & Stephenson JD (1988). Gastric control of food intake. *J Psychosom Res* 32, 6, 593-606.
- Roy-Byrne PP, Stein MB, Russo J, Mercier E, Thomas R, McQuaid J, Katon WJ, Craske MG, Bystritsky A, & Sherbourne CD (1999). Panic disorder in the primary care setting: comorbidity disability service utilization and treatment. *J Clin Psychiatry* 60, 7, 492-499.
- Rutter M, Cox A, Tupling C, Berger M, & Yule W (1975). Attainment and adjustment in two geographical areas I—The prevalence of psychiatric disorder. *Br J Psychiatry* 126, 493-509.
- Schwartz MA, & Wiggins OP (1986). Systems and the structuring of meaning: contributions to a biopsychosocial medicine. *Am J Psychiatry* 143, 10, 1213-1221.
- Semprini F, Fava GA, & Sonino N (2010). The spectrum of adjustment disorders: too broad to be clinically helpful. *CNS Spectr* 15, 6, 382-388.
- Siegel WC, Hlatky MA, Mark DB, Barefoot J C, Harrell FE Jr, Pryor DB, & Williams RB Jr (1990). Effect of Type A behavior on exercise test outcome in coronary artery disease. *Am J Cardiol* 66, 2, 179-182.
- Sirri L, Grandi S, & Fava GA (2008). The Illness Attitude Scales A clinimetric index for assessing hypochondriacal fears and beliefs. *Psychother Psychosom* 77, 6, 337-350.
- Slavney PR (1999). Diagnosing demoralization in consultation psychiatry. *Psychosomatics* 40, 4, 325-329.
- Slavney PR, & McHugh PR (1985). The life-story method in psychotherapy and psychiatric education: the development of confidence. *Am J Psychother* 39, 1, 57-67.
- Spitzer RL, & Fleiss JL (1974). A re-analysis of the reliability of psychiatric diagnosis. *Br J Psychiatry* 125, 341-347.
- Starcevic V, Kellner R, Uhlenhuth EH, & Pathak D (1992). Panic disorder and hypochondriacal fears and beliefs. *J Affect Disord* 24, 2, 73-85.
- Stone J, Wojcik W, Durrance D, Carson A, Lewis S, MacKenzie L, Warlow CP, & Sharpe M (2002). What should we say to patients with symptoms unexplained by disease? The "number needed to offend". *BMJ* 325, 7378, 1449-1450.
- Strain JJ, & Diefenbacher A (2008). The adjustment disorders: the conundrums of the diagnoses. *Compr Psychiatry* 49, 2, 121-130.
- Thornton T (2010a). Narrative rather than idiographic approaches as counterpart to the nomothetic approach to assessment. *Psychopathology* 43, 4, 252-261.
- Thornton T (2010b). Narrative rather than idiographic approaches as counterpart to the nomothetic approach to assessment. *Psychopathology* 43, 4, 252-261.
- Viederman M, & Perry SW III (1980). Use of a psychodynamic life narrative in the treatment of depression in the physically ill. *Gen Hosp Psychiatry* 2, 3, 177-185.
- Voigt K, Nagel A, Meyer B, Langs G, Braukhaus C, & Lowe B (2010). Towards positive diagnostic criteria: a systematic review of somatoform disorder diagnoses and suggestions for future classification. *J Psychosom Res* 68, 5, 403-414.
- Wendy Moore (2005). *The Knife Man: The Extraordinary Life and Times of John Hunter*. Broadway, New York.
- Wise TN (1974). Psychiatric management of patients who threaten to sign out against medical advice. *Int J Psychiatry Med* 5, 2, 153-160.
- Wolff S (1995). The concept of resilience. *Aust NZ J Psychiatry* 29, 4, 565-574.
- Ziegelstein RC, & Howard B (2010). Depression and poor adherence to lipid-lowering medications among patients with coronary artery disease. *J Psychosom Res* 69, 2, 175-177.