

Chinese Medicine for Mental Disorder and its Applications in Psychosomatic Diseases

Chunjiang Tan, PhD; Yanbing Wu, MD; Songming Chen, PhD

ABSTRACT

With the development of modern medicine, an increasing awareness has developed regarding the limitations of a specialized and compartmentalized approach to clinical practice that largely ignores the interconnectedness of the mind, body, and spirit. Although contemporary medicine now accepts this interconnectedness, practitioners tend to think that the emotions play a secondary or excitatory role in producing disease rather than being a primary causative factor. Traditional Chinese medicine (TCM), which stems from Confucianism, Buddhism, and Daoism, views the body and the spirit as inseparable. This construct provides the foundation for the whole system of TCM, and therefore constitutes the backbone of TCM. This article presents the ways in which emotion can act as an

internal etiological factor that produces a pathogenic mechanism and that underlies various psychosomatic diseases. Therefore, this article intends to integrate the ancient classic treatise established in the *Yellow Emperor's Canon of Internal Medicine* with current data. Likewise, the authors discuss their empirical experience to illustrate the following concepts: (1) the factors contributing to emotional impairment; (2) the holistic approach to diagnosing psychosomatic disease; (3) the integrative therapy necessary to restore the balance of body and mind; and (4) the role of emotional theory in nursing care and the prevention of psychosomatic disease. (*Altern Ther Health Med.* 2013;18(2):59-69.)

Chunjiang Tan, PhD, is professor at Fujian Academy of Integrative Medicine, Fujian University of Traditional Chinese Medicine, Fujian, China. Yanbing Wu, MD, is affiliated with Fujian Academy of Integrative Medicine, Fujian University of Traditional Chinese Medicine, Fujian, China. Songming Chen, PhD, is professor at First Affiliated Hospital, Medical College, Shantou University, Guangdong, China.

Corresponding author: Songming Chen, PhD
E-mail address: chsongming@126.com

Your emotions affect every cell in your body. Mind and body, mental and physical, are intertwined.
—Dr Thomas Tutko, father of sports psychology

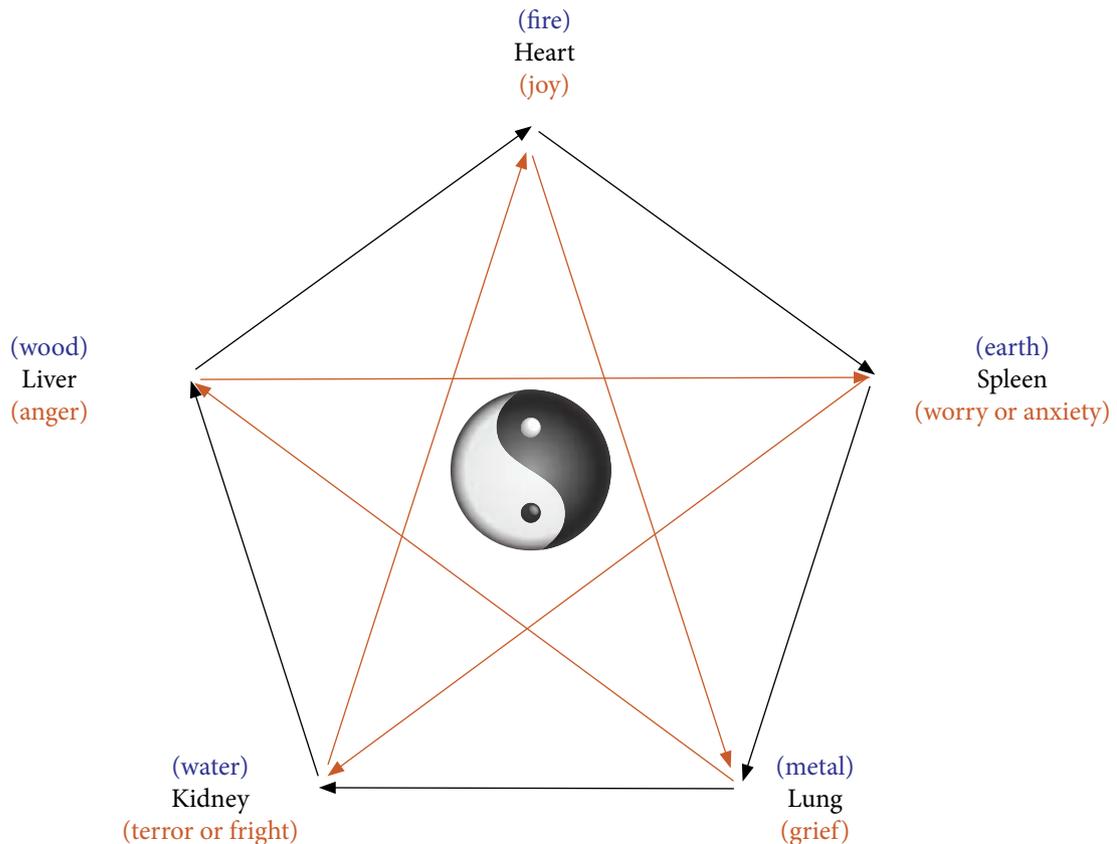
Although reports suggest that the overall prevalence rates of mental disorders among the Chinese are roughly similar to the reported rates from other cultures,¹ Chinese patients display a better prognosis than those in Western countries.² Due to this difference, important questions arise regarding whether the Chinese have unique psychiatric treatment modalities or whether psychiatric knowledge or theory specific to Chinese culture plays an important role with regard to causation, manifestation, and evolution of mental illness as well as to interventions to mediate it.

Confucianism, Buddhism, and Daoism significantly influence traditional Chinese medicine (TCM), which emphasizes the unity of heaven and humanity. This concept, the unity of heaven and humanity, plays an essential role in the manifestation, perception, and interpretation of mental disorders. According to the holistic view, disease is the disharmonization of the somatic and/or spiritual self, society, or universe. All TCM-trained practitioners of Chinese medicine have applied this concept to the prevention, diagnosis, and treatment of various mental disorders for thousands of years, beginning with the publication of a classic book, the

Figure 1. The face expresses seven kinds of emotions: joy, anger, worry, anxiety, grief, terror, and fright.



Figure 2. The interrelation of seven emotions, their corresponding viscera, and the five phases (heart for fire, spleen for earth, lung for metal, kidney for water, and liver for wood). The black lines with arrows show the mutual generations among the five viscera; for example, liver (mother viscera) generates heart (child viscera) and the mother ailment of the viscera (liver) may affect the child visceral function (heart), and vice versa, and the red lines with arrows show the mutual restrictions.



Yellow Emperor's Canon of Internal Medicine (Emperor's Canon).³ To obtain a better understanding of emotional etiology, this article ventures to address the following issues using our clinical experience: (1) the concept of seven emotions; (2) the mechanism of emotion-induced mental disorders; and (3) emotional theory as applied to diagnosis, treatment, prevention, and nursing care for mental illness.

DISHARMONIOUS EMOTION, AN INTERNAL ETIOLOGICAL FACTOR

The seven emotions are seven sentimental changes that include (1) joy, (2) anger, (3) worry (pensiveness), (4) anxiety, (5) grief, (6) terror, and (7) fright. These emotions reflect the mental state of human beings (Figure 1). According to TCM's theoretical structure, each emotion corresponds to an internal organ. The sites include (1) joy—the heart, (2) anger—the liver, (3) worry, (4) anxiety—the spleen, (5) grief—the lung, and (6) terror or fright—the kidney (Figure 2). According to the *Emperor's Canon*, the five zang-viscera (heart, liver, spleen, lung, and kidney) of the human body generate five kinds of essential *qi* (energy), giving rise to joy, anger, worry or anxiety, grief, and terror or fright (fear). The last three emotions share the same zang-viscera, the kidney. This conceptual framework suggests that sentimental activities are dependent on the visceral *qi* for their material basis.

In optimal health, an individual's emotions flow freely and are acknowledged and responded to appropriately, and then he or she moves on to the next feeling. Disharmony and illness, however, may arise when these emotions become too intense, strong, unexpressed, or excessive or when they dominate the psyche over a long period. Under those conditions, the seven emotions become internal etiological factors that the *Emperor's Canon* refers to as "the seven emotional evils causing endogenous injury." All TCM-trained practitioners of Chinese medicine believe that these etiological factors can lead to various diseases by causing the dysfunction of visceral *qi* and the imbalance of *yin-yang* in the corresponding viscera. Therefore, TCM regards all kinds of diseases as related to the disorder of *qi*. For example, excessive anger drives *qi* to flow upwards; excessive joy slows the movement of *qi*; excessive grief exhausts *qi*; excessive terror drives *qi* to move downwards; excessive fright disturbs the flow of *qi*; and excessive contemplation stagnates *qi*.^{3(p194)}

In TCM, well-being is the prerequisite to keep the body and mind in a harmonious state; the key to health cultivation is to avoid excessive grief and anxiety, known as *harmonization*. Those who can maintain a harmonized unity of mind and body can enjoy a long life.^{3(p532)}

FACTORS INFLUENCING THE SEVEN EMOTIONS

Individual Differences and Emotional Regulation

According to TCM, individuals show significant differences in their expressive emotion and a hierarchical model can represent the general regulation of emotion. For example, violent stimuli may not affect a strong-willed person because he or she can control or adjust the emotions,

bringing them into the normal range and ultimately causing little adverse impact on the body. In a person who is not strong willed, a minor stimulus may cause a great fluctuation of emotions, leading to a serious impairment of the body. TCM has long realized that human bodies are different: in character, some are firm and some are soft; in constitution, some are strong and some are weak.^{3(p532)} In this case, when encountering pain, the brave persons who can endure pain are not afraid of difficulty and remain unmoved; however, the timid ones who cannot endure pain only turn their eyes, stare angrily but dare not speak, hold their breath, become startling and pale, and harbor all sorts of misgivings.^{3(p709)}

James Gross and his colleagues confirmed that individuals differ widely in their expressive behavior and that a hierarchical model can represent the general domain of expressivity.⁴ Likewise, individual differences in emotion and its regulation contribute to an individual's unique constitution, social status, economic conditions, literacy, religious beliefs, and so forth. Long ago, TCM fully recognized these contributing factors and developed the individualized therapy for psychosomatic diseases.

Natural Factors

According to the unity of nature and humanity, TCM holds that each season has a corresponding dominant emotion, and the human emotions and actions must be in accordance with the seasonal sequence. For example, the most dominant emotion (1) in spring is anger; (2) in summer is joy; (3) in autumn is worry and grief; and (4) in winter is terror and fright. For example, one should go to bed in the spring when night comes and get up early in the morning. In the morning, one should breathe the fresh air while walking in the yard to exercise one's tendons and bones and loosen one's hair to make the whole body comfortable as well as generate spring energy.^{3(p13)} Individuals generally feel comfortable and relaxed on sunny days but likely feel depressed and bored on rainy days. Similarly, windy or hot weather often upsets a person, and autumn leaves make him or her sentimental. For example, the human temperament will be fresh and cool in a calm circumstance where no strong wind and rainstorm are occurring. With the calm circumstance, one can keep one's spirit quiet and clear as the blue sky and refrain from the disturbances of over-joyousness and violent rage.^{3(p18)} However, if the wind energy is exceedingly powerful, one may be apt to experience sudden anger.⁵ Recent data has confirmed that seasonal variations are associated with psychological changes, termed *seasonal affective disorder*.⁶ For example, depression often occurs in late autumn and winter, but it often lifts in spring.⁷ Spring's pleasant weather lightens one's mood and broader cognition creates behavioral flexibility that over time builds personal resources, such as mindfulness, resilience, social closeness, and even physical health, but in the summer, hotter weather is associated with lower mood.⁸ People living in the areas where little sunlight is present much of the time, such as in Alaska, or where rains falls frequently, such as in Oregon,

exhibit a higher rate of depression; interestingly, bright-light treatments can ameliorate these depressive symptoms.⁹ In addition, natural disasters—such as floods, typhoons, and earthquakes—can cause long-term sustainment of various psychological symptoms among the victims who survive.¹⁰⁻¹² For example, in 1981, floods in Kentucky led to increased cognitive impairment, depressed mood, crying spells, and feelings of hopelessness in survivors, and these impairments had not resolved at 2 years after the disaster.^{13,14}

Social Factors

Individuals with smaller social networks often have fewer close relationships or show a lower perceived adequacy of social support. Researchers have linked both of these factors to depressive symptoms.^{15,16} Additionally, psychological and physical health can suffer if one lacks fulfilling, caring relationships and/or meaningful connections to a larger social group.^{17,18} Animal experiments revealed that the social environment of the pig can greatly affect its behavioral and physiological stress state. Low social status can affect access to resources, such as feed or preferred sleeping area,¹⁹ can compromise immune status,²⁰ and increase physiological stress.²¹ Similar phenomena were observed in humans where social status also affects the level of stress and an individual's stress responsiveness, which in turn can affect a person's psychological and physical health.^{22,23} Therefore, TCM emphasizes that when we make a diagnosis, we must inquire in advance about the three states of the patient: noble or humble, rich or poor, and happy or miserable. For example, when dismissed from office or demoted, he/she can suffer an injured spirit, and his/her body can be harmed, even though he/she is not attacked by any outside evils.^{3(p471)}

According to TCM, emotional impairment by social factors, such as career frustration, can directly hurt one's blood and visceral qi. Although no outside injury may occur, the victim's hair may wither, muscle may become contractive, and he/she may experience flaccidity of the feet.^{3(p471)}

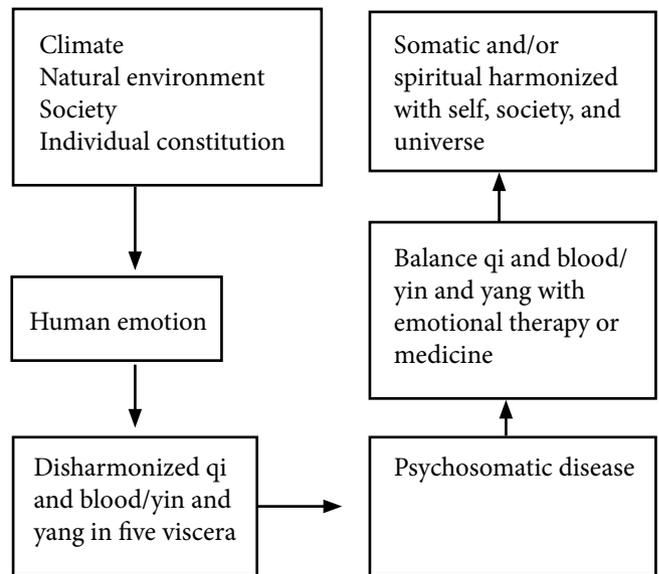
MECHANISM OF DISEASES INDUCED BY EMOTIONAL IMPAIRMENT

The following sections summarize the general mechanisms of the seven emotion-mediated, endogenous impairments (Figure 3).

Impairment of Visceral Qi

From the perspective of TCM, the dynamic balance of qi movement (ie, ascending, descending, exiting, or entering) is vital to maintenance of physiological functions of viscera. Excessive emotions can cause an imbalance in qi movement. For example, fury makes the qi reverse up; excessive joy makes the qi slack; sorrow makes the qi disperse; fright or terror makes the qi chaotic; worry or anxiety makes qi stagnate; excessive melancholy confuses qi; and fatigue consumes the qi.^{3(p194)} Therefore, dysfunctional qi not only impairs the corresponding internal viscera but also disharmonizes the dynamic balance of yin-yang in the viscera,

Figure 3. The mechanism of emotional hurt is involved in the pathogenesis of psychosomatic diseases. As shown in the figure, such contributing factors as climate, natural environment, society, and individual constitution comprise the potential impairments of emotion. Impaired emotions, via the mechanism of disharmonized qi and blood and/or yin-yang in the viscera, bring forth various psychosomatic diseases, which in turn worsen the imbalance of qi and blood and/or yin-yang in the viscera. The purpose of treatment is to restore the homeostasis of the body–spirit with the self, society, and universe.



which in turn can worsen the stagnation of qi and blood stasis. Numerous studies have reported that individuals with chronic somatic illnesses often present mental disorders. For example, they show a higher prevalence of mental disorder with a comorbidity of metabolic, gastrointestinal, pulmonary, cardiovascular, musculoskeletal, and neurological diseases.^{24,25} People with negative emotions, such as depression, anger, and hostility, are often comorbid with a compromised immune system or cardiovascular diseases.^{26,27} In turn, such comorbidity results in a poorer prognosis, increased resource utilization, higher costs, disability, and poorer treatment compliance.²⁸⁻³⁰ On the other hand, physical illnesses are frequently psychologically caused,^{31,32} and psychological states also play a decisive role in the healing process for physical illnesses.³³⁻³⁵

Comorbidity With Psychiatric Symptoms

TCM's holism considers the body to be the material basis of spiritual activities and spiritual activity to be the external manifestation of visceral functions. Emotion-induced endogenous injury is not only comorbid with somatic symptoms but often displays a series of mental symptoms. TCM has observed and recorded that excessive terror and worry will injure the spirit, causing loss of self-

control. Excessive melancholy can likewise cause depression and restlessness. Excessive anger may bring on delirium^{3(p194)} and excessive joy may result in mania and unconsciousness.^{3(p543-544)} Numerous studies have confirmed that emotional stress is implicated in the development of mental disorders and can ultimately generate various mental ailments, such as insomnia and amnesia.^{36,37}

Direct Impairment of Visceral Functions

Excessive joy can also directly hurt the heart; rage can hurt the liver; worry or anxiety can hurt the spleen; grief can hurt the lungs; and terror or fear can hurt the kidneys. For example, an impaired liver causes qi dysfunction and causes fullness and discomfort in the chest as well as the hypochondrium or upper lateral region of the abdomen. An impaired liver also causes depression, quick-temperedness, abdominal discomfort, belching, frequent sighing, irregular menstruation, painful breasts, and a sensation of obstruction in the pharynx. An impaired spleen fails to transport and transform food and water, leading to anorexia, problems with limbs, epigastric oppression, and loose stools.

Much is yet to be understood regarding the mechanism of the mind-body relationship, but as research has revealed, what individuals think and feel affects not only their bodies' functions but also the expressions of their genes.^{38,39} In turn, somatic conditions affect our emotions.⁴⁰ For example, physical fitness contributes to our good mood, and because of this, the vulnerability to disease diminishes.^{41,42} Stress, however, increases cognitive impairment, brain atrophy, and vulnerability to disease, providing a powerful mechanism by which an individual's emotions can affect his or her cognitive performance, brain tissue, and physical health.⁴³⁻⁴⁸

Stagnation of Phlegm and Blood Stasis

Harmony in emotion is vital to maintaining the balance of qi and blood or yin and yang in the viscera, and vice versa. Impairment of emotion causes the visceral qi to stagnate as well as the blood and the body's fluid to be condensed to form phlegm or blood stasis. Phlegm or blood stasis is a kind of pathological substance caused by disturbance of retention of fluid or blood circulation. Normally the fluid or the blood is propelled by heart-qi to flow in the vessels. If fluid or blood circulation is stagnated or slowed down by certain factors, it will lead to retention of fluid or blood in the vessels, collaterals or viscera, causing phlegm or blood stasis. When one is hurt by melancholy or anger, the qi will reverse up impeding six channels and generating blood stasis.^{3(p760)} In addition, extremes of the seven emotions may cause qi disorder, bringing forth the sputum or blood stasis.^{3(p709)} Therefore, emotional injury is regarded as one of the pathogenesis mechanisms of phlegm and blood stasis. Furthermore, the stagnated phlegm or blood stasis can worsen underlying diseases or cause new ailments. Therefore, both of these states can be pathological and etiological factors, influencing each other and participating in various diseases.

Weakened Defense Qi

From the perspective of TCM, excessive depression, sorrow, terror, joy, and anger can empty the five viscera, making them unable to maintain the qi and blood.^{3(p471)} Excessive joy and anger, great fright, and sudden fear make the qi and blood divorce.^{3(p636)}

Emerging evidence has revealed that negative emotion is associated with compromised immune functions. For example, Roger Bartrop and his colleagues found that general dysfunction of the immune system follows the sudden death of a spouse,⁴⁹ and later studies have confirmed this finding.^{50,51} In addition, researchers found that stressful events were a causal factor in impairment of a patient's cell-mediated control of latent viruses, inadequate responses to vaccinations, and a delay in the healing of experimental wounds.^{27,52,53} In TCM, all of these phenomena contribute to the internal damage to defensive-qi induced by emotional distress.

Deterioration of Underlying Illnesses

Sharp fluctuations of emotion may worsen underlying diseases or even become the cause of death. TCM holds that when one is in great rage, the yang-qi and the blood will go upward. If the blood stagnates in the chest, the physique and activating vital qi will become obstructed. In this case, the confusion of vital qi and blood will occur, causing syncope due to emotional upset.^{3(p13)} Emerging data has suggested that negative emotions (eg, sadness, anger, or fear) adversely affect an individual's cognitive functioning and physical health.^{54,55} Clinical studies have shown that anger or depression increases the risk of cardiac mortality and morbidity in patients with coronary heart disease, while a peaceful emotion is beneficial to prevention and treatment of and recovery from these ailments.⁵⁶

EMOTION-RELATED DISEASES

Excessive Joy Impairing the Heart

Normally, TCM holds that joy leads to relaxation and good mood and allows the nutrient-qi and defense-qi to function smoothly, producing a relaxed state of qi^{3(p194)}; however, excessive joy hurts the heart and impairs yang and makes mental vitality scatter.³ Because TCM assumes that the heart is the center of mental vitality instead of the brain, excessive joy is believed to disperse the heart-qi and cause an imbalance in mental vitality. Therefore, excessive joy produces forgetfulness (scatterbrain) and insomnia, and in critical cases, mental disarrangement accompanied by facial flushing and sweating. Use of fear to overcome joy³ is the emotional therapy for the disease, based on the concept that joy is the heart's emotion of fire, while fear is the kidney's emotion of water. Therefore, fear (water) can overcome joy (fire). As for the herbal treatment, a Jianji decoction (from Yi Chun Shen Yi) can balance and nourish the nutrient qi and the defense qi to tranquilize the mind; practitioners also can add *Asparagus cochinchinensis*, *Schisandra chinensis*, *Schisandra chinensis* Michx, *Astragalus alpinus*, *Panax ginseng*, *Angelica sinensis*, *Paeonia lactiflora*, *Salvia miltiorrhiza*

Bunge, *Cacumen platycladi* seed, *Zingiber officinale*, *Ziziphus jujuba* Mill, amber, and cinnabar, according to individual conditions.

Clinical Cases (Extracted From the Book *Ru Men Shi Qing*). Doctor Zhang, a famous doctor in the Jin-Yuan dynasty, once saw a patient who was troubled by unceasing laughter after he became the champion in the imperial examination. The imperial examination was a system in imperial China designed to select the best administrative officials for the state's bureaucracy. This system had a huge influence on both society and culture in imperial China and was directly responsible for the creation of a class of scholar-bureaucrats irrespective of their family pedigree. After learning this history, Doctor Zhang diagnosed the patient as being hurt by excessive joy. Feeling the pulse, the doctor thought for a while and then lied to the patient that he had to retrieve some medicine for the disease. The doctor, however, did not come back again. The patient thought that his illness was untreatable, and he felt so scared that he cried to his relatives that he would die soon. With this news, the doctor secretly informed the patient's relatives that his conditions would soon improve or that he even would recover completely. When the patient's relatives wondered how he was cured, Zhang explained that "terror wins over joy." Since the patient was hurt by excessive joy and now felt frightened, the doctor told the relatives that he would be fine soon. Sure enough, the patient was cured as the doctor had expected. Then the doctor prescribed a Jianji decoction to balance and nourish the nutrient and defense qi and tranquilize the mind; gradually, the patient's illness was cured completely.

Rage Impairing the Liver

TCM holds that anger makes qi rush up and impair the liver yin.³ Anger is the emotion of liver and anger impairment causes a disorder of the liver qi, leading to the following symptoms: headache; flushed face; dizziness; red eyes; dull pain in the ribs and rib cage; feelings of vulnerability and irritability whenever the stagnated liver qi transformed into fire; insomnia; a red tongue with little or yellow coating; and a wiry, rolling, and rapid pulse. In serious cases, great anger causes separation of the body and qi, making the blood pool in the upper part of the body, and causing sudden coma.^{3(p18)}

The proper emotional therapy uses grief to overcome anger,³ based on the concept that grief is the lung's emotion of metal, while anger is the liver's emotion of wood. Therefore, grief (metal) can overcome anger (wood). Practitioners of TCM try to persuade patients to cultivate a broad mindedness to forgive their offenders, integrating that suggestion with Jienu Bugan decoction to disperse stagnated or suppressed liver qi and tranquillize the mind; practitioners also can add *P lactiflora*, *A sinensis*, *Alisma plantago-aquatica*, *Schizonepeta tenuifolia*, *Glycyrrhiza glabra*, *Citrus aurantium*, *Salvia chinensis*, and *Bupleurum*, according to individual conditions.

A Clinical Case (Extracted From the Book *Fu Qingzhu's Works on Gynecopathy*, Written by the Famous Doctor Fu Shan During the Ming Dynasty). A young woman was struck by anger and fell sick because of her husband's love affair with another woman. Informed of the cause of her disease, the doctor told her husband that a kind of stone soup might cure his wife but that the stone must be cooked until it became tender. Without any doubt, he decocted the stone over a big fire for 3 days and 3 nights around the clock. Seeing his eyes red-rimmed with fatigue, his wife was moved to tears by the fact that her husband cared for her so much. Spontaneously, her disease was gradually cured with the help of the Jienu Bugan decoction to disperse stagnated or suppressed liver qi and tranquilize the mind. Of course, the stone could not be cooked to tenderness and the soup may be ineffective for the disease; in spite of this, however, the doctor tactfully used the emotional therapy of "grief prevailing over anger," albeit in a ludicrous or absurd method of curing the disease.

Grief or Sorrow Impairing Lung

TCM holds that grief or sorrow hurts the lungs and makes qi wither away.³ The lung is responsible for qi circulation, so an impaired lung will lead to dysfunction in qi's dispersal and descent, causing the following symptoms: pallor in complexion, a sense of cold or hot, feelings of suffocation, cough, phlegm retention, and stuffy nose as well as poor appetite, constipation, urinary problems, a red tongue with white thin or yellow greasy fur, and a slippery and string pulse. In the authors' clinic, grief or sorrow following bereavement often triggered relapse of chronic pulmonary diseases.

Using joy to overcome grief or sorrow is the emotional therapy for this disease.³ This therapy is based on the concept that grief or sorrow is the lung's emotion of metal, while joy is the heart's emotion of fire. In TCM, practitioners believe that metal overcomes fire. In a clinical setting, a doctor will try to make a patient light-hearted by hearty talking or joking to eliminate the sadness. Meanwhile, the doctor will prescribe Xuancao Wangyou soup (from Yi Chun Sheng Yi) to disperse lung qi for resuscitation and to regulate the flow of qi to eliminate phlegm and tranquilize the mind. Practitioners also can add *P lactiflora*, *G glabra*, *Cinnamomum cassia*, *Curcuma longa*, *Albizia julibrissin* Durazz, *Chachiensis hortorum*, *Poria cocos* Schw, *C platycladi* seed, *Hemerocallis*, and *Fritillaria*, according to individual conditions.

Clinical Cases. In May 2003, Dr Tan saw a 38-year-old female patient who claimed to grieve to death at the news that her husband died in a traffic accident. From then on, she was troubled with dizziness, fatigue, insomnia, forgetfulness, stuffy chest, and poor appetite, and these symptoms worsened over time. The general biochemical tests found no abnormal parameters, and medical treatment had little effect on her illness. In addition to the above complaints, at her visit her tongue was red with a white, thin, greasy coating. From her complaints and the signs of the tongue and pulse,

the doctor determined that she was affected by grief, causing qi disorder and phlegm and dampness stagnation. Excess dampness is considered a yin pathogenic (disease causing) influence. When dampness invades the body, it leads to sluggishness, tiredness, heavy limbs, and heaviness in the forehead. Bodily discharges will tend to be sticky and turbid and the tongue will have a sticky coat. The doctor combined psychological comfort with Chaihu Shugan powder (*Citrus tangerina*, *Cyperus rotundus*, *Ligusticum wallichii*, *C aurantium*, *P lactiflora*, *G glabra*, and *Bupleurum*) to disperse the stagnated liver qi and to strengthen the spleen to eliminate phlegm and dampness. The patient's condition improved significantly. Later, she remarried, and her illness was cured completely.

Pensiveness Impairing Spleen

TCM holds that human thought begins in the spleen and ripens in the heart. Pensiveness or worry impairs the spleen and makes spleen-qi stagnate.^{3(p194)} As a consequence, excessive melancholy or anxiety not only affects the spleen-qi but also impairs the heart-spirit, causing qi to stagnate and its circulation to fail.^{3(p194)} When the internal consumption of yin-blood occurs or if the depressed spleen-qi turns into fire, the heart will be undernourished or disturbed by the fire. Thus, practitioners will observe the following symptoms: palpitation, amnesia, insomnia, and dreaminess, accompanied by red tongue with little or yellow greasy coating, and thin string and weak or slippery pulse. Meanwhile, when the stagnated qi accumulates in the abdomen, the spleen fails to govern transportation and transformation, causing poor appetite, abdominal distension, and laziness of the limbs.

Using anger to overcome anxiety is the emotional therapy for this kind of disease.³ The practitioner tries to irritate the client to disperse the suppressed qi and integrates this action with Guipi Wan and Yueju Wan, two compounds often used to regulate suppressed qi. This regulates qi-flow, strengthens the spleen, and tranquilizes the mind; practitioners also can add *Codonopsis*, *Atractylodes macrocephala* Koidz, *Astragalus propinquus*, *Glycyrrhiza uralensis*, *Polygala tenuifolia* Willd, *Schisandra chinensis* Michx, *Aucklandia lappa* Decne, *Gardenia jasminoides* Ellis, *Dimocarpus longan*, *Atractylodes lancea*, *A sinensis*, *C rotundus*, *L wallichii*, *Z jujuba* Mill, *P cocos*, and medicated leaven, according to individual conditions.

Clinical Cases (Extracted From the Book *The Renewal of Medical Cases*, Edited by Weizi Xiu, a Famous Doctor in the Qing Dynasty). Doctor Zhuang, a famous doctor in Qing dynasty, once saw a woman troubled with insomnia for 2 years due to the impairment of pensiveness. After the doctor made the diagnosis, he privately told her husband that anger might cure his wife. With the husband's approval, the doctor made a plan to irritate her. Zhuang pretended to ask for a large sum of money to treat her disease, and he consumed a good deal of drink at her home for several days. He did not mention her illness, however, nor did he issue any

prescriptions for her. One day, the doctor sneaked away, making her very frustrated! The woman flew into a rage and broke into a sweat all over, which made her so tired that she fell asleep for several days. Soon after that, her 2-year trouble with sleeping gradually faded with treatment using Guipi Wan and Yueju Wan. This case represents one where anger prevailed over pensiveness.

Terror or Fright Impairing Kidney

TCM holds that terror or fright impairs the kidney, which induces a decline of the refined energy, resulting in the obstruction of the upper jiao. Due to the failure of energy to reach the upper jiao, the energy returns to and stagnates in the lower jiao, causing fullness and distention of the lower jiao.^{3(p194)} Terror or fright is linked to the kidney, and impaired kidneys cause an adverse flow of qi resulting in the following symptoms: listlessness; weakness in joints, waist and knees, or lower back pain; urinary problems; a desire for solitude; insomnia; forgetfulness; spermatorrhea (excessive, accidental ejaculation) in males or irregular menstruation in females; bedwetting in children; a red tongue with white thin coating, and a slow and sinking pulse.

In keeping with the theory of using anxiety to overcome terror or fright,³ the practitioner advises patients to meditate in order to cultivate a peaceful mind through regulation of breathing, self-awareness, and consciousness, thus eliminating the shadow of terror or fright. To perform this treatment, the patient should cross his or her two legs, keeping soles of the feet upward and sitting up straight on a mat (10 cm thick). The person must keep his or her chest and abdomen aligned, keep the chest lifted while keeping the abdomen flat, and the rhythmic breathing must be deep, with both eyes slightly closed. The individual must keep both hands limp, with the thumb and the second finger forming a semicircle, and palms up and flat on the knees (as in the posture of yoga) or palms folded or formed (as a posture of Mahamudra [Figure 4]). Imagine yourself sitting on a lotus flower in calm water with a blue sky overhead and the sun shining on you and gradually combine yourself with the sun so that fear leaves you. During the procedure, you can focus your attention on jewelry or something similar you are wearing or holding, or on something else of significance, such as spirit. You also can accompany the meditation with the burning of incense or the playing of light music. The meditation must end with music, however; otherwise, the lack of music will affect the results. Music helps the patient to focus attention on the meditation; therefore, lack or interruption of the music may affect results. This simple ceremony allows you to access the harmonized mind. This meditation integrates with a Bugu Zhi decoction to replenish the essence of the kidney and regulate qi flow. To tranquilize the mind practitioners also can add *Psoralea corylifolia*, *Alpinia oxyphylla* Miq, *Cistanche deserticola*, *P cocos*, *Achyranthis bidentata*, *A sinensis*, *P ginseng*, *P tenuifolia* Willd, *P lactiflora*, *S miltiorrhiza* Bunge, *Z jujuba* Mill, and *Z officinale*, and *Rehmanniae*, according to individual conditions.

Figure 4. In the posture of meditation, an individual crosses his or her two legs, with the soles facing upward, and sits up straight on a mat. The individual keeps his or her chest and abdomen aligned and deepens rhythmic breathing, with both eyes slightly closed. Both hands are at ease, with the thumb and the second finger forming a semicircle and the palms up and flat on the knees, as a posture of yoga (A), or with the palms folded or formed, as a posture of *mahamudra* (B).



Clinical Cases. In May 2004, Dr Tan saw a 64-year-old woman who complained of being haunted by a shadow-ghost ever since one of her neighbors had died 2 months prior to her appointment. Suffering from fear all day long, she gradually developed the symptoms of soreness and weakness in her waist and knees, oppression in her chest, nausea, dizziness, and forgetfulness. In addition to these symptoms, upon her first visit, her tongue was reddish, and her pulse was deep, thready, and weak. Based on her complaints and the signs of her pulse and tongue, the doctor diagnosed her as struck with terror. In addition to care and psychological counseling, the doctor prescribed meditation therapy. The doctor asked her to sit on a plastic lotus for 2 hours each day for 2 months as described above; meanwhile, he integrated that practice with a Bugu Zhi decoction to replenish her kidney essence and tranquilize her mind; 2 months later, her illness was cured completely.

Multi-emotional Impairment

As a dynamic unity, the five viscera are interrelated both physiologically and pathologically. One or more emotions may impair the same viscera, or one emotion can affect several viscera, although emotional injury has a certain degree

of selectivity. According to the theory of viscera's mutual promotion and restriction, the mother ailment of the viscera (for example, heart) may affect the child visceral function (spleen), and vice versa (Figure 2).

TCM practitioners believe that the heart dominates the spirit, and the liver stores the blood. The spleen is the hub of qi and also the place that produces the qi and blood. Therefore, the function of the three viscera is intimately related to the regulation of spirit, qi, and blood and to emotional vulnerability. For example, pensiveness often impairs the heart and spleen, causing deficiency of both qi and blood in the two viscera. In a clinical setting, depression, heart disease symptoms, and menopausal transition syndrome are involved in the impairment of several emotions. In these complicated cases, TCM's practitioners often use emotional therapy integrated with Chinese medicine according to syndrome differentiation to regulate qi and blood as well as yin and yang in the heart, liver, and spleen. The integrative therapy can often obtain satisfying results.

MULTIPLE FACTORS IN THE DIAGNOSIS OF EMOTIONAL DISEASES

TCM holds that the human body corresponds to four seasons and the natural environment, and just as the weathers of the four seasons are different, the diseases affected by them are different.^{3(p604)} As multiple factors affect human emotion, to diagnose emotional diseases, TCM requires the practitioner to know the changes of four seasons, the inhabitants' geographic features, the social status, and the emotional characteristic of the clients,^{3(p18)} and to obtain the most detailed information possible through four examinations—looking, listening, asking, and touching examinations. Therefore, the qualified TCM practitioner, who is good at diagnosis, always observes the complexion of the patient and palpates the pulse first (1) to distinguish by observing the color and the lucid or turbid complexion of the patient whether the disease belongs to yang or yin (ie, the emotional hurt represents tin; the external causes represents yang) and to infer in which channel the disease exists; and (2) to distinguish the solid organ associated with the disease from the pulse condition of the various seasons (ie, spring determines the condition of the liver; summer determines the condition of the heart, etc).³

EMOTIONAL STATE AND PROGNOSIS OF DISEASE

Negative emotions, such as depression, pessimism, and fear, not only directly affect therapeutic effect, recovery, and prognosis, but also affect the development of diseases. For instance, emotional impairment often accompanies a lifelong physical illness, such as hypertension or diabetes, and emotional therapy combined with drug therapy has an improved efficacy over using a drug only.^{24,25} Emerging evidence indicates that positive emotions are associated with a significantly lower incidence of cardiocerebral events^{57,58} as well as a lower risk of new onset of disability and frailty in older populations.^{59,60} Positive emotion is also associated with

longevity.^{61,62} In contrast to the above-mentioned emotional therapies, which suppress surplus emotion, TCM describes other emotional therapies, including changing emotion, speech enlightening, suggestion therapy, and qigong. Details of these four most commonly used psychotherapies in TCM are as follows: (1) changing emotion therapy requires practitioners to design a scenario that transfers or decentralizes the patient's emotions onto the disease; (2) speech enlightening therapy uses pleasant words to light the patient or encourage the patient to build up confidence; (3) suggestion therapy relaxes the patient into a very light hypnotic state with positively worded suggestions that will affect whatever symptom(s) the patient is consulting about. This therapy also teaches the patient how to think and act more positively and to visualize the outcomes he/she desires. Lastly, qigong is an exercise to regulate the mind and breathing in order to control or promote the flow of qi. These therapies have proven to be effective for psychosomatic diseases; however, whatever therapy is appropriate depends on the individual patient's condition.

TCM emphasizes the influence of emotion on therapeutic effect and prognosis in illness. TCM holds that when the spirit is hurt, one will not be able to control oneself; when the condition is protracted, the muscles will deteriorate.^{3(p543-544)} Therefore, it is the doctor's obligation to help a patient cultivate a positive or an optimistic attitude regarding the illness and to restore the patient's faith in life.

EMOTIONAL THERAPY IN NURSING CARE AND PREVENTION

An ounce of prevention is worth a pound of cure. TCM emphasizes the role of human emotion in nursing care and the prevention of disease. A person promoting well-being should be completely free from wishes, ambitions, and distracting thoughts and should be indifferent to fame and gain; true energy will come in the wake of these attitudes. When one concentrates their spirit internally and keeps a sound mind, how can any illness occur?^{3(p8)}

According to TCM's theory of correspondence between the human body and the natural environment, an individual must establish a regular life rhythm and dynamic emotion synchronous with the natural environment. One should nourish yang in spring and in summer while nourishing yin in autumn and in winter,³ which maintains the emotional and visceral yin-yang in harmonious unity. Therefore, when one wants to preserve their health, they always adapt agreeably to the cold and hot weather, in conjunction with the four seasons, and keep moods, such as joy and anger, in harmony to maintain appropriate motion and rest in daily life. This way, one can maintain a dynamic equilibrium of yin and yang and well-being.^{3(p543-544)}

The prominent feature of TCM is its orientation toward patients. The doctor's duty is not only to pay attention to the disease itself, but more importantly, to pay attention to the concerns of the patient's emotions. To educate or help the patient to establish confidence in combating a disease is the indispensable duty for TCM practitioners. TCM has long

realized that everyone is afraid of death and prefers living; if we physicians tell the patient what is beneficial and what is harmful to their body, and show them the proper way of treating it, which will benefit them and relieve the misgivings that cause them misery, the patient will not neglect the advice, even if they are a somewhat unreasonable person.^{3(p642)}

A Set of Therapies for Psychiatric Disorders

Chinese medical practitioners who have specialized training in TCM commonly use acupuncture, herbal medicines, qigong, and other forms of therapy for treatment of depressed mood. Of these, herbal compounds and acupuncture are the most widely used therapies, and practitioners have found them to be effective in alleviating the symptoms of various mental disorders. The study of the effects of Chinese herbal compounds on mental disorders, however, are largely based on empirical experience, scattered in numerous reports over thousands of years. TCM uses compounds that have complex constituents, and it is difficult to assess the active constituents of these compounds. Recent studies have clarified the role of some botanicals in the treatment of depression and anxiety. For example, hypericin, extracted from *Hypericum perforatum* (St John's wort), has shown significant antidepressant activity by inhibiting the enzyme mono amino oxidase,^{63,64} as well as *Bacopa monnieri* from *Bacopa monnieri* Brahmi and *Centella asiatica* Mandukaparni.⁶⁵

Acupuncture is the most widely used treatment method for mental disorders.¹⁴ Relatively high-quality trials involving nearly 2000 patients with major depressive disorders (MDD) showed that the overall effects of acupuncture monotherapy were similar to the pooled control in improving clinical responses and reducing depressive symptoms in MDD patients.⁶⁶ One of the serotonergic mechanisms of acupuncture involved in the antidepressant actions contributes to an increase in platelet serotonin (5-HT) levels and a decrease in platelet 5-HT_{1A} receptors.⁶⁷ Moreover, 15 high-quality, randomized, controlled trials involving nearly 1700 patients with poststroke depression (PSD) showed that acupuncture intervention produced overall effects significantly greater than the pooled control in improving both clinical responses and depressive symptoms. In addition, acupuncture intervention may also enhance stroke rehabilitation and have beneficial effects in treating poststroke neurological disorders, including limb disabilities, aphasia, dysphagia, and urinary and defecation incontinence.⁶⁸⁻⁷¹ Researchers have found the improvements in physical disabilities to be greatly helpful in reducing depressive symptoms.⁷²

CONCLUSION

Seven-emotion theory, an important component of TCM, plays an instructive role in the analysis of etiology and pathogenesis, diagnosis, treatment, and prevention of psychosomatic diseases. Therefore, aside from treating ailments, the Chinese physician's responsibilities include prevention,

lifestyle recommendations, and emotional support. Contemporary problems such as burnout in the workplace, subhealth conditions—experiences of pain and discomfort that have no known physical cause—and chronic diseases (eg, cardiac-cerebrovascular diseases, diabetes mellitus and cancer), are multidimensional issues that call for an integrative approach capable of honoring the physical, cognitive, emotional, social, and spiritual experiences of individuals in the process of assessment and treatment. Although many hurdles are still left to decipher TCM, the West can learn a different philosophical approach toward medicine from its Eastern counterpart, and impart a more holistic, patient-oriented, and far-reaching approach. Medical practitioners can hope that this merging of East and West will foster an evolution in the prevention, diagnosis, treatment, and nursing care of psychosomatic disease.

ACKNOWLEDGEMENTS

Yanbin Wu contributed equally to the first author.

REFERENCES

1. Berk BB, Hirata LC. Mental illness among the Chinese: myth or reality? *J Soc Issues*. 1973;29(2):147-166.
2. Lo WH, Lo T. A ten-year follow-up study of Chinese schizophrenics in Hong Kong. *Brit J Psychiatry*. July 1977;131:63-66.
3. Bing W; Liansheng W, Qi W (trans). *Yellow Emperor's Canon of Internal Medicine*. Beijing, China: China Science and Technology Press, 1997.
4. Gross JJ, John OP. Facets of emotional expressivity: three self-report factors and their correlates. *Pers Individ Dif*. 1995;19(4):555-568.
5. Keller MC, Fredrickson BL, Ybarra O, et al. A warm heart and a clear head: the contingent effects of weather on mood and cognition. *Psychol Sci*. 2005;16(9):724-731.
6. Silverstone T, Romans S, Hunt N, McPherson H. Is there a seasonal pattern of relapse in bipolar affective disorders? A dual northern and southern hemisphere cohort study. *Br J Psychiatry*. 1995;167(1):58-60.
7. Barnston AG. The effect of weather on mood, productivity, and frequency of emotional crisis in a temperate continental climate. *Int J Biometeorol*. 1988;32(2):134-143.
8. Golden RN, Gaynes BN, Ekstrom RD, et al. The efficacy of light therapy in the treatment of mood disorders: a review and meta-analysis of the literature. *Am J Psychiatry*. 2005;162(4):656-652.
9. Heo JH, Kim MH, Koh SB, et al. A prospective study on changes in health status following flood disaster. *Psychiatry Investig*. 2008;5(3):186-192.
10. Soldatos CR, Paparrigopoulos TJ, Pappa DA, Christodoulou GN. Early post-traumatic stress disorder in relation to acute stress reaction: an ICD-10 study among help seekers following an earthquake. *Psychiatry Res*. 2006;143(2-3):245-253.
11. Katz CL, Pellegrino L, Pandya A, Ng A, DeLisi LE. Research on psychiatric outcomes and interventions subsequent to disasters: a review of the literature. *Psychiatry Res*. 2002;110(3):201-217.
12. Phifer JF. Psychological distress and somatic symptoms after natural disaster: differential vulnerability among older adults. *Psychol Aging*. 1990;5(3):412-420.
13. Ursano RJ, McCaughey BG, Fullerton CS, eds. *Individual and Community Responses to Trauma and Disaster: The Structure of Human Chaos*. Cambridge, UK: Cambridge University Press; 1994.
14. Barnett PA, Gotlib IH. Psychosocial functioning and depression: distinguishing among antecedents, concomitants, and consequences. *Psychol Bull*. 1988;104(1):97-126.
15. Oxman TE, Berkman LF, Kasl S, Freeman DH Jr, Barrett J. Social support and depressive symptoms in the elderly. *Am J Epidemiol*. 1992;135(4):356-368.
16. Hawkey LC, Cacioppo JT. Loneliness and pathways to disease. *Brain Behav Immun*. 2003;17(Suppl 1):S98-S105.
17. Pressman SD, Cohen S, Miller GE, Barkin A, Rabin BS, Treanor JJ. Loneliness, social network size, and immune response to influenza vaccination in college freshmen. *Health Psychol*. 2005;24(3):297-306.
18. Krieger N, Davey Smith G. "Bodies count," and body counts: social epidemiology and embodying inequality. *Epidemiol Rev*. 2004;26:92-103.
19. O'Connell NE, Beattie VE, Moss BW. Influence of social status on the welfare of growing pigs housed in barren and enriched environments. *Anim Welfare*. 2004;13(4):425-431.

20. McGlone JJ, Salak JL, Lumpkin EA, Nicholson RI, Gibson M, Norman RL. Shipping stress and social status effects on pig performance, plasma cortisol, natural killer cell activity, and leucocyte numbers. *J Anim Sci*. 1993;71(4):888-896.
21. Ruis MAW, Brake JHA, Engel B, Buist WG, Blikhuis HJ, Koolhaas JM. Implications of coping characteristics and social status for welfare and production of paired growing gilts. *Appl Anim Behav Sci*. 2002;75:207-231.
22. Marmot M, Wilkinson RG, eds. *Social Determinants of Health*. 2nd ed. Oxford, UK: Oxford University Press; 2005.
23. Scott KM, Bruffaerts R, Tsang A, et al. Depression-anxiety relationships with chronic physical conditions: results from the World Mental Health Surveys. *J Affect Disord*. 2007;103(1-3):113-120.
24. Katon W, Lin EH, Kroenke K. The association of depression and anxiety with medical symptom burden in patients with chronic medical illness. *Gen Hosp Psychiatry*. 2007;29(2):147-155.
25. Härter M, Baumeister H, Reuter K, et al. Increased 12-month prevalence rates of mental disorders in patients with chronic somatic diseases. *Psychother Psychosom*. 2007;76(6):354-360.
26. Kiecolt-Glaser JK, Glaser R, Gravenstein S, Malarkey WB, Sheridan J. Chronic stress alters the immune response to influenza virus vaccine in older adults. *Proc Natl Acad Sci USA*. 1996;93(7):3043-3047.
27. Glaser R, Kiecolt-Glaser JK, Malarkey WB, Sheridan JF. The influence of psychological stress on the immune response to vaccines. *Ann NY Acad Sci*. May 1998;840:649-655.
28. Egede LE. Major depression in individuals with chronic medical disorders: prevalence, correlates and association with health resource utilization, lost productivity and functional disability. *Gen Hosp Psychiatry*. 2007;29(5):409-416.
29. Simon GE, Katon WJ, Lin EH, et al. Cost-effectiveness of systematic depression treatment among people with diabetes mellitus. *Arch Gen Psychiatry*. 2007;64(1):65-72.
30. Scott KM, Von Korff M, Alonso J, et al. Mental-physical co-morbidity and its relationship with disability: results from the World Mental Health Surveys. *Psychol Med*. 2009;39(1):33-43.
31. Kozłowska K. Healing the disembodied mind: contemporary models of conversion disorder. *Harv Rev Psychiatry*. 2005;13(1):1-13.
32. Roelofs K, de Bruijn ER, Van Galen GP. Hyperactive action monitoring during motor-initiation in conversion paralysis: an event-related potential study. *Biol Psychol*. 2006;71(3):316-325.
33. Benson H, Klipper MZ. *The Relaxation Response*. New York, NY: William Morrow and Company, Inc; 1975.
34. Kabat-Zinn J. *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness*. New York, NY: Delacorte Press; 1990.
35. Kabat-Zinn J, Lipworth L, Burney R. The clinical use of mindfulness meditation for the self-regulation of chronic pain. *J Behav Med*. 1985;8(2):163-190.
36. Carson AJ, Ringbauer B, MacKenzie L, Warlow C, Sharpe M. Neurological disease, emotional disorder, and disability: they are related: a study of 300 consecutive new referrals to a neurology outpatient department. *J Neurol Neurosurg Psychiatry*. 2000;68(2):202-206.
37. Meiland FJ, Kat MG, van Tilburg W, Jonker C, Droes RM. The emotional impact of psychiatric symptoms in dementia on partner caregivers: do caregiver, patient, and situation characteristics make a difference? *Alzheimer Dis Assoc Disord*. 2005;19(4):195-201.
38. Epel ES, Blackburn EH, Lin J, et al. Accelerated telomere shortening in response to life stress. *Proc Natl Acad Sci USA*. 2004;101(49):17312-17315.
39. Miller GE, Chen E. Life stress and diminished expression of genes encoding glucocorticoid receptor and beta2-adrenergic receptor in children with asthma. *Proc Natl Acad Sci USA*. 2006;103(14):5496-5501.
40. Maier SF. Bi-directional immune-brain communication: implications for understanding stress, pain, and cognition. *Brain Behav Immun*. 2003;17(2):69-85.
41. Callaghan P. Exercise: a neglected intervention in mental health care? *J Psychiatr Ment Health Nurs*. 2004;11(4):476-483.
42. Colcombe SJ, Kramer AF, Erickson KI, et al. Cardiovascular fitness, cortical plasticity, and aging. *Proc Natl Acad Sci USA*. 2004;101(9):3316-3321.
43. Cohen S. Psychological stress, immunity, and upper respiratory infections. *Curr Dir Psychol Sci*. 1996;5(3):86-90.
44. McEwen BS. The neurobiology and neuroendocrinology of stress: implications for post-traumatic stress disorder from a basic science perspective. *Psychiatr Clin North Am*. 2002;25(2):469-494.
45. Robles TF, Glaser R, Kiecolt-Glaser JK. Out of balance: a new look at chronic stress, depression, and immunity. *Curr Dir Psychol Sci*. 2005;14(2):111-115.
46. Sapolsky RM. Why stress is bad for your brain. *Science*. 1996;273(5276):749-750.
47. Segerstrom SC, Miller GE. Psychological stress and the human immune system: a meta-analytic study of 30 years of inquiry. *Psychol Bull*. 2004;130(4):601-630.
48. Stetler C, Murali R, Chen E, Miller GE. Stress, immunity, and disease. In: Cooper CL, ed. *Handbook of Stress Medicine and Health*. 2nd ed. Boca Raton, FL: CRC Press; 2005:131-154.
49. Bartrop RW, Luckhurst E, Lazarus L, Kiloh LG, Penny R. Depressed lymphocyte function after bereavement. *Lancet*. 1977;1(8016):834-836.
50. Stein M, Schleifer SJ, Keller SE. Hypothalamic influences on immune responses. In: Ader R, ed. *Psychoneuroimmunology*. Burlington, MA: Elsevier Academic Press; 1981:429-448.
51. Kiecolt-Glaser JK, Glaser R. Psychosocial factors, stress, disease and immunity. In: Ader R, Felten DL, Cohen N, eds. *Psychoneuroimmunology*. 2nd ed. Burlington, MA: Elsevier Academic Press; 1991:847-868.

52. Glaser R, Kiecolt-Glaser JK. Chronic stress modulates the virus-specific immune response to latent herpes simplex virus type 1. *Ann Behav Med*. 1997;19(2):78-82.
53. Carney RM, Freedland KE, Miller GE, Jaffe AS. Depression as a risk factor for cardiac mortality and morbidity: a review of potential mechanisms. *J Psychosom Res*. 2002;53(4):897-902.
54. Kiecolt-Glaser JK, McGuire L, Robles TF, Glaser R. Psychoneuroimmunology and psychosomatic medicine: back to the future. *Psychosom Med*. 2002;64(1):15-28.
55. Carney RM, Freedland KE, Rich MW, Jaffe AS. Depression as a risk factor for cardiac events in established coronary heart disease: a review of possible mechanisms. *Ann Behav Med*. 1995;17(2):142-149.
56. Carney RM, Freedland KE. Depression, mortality, and medical morbidity in patients with coronary heart disease. *Biol Psychiatry*. 2003;54(3):241-247.
57. Steptoe A, Wardle J, Marmot M. Positive affect and health-related neuroendocrine, cardiovascular, and inflammatory processes. *Proc Natl Acad Sci USA*. 2005;102(18):6508-6512.
58. Brummett BH, Morey MC, Boyle SH, Mark DB. Prospective study of associations among positive emotion and functional status in older patients with coronary artery disease. *J Gerontol B Psychol Sci Soc Sci*. 2009;64(4):461-469.
59. Fisher MN, Snih SA, Ostir GV, Goodwin JS. Positive affect and disability among older Mexican Americans with arthritis. *Arthritis Rheum*. 2004;51(1):34-39.
60. Ostir GV, Ottenbacher KJ, Markides KS. Onset of frailty in older adults and the protective role of positive affect. *Psychol Aging*. 2004;19(3):402-408.
61. Ostir GV, Markides KS, Black SA, Goodwin JS. Emotional well-being predicts subsequent functional independence and survival. *J Am Geriatr Soc*. 2000;48(5):473-478.
62. Danner DD, Snowdon DA, Friesen WV. Positive emotions in early life and longevity: findings from the nun study. *J Pers Soc Psychol*. 2001;80(5):804-813.
63. Muldner H, Zoller M. Antidepressant effect of a Hypericum extract standardized to an active hypericin complex [in German]. *Arzneimittelforschung*. 1984;34(8):918-920.
64. Erdelmeier CA. Hyperforin, possibly the major non-nitrogenous secondary metabolite of *Hypericum perforatum* L. *Pharmacopsychiatry*. 1998;31(Suppl 1):2-6.
65. Vohora DS, Mishra LC. Alzheimer's disease. In: Mishra LC, ed. *Scientific Basis for Ayurvedic Therapies*. Boca Raton, FL: CRC Press; 2004:411-426.
66. Zhang ZJ, Chen HY, Yip KC, Ng R, Wong VT. The effectiveness and safety of acupuncture therapy in depressive disorders: systematic review and meta-analysis. *J Affect Disord*. 2010;124(1-2):9-21.
67. Zhang ZJ, Wang XY, Jin GX, Yao SM. The involvement of serotonergic mechanisms in acupuncture acceleration of the response to paroxetine in patients with major depressive disorder. Abstract presented at: Annual meeting of the Society for Neuroscience; November 2008; Washington, DC.
68. Park J, Hopwood V, White AR, Ernst E. Effectiveness of acupuncture for stroke: a systematic review. *J Neurol*. 2001;248(7):558-563.
69. Wu HM, Tang JL, Lin XP, et al. Acupuncture for stroke rehabilitation. *Cochrane Database Syst Rev*. Jul 2006;(3):CD004131.
70. Shifflet SC. Does acupuncture work for stroke rehabilitation: what do recent clinical trials really show? *Top Stroke Rehabil*. 2007;14(4):40-58.
71. Xie Y, Wang L, He J, Wu T. Acupuncture for dysphagia in acute stroke. *Cochrane Database Syst Rev*. Jul 2008;(3):CD006076.
72. Paolucci S. Epidemiology and treatment of post-stroke depression. *Neuropsychiatr Dis Treat*. 2008;4(1):145-154

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