

BRAIN-BODY MEDICINE & HEALTH OUTCOMES

B Sivaprakash *

ABSTRACT

Mental functioning is fundamentally interconnected with physical and social functioning and health outcomes. For example, depression is a risk factor for cancer and heart diseases. There is also evidence that depression predicts the incidence of heart disease. People suffering from chronic physical conditions have a greater probability of developing mental disorders such as depression. Research has confirmed that mental & physical comorbidity results in poorer health outcome.

Psychosomatic medicine seeks to promote and advance the scientific understanding and integration of biological, psychological, behavioral and social factors in human health and disease, and to foster the application of this understanding in health care. Related fields include mind-body medicine, behavioral medicine, integrative medicine, and health psychology.

It is well-established that the mind is an expression of neural activity within the brain. Thus, the influence of the mind on physical health can only be mediated through physiological pathways connecting the brain with other organ systems. The new field of brain-body medicine focuses on interactions between the brain, peripheral pathways and bodily end-organs. Bi-directional brain-body pathways can be thought of as the mechanistic substrate that mediates the relationship between emotions, stress and physical health. The brain interacts with the other organ systems through three physiological systems: the autonomic nervous system, the neuroendocrine pathway, and the neuro-immune pathway. Recent research in the field of brain-body medicine shows that pathways connecting the prefrontal cortex, limbic system, hypothalamus & brainstem centers have a profound impact on the autonomic nervous system, the endocrine system, and the immune system, resulting in diverse effects on systemic health. Such research has been facilitated by tremendous advances in neuroimaging techniques such as functional magnetic resonance imaging & positron emission tomography, along with the ability to simultaneously measure peripheral physiological processes.

In addition, mental health influences overall health through the health behaviour / lifestyle pathway. The term health behaviour covers a range of activities, such as eating sensibly, getting regular exercise and adequate sleep, avoiding smoking, and adhering to medical therapies.

The practical implications of research findings from psychosomatic medicine & brain-body medicine can be conceptualized under three categories: knowledge, attitude & practices. Acquisition of new scientific knowledge pertaining to brain-body pathways & the health behaviour pathways lays the foundation for positive changes in attitude & health care practice. Many physicians & other health care professionals have traditionally viewed the psychosomatic concept with skepticism. Modern research in brain-body medicine has an immense potential to change this unfavorable attitude. Demonstration of an unequivocal biological basis for the impact of the mind on overall health will strengthen the biopsychosocial model of disease & radically change the way in which health care is provided. Research findings from psychosomatic medicine & brain-body medicine may serve to improve health care practices. Addressing mental health issues while caring for patients with physical disease can improve quality of patient care & overall health outcomes. Therefore mental health care needs to be integrated with physical health care to achieve holistic care. Mental health screening of patients with long-term medical conditions such as diabetes & heart disease is a practical measure that can serve to detect stress & psychiatric comorbidity. Research indicates that screening for and managing stress & mental health problems in medical patients is likely to improve health outcomes.

* Dr. Sivaprakash B, MD , Professor, Department of Psychiatry
Mahatma Gandhi Medical College & Research Institute, Pondicherry, India
Email: drprakashb@hotmail.com