

## Psychosomatics: Exploring the Role of the Mind-Body Connection in Causing Physical Illnesses

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### Introduction

Psychosomatics has been described as the connection of mind-body relations to disease causation by different scholars. This branch of medicine has witnessed intense research to prove the proclamation of healing through alteration of the disease progression and healing processes by influencing the activity of the brain such as mood and perception. The art of healing through the mind and body relation, or rather the connection of body disease to mind orientation originated from the Greek words 'Psych' meaning mind and 'somaticos' meaning body. This follows the practice of two Persian psychologist

physicians, Ahmed IbnSahl al-Blkhi and HalyAbbas (2015), who developed an early model of illness that implicated the interaction between the body and mind in disease development and progression [1]. Therefore, any illness that has a mind or emotional origin has been termed as a psychosomatic illness. By mind or emotional origin, the emotional stress that people experience in their everyday life, destructive thoughts are referred [2].

There are some factors that are considered to contribute to individual causation of disease in the life of human beings. These are the factors that are put in the spotlight when it comes to the remedy of disease through psychosomatic medicine. These factors include life events and allostatic load of an individual which points towards the developmental stages that one went through and their experiences while they passed those stages, for instance, poor health after a stressful upbringing has been a common observation; health attitude and behaviors also play a key role in the development of disease as it is linked to the nutrition and nurturing of the body at cellular level; Social support coupled with the psychological wellbeing of an individual; spirituality aspect of one's life is important in that religious following has a

favorable effect on survival that does not have any relationship with behavioral factors, negativity and degree of social support [3].

Further significant scientific evidence suggests that trauma/Post-traumatic stress disorder leaves traces on an individual's mind and body. Trauma has a significant impact on an individual at a physiological level. Among of all the psychiatric disorders, posttraumatic stress disorder (PTSD) is the one with the strongest relationship with somatization and particularly medically unexplained pain. An increasing body of evidence demonstrates how the increased allostatic load associated with PTSD is associated with a significant body of physical morbidity in the form of chronic musculoskeletal pain, hypertension, hyperlipidaemia, obesity and cardiovascular disease. Increasing amount of research suggests that stress caused due to traumatic events can impact an individual's physical and mental wellbeing negatively [4]. Another meta-analysis that systematically examined the association of reported psychological trauma and PTSD with functional somatic syndromes, found that individuals who reported exposure to trauma were 2.7 times more likely to have functional somatic syndrome [5].

There exist a set of principles of psychosomatic integration into the medical field. These were put forth by a prominent medical doctor, Dr. Cleghorn in the late 1900s, borrowing from the scientists of then, who were great enthusiasts of this practice. In his paper, he lists these four principles to be relation of endocrinology and neurophysiology to stress; application of psychoanalytic formulations to the understanding of illness; development of social sciences such as anthropology with respect to the emotional life of human beings; and the application of epidemiological techniques to the understanding of incidence of disease and their causes [6]. This paper will not illustrate deeper into these principles, but rather discuss the recent developments in psychosomatics as an upcoming field in medical practice. This article will, therefore, review the research articles that have explored the application of psychosomatics in neurology, cardiology, nephrology, immunology, and dermatology.

## Material and Methods

For this systematic review, PubMed and Web of science were searched for studies about psychosomatics in relations to neurology, cardiology, immunology, urology and dermatology using the keywords "Psychosomatics in neurology", "Psychosomatics in cardiology", "Psychosomatics in immunology", "Psychosomatics in urology", and "Psychosomatics in dermatology". In total there resulted in 48, 728 articles about the topic in all the databases searched of which 24, 800 articles were removed since they were duplicates. In the selection process, articles with cross-sectional studies, observation and longitudinal study designs across all age groups published from the earliest available records from 1940 to January 2020 were included. Therefore, based on abstract and title search, 25 papers were included in the review.

## Results and Discussion

Twenty five selected articles used for this systematic review showing the application of psychosomatics in medicine and disease management, as they presented the most relevant information pertaining to psychosomatic practices in medicine.

### *Psychosomatics in Neurology*

Numerous types of diseases affect the brain, spine, and nerves that connect to and from them. These diseases have been enumerated to be over 600, and they include epilepsy, dementia as well as tumors (Neurological Disorders). Some of the studies pertaining to the application of psychosomatics in neurology include clinical trials that have been conducted in recent years about the effect of massage therapy on psychological somatic ailments such as pain, anxiety, and depression. For instance, a random controlled trial conducted by Ahmad indicated that massage with one of the traditional oils had a significant effect on the subject with an ailing leg compared to the control drug in the trial [6]. Another clinical trial performed on subjects with post-stroke hemiplegia showed that the patients had a near-total function gain and independent walking as well as a more

positive social behavior compared to those treated with the control drug [7]. When the same was applied to cerebral palsy subjects, the massage enabled them to achieve an enhanced hip range of motion, gross motor function, and better cognitive performance [8].

In psychology, a study on the adaptation of psychological models in treating psychosomatic disorder noted that people displayed certain characteristics involuntarily while coping with their diseases. From a psychological perspective, these coping techniques could be cognitive such as confusion, emotional such as suppression of the emotions or behavioral such as retreat as was identified with people suffering from neurosis [9]. And in that case quite difficult to deal with using conventional psychological interventions such as the recommendation of social support groups, and therefore through the knowledge of psychosomatics, it has been made possible to understand these symptoms and treated accordingly, as pointed out by the study results.

One aspect of neurology where psychosomatics apply is sleep-related disorders which are those that result when one is unable to sleep thus causing a significant effect on the victim's quality of life and the ability to function properly. Some examples of sleep disorders include insomnia which is the inability to fall or stay asleep during the night leading to a non-resting sleep which eventually has a great effect on the mood and energy of the victim during the day. Another example of sleep disorder is daytime somnolence which means to sleep excessively during the day and not have enough energy to participate in family gatherings or social events that are taking place during the day even after a long night of sleep. Some of these sleep disorders can be managed by primary care physicians, neurologists or psychiatrists with special knowledge in sleep medicine [10]. Sleep disorders are considered psychosomatic because the unrest of the mind results in affliction on the body.

Depression and anxiety are disorders that have been associated with some grave diseases with an unexplainable physical origin. Statistically, according to a cross-sectional study on 8580 patients from 22 European countries where their levels of depression were examined

through the hospital and anxiety scale, women suffered more from anxiety than men. This was shown by up to 35% of the study population suffering from depression and anxiety being men and up to 62.55% being women [11]. This could explain why more women than men suffer from diseases such as coronary heart disease and urological disorders with a psychosocial origin.

Pain as a factor of the neurological system, its levels can be controlled through emotional regulation which is a set of cognitive and emotional processes that aid in maintaining emotions at a stable state. A review of literature connecting chronic pain and emotional regulation, as a branch of psychosomatics, established that being a psychological factor, consideration of emotional regulation when investigating chronic pain can be very helpful when trying to explain the etiology and individual differences in the development of chronic pain among patients [12].

#### *Psychosomatics in Cardiology*

A position paper by Christian Albus and colleagues, as members of the German Cardiac Society, indicate a recent acknowledgment of the psychosocial factors in cardiovascular diseases by the affected patients and healthcare providers [13]. The most common psychosocial factors that show comorbidity with cardiovascular disorders include socioeconomic status, chronic stress, depression, anxiety, and limited social support together with certain personality traits such as hostility. A cross-sectional study on 7589 patients from 24 European countries established that the greatest psychosocial risk factors for coronary heart disease were depression and anxiety is seen in about 265 of the participants with more women suffering than men [14].

#### *Psychosomatics in Immunology*

The immune system plays a very important part in the proper functioning of the body including but not limited to protection against invading pathogenic organisms and clearing of aged cells. In a disease state, the activity of the immune cells can mediate behavior abnormalities such as fatigue and depression-like symptoms [15]. Similarly, people with autoimmune

disorders have been known to display depression-like symptoms such as low quality of life leading to poor health in the long run. Another disease that has been associated with psychosocial origins is psoriasis which is a disorder that occurs most of the time among psychiatric patients. It is characterized by chronic body inflammation. Through observation of victims, it was realized that psychosocial distress was able to trigger flares of psoriasis due to the upregulation of cortisol that results from the failure of the immunosuppressive mechanisms during stressful instances [16].

#### *Psychosomatics in Urology*

Most urinary disorders have been attributed to psychological malfunctions such as fear and depression. For instance, in specialist urology clinics, almost 70% of the patients suffering from chronic diseases of the urinary system such as recurrent urinary tract infection, chronic pelvic pain syndrome and post-prostatectomy incontinence have in one way or another a psychological disorder. This is so because most times, the origin of such diseases cannot be explained through physical findings, for example, a laboratory report showing no organism isolation in a recurrent urinary tract infection [17]. A case study of a patient who opted for the removal of the bladder due to chronically suffering from symptoms of pollakiuria and overactive bladder illustrates the importance of cross-departmental collaboration during patient management. This is because there were no indications of surgery and as there was no physically evidential cause of the problem [18]. The essay further gives insight into the importance of simultaneous medical and psychosocial diagnosis during the management of patients with physical complaints whose origins cannot be explained by physical evidential diagnosis.

A study on urinary incontinence among women established a relationship between psychosomatics and the activity of the bladder. It was noted that urinary incontinence could result in shame and insecurity all summing up to stress and depression. Additionally, women who had urinary incontinence experienced episodes of anxiety and general fear of illness. These

patients were generalized to develop psychosomatic reactions depending on the severity of their urinary incontinence symptoms, this is based on the fact that micturition is a loop with cognitive conscious motor components and affective unconscious components [19]. Another study on the diagnostic criteria on psychosomatic disorders found some of the diseases had comorbidity with stress, depression and mood problems. Some of the diseases that were examined with which positive results were obtained include alexithymia, anorexia nervosa, hypertension and agoraphobia without panic [20]. This study illustrates the importance of treating psychosomatic disorders as the other somatic diseases are being managed. This could help in speeding up the recovery process as put across by the findings of this study.

#### *Psychosomatics in Dermatology*

Psychosomatics is applied in dermatology to manage those afflictions whose causes cannot be explained through laboratory findings or anatomical examinations. In most cases, they are caused by psychosocial circumstances which should be considered when contemplating treatment and management regimens [21]. Generally, psych dermatological disorders can be defined as conditions that result from the interaction between the mind and skin. They can be categorized into three namely psychophysiological disorders, psychiatric disorders with dermatologic symptoms and dermatologic disorders with psychiatric symptoms [22].

In an estimate, about one in 3 patients suffering from dermatological disorders have an etiology in psychosocial factors such as anxiety. It is therefore of great significance to consider associated emotional factors while managing dermatological disorders [23]. This, therefore, invites the use psychosomatic techniques in the treatment of dermatological disorders such as itchiness or skin pain, dysfunctional habits including scratching, acceleration of healing of skin disorders as well as alternating cognitive and emotional dysfunction patterns related to skin disorders. Some of these techniques include hypnotherapy and meditation [24]. Hypnotherapy

is the use of trance to access parts of the brain that are otherwise inaccessible in a conscious state. It can be applied medically to reduce the intensity of an itch or to reduce the instances and urges to scratch, therefore, easing the pain that results from it. Itchiness, for instance, is a skin disease that is caused by a variety of systemic, neurological and psychogenic factors or even drug intake. Itchiness can be chronic when it has multiple origins and can result in itch lesions including chronic prurigo [25]. Treatment and management, therefore, require the factoring of the other origins other than microbial causes including the psychological state of the patient in relation to the presenting external and internal environmental factors.

### Conclusion and Recommendation

It is important to note the significant improvements that have been witnessed in the field of psychosomatics. Through the laborious efforts of researchers, there has been great development on how we see diseases and their healing processes. It is through this that some of the alternative treatments and interventions have been developed. The significant contributions of psychosomatics to the explanation of the relationship between stress, depression, emotions and mood disorders and diseases such as neurological illnesses, cardiovascular illnesses, and endocrinal disorders cannot go unnoticed. With this new understanding of how emotions and psychology impacts the body, there has to be a holistic approach towards treating various illnesses that has any psychological roots. There is a need for further research using promising therapies like hypnotherapy, emotional freedom techniques, regression therapy etc. for treating psychosomatic causes. Even though modern medicine has advanced immensely; we still have a long way to go until an approach that includes understanding and treating illnesses at all the levels viz: physical, emotional and mentalis developed.

### Declaration of Competing Interest

There are no conflicts of interest related to the submitted paper.

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