



IJSRM

INTERNATIONAL JOURNAL OF SCIENCE AND RESEARCH METHODOLOGY

An Official Publication of Human Journals



Human Journals

Review Article

October 2021 Vol.:19, Issue:4

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Can Our Mind Create Diseases or It's Only in Our Head?



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Submitted: 24 September 2021

Accepted: 30 September 2021

Published: 30 October 2021



HUMAN JOURNALS

www.ijsrm.humanjournals.com

Keywords: Psychosomatic disorders, Psyche, Soma, Emotional factors, Biopsychosocial model

ABSTRACT

Background: The term “psychosomatic disorder” is especially used to mean “a physical disorder which is thought to be caused or created worse by psychological factors” The term is additionally used when psychological factors cause physical symptoms however there is the absence of physical unwellness. Psychosomatic disorder is also known as Psychophysiological Disorder. It is mainly misunderstood by the layperson as a disorder of “only in your head” for many decades. **Purpose:** The present review highlights the important aspects of psychosomatic disorder which are affecting normal body functioning and suggests people understand that a person’s medical condition does not solely depend on biological factors but also on psychological and social factors. **Method:** Reviewed different journals from various sources to obtain information on this topic. **Findings:** A thorough literature review explaining the different characteristics of disorder such as its symptoms, causes, types, treatment. **Conclusion:** The review gives a brief idea about the Psychosomatic order and how to tackle or prevent its symptoms by using pharmacological and non-pharmacological treatment.

INTRODUCTION:

The term Psychosomatic consists of two Greek words “psyche” (mind) and “soma” (body). A mental disorder may be a sickness that involves both mind and body [1]. It might have mild to severe effects in an individual’s life, from interfering with the normal body functioning to causing physical or mental disability. The term” Psychosomatic” was first used by German psychiatrist Heinroth in 1818 and these are the consequences of harmful effects that result from psychic influences on the organic control of tissue[2].

We often hear that psychology plays an important role in curing sickness, and even doctors trust this. So, if our healthy psychological state could help in obtaining relief, a poor psychological state may also influence our physical well-being [3]. But the psychosomatic patient does not ask themselves about their suffering: it falls within the body itself, in isolation from any relationship with the psychological. That is why psychosomatic patients move from one treatment to a different one without finding a proper answer.

When we think about health-related issues, only biological factors come to our mind as many of us think that sickness or unhealthiness are only related to biological factors, but the psychological and social factors also play some roles. This is explained by the Biopsychosocial model which gives the interconnection between these three factors[4].

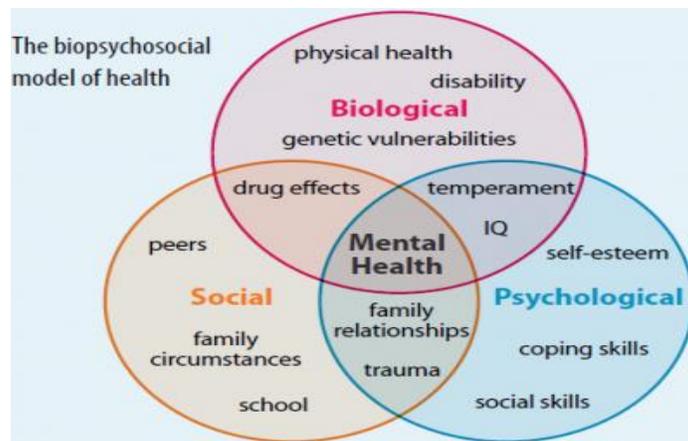


Figure No.1: Diagram of the Biopsychosocial model

Some psychological factor like anxiety, depression also causes some serious health conditions, such as

1. **Heart Attack-** Mental stress hurts a person's heart as unmanaged stress can lead to an increase in blood pressure, arterial damage, heart arrhythmias, platelet reactivity, decreased heart variability, and increased levels of C-reactive protein or CRP, which comes under the risk factors for cardiovascular disease. Depression can also increase the risk of an adverse cardiac event such as a heart attack or clotting of blood in people suffering from cardiovascular disease [5].

2. **Cancer:** People with psychological disorders such as clinical depression and bipolar disorder have a higher risk of developing certain cancers including brain and lung cancer at younger ages. Though, other etiological factors are also responsible for the development of cancer in people like psychological stress which affects both ability of tumor's growth and their ability to invade, thereby worsening the state of cancer [6].

3. **Covid-19:** It is an infectious disease caused by a family of viruses that directly affects the respiratory system and intestine in the human body and animals [7]. The symptoms are very similar to common viral infections such as fever, cold, cough, and chest pain. Normal people with coughs and colds are the ones who are hitting the panic button. Plus, people who are feeling overwhelmed with the fear of the virus. As we all know, two things are spreading faster than the COVID 19 Virus, Fear of Virus, and the fake news about the same.

“DO I HAVE CORONAVIRUS, OR IS IT ALL IN MY HEAD”

Don't let the mind jump straight to the conclusion that 'oh God! I have coronavirus'. You might be having a panic attack. Feeling anxious amidst the COVID-19 pandemic is to be expected, and this anxiousness starts creating new imaginary symptoms which can cause a dangerous cycle of a panic attack.

What are “Psyche” and “Soma”? How do they interlink with each other?

There are two concepts to elucidate the connection between “Psyche” and “Soma”.

1- Specific hypothesis

This hypothesis suggests that specific emotions, conflicts, and personality constellations led to specific cell and tissue damage.

If a selected stimulus, emotional conflict, or stress occurred, it expressed itself during a specific response or illness during a genetically predetermined organ.

After ANS help in suppressing the stress, however, the sympathetic responses may remain alert for heightened aggression or flight or parasympathetic nervous system responses could also be altered for increased vegetative activity. Such prolonged alertness can also participate in the production of physiological disorders and eventually the pathology of organs or viscera. E.g. constipation, peptic ulcer [8].

2 - Non-specific hypothesis

This hypothesis suggests that generalized stress created the preconditions for a variety of not necessarily pre-existing disorders. Consistent with this hypothesis four sorts of reactions takes place due to stress:

- a. The Neurotic: In this alert signal of hysteria is too great and the defense fails.
- b. The Psychotic: On which alarm could be misperceived or maybe ignored.
- c. Healthy Normal: On which alertness is followed by a defense action [8].
- d. The Psychosomatic: In this defense through the psyche becomes ineffective and alertness is translated into somatic symptoms causing changes in body tissue [9].

Types of Psychosomatic Disorders -

Based on the fundamental cause of the stress and the way how it is characterizing itself, the psychosomatic disorder is assessed into different types. This includes-

1. **Undifferentiated somatoform disorder:** - It is defined as one blunt medical symptom with a minimum duration of six months, but it does not meet the diagnostic threshold for somatization disorder. This disorder is less limiting. this patient experiences one or more symptoms [10].

2. **Somatization disorder:** This disorder is characterized by the presence of physical symptoms without any physical cause. It more frequently occurs in females as compared to males. During this condition, an individual experiences symptom that doesn't have any references to a serious medical condition such as frequent headaches followed by diarrhea [11,10].

3. **Unspecified somatoform disorder:** -It requires merely a medically unexplained symptom, which does not have to be accompanied by significant hinder and patients falsely start to believe that they are pregnant because of different signs that are shown when a lady is pregnant which are termination of menstruation, fetal movement, labor pains, nausea, etc [12,10].

4. **Conversion disorder:** - Initially, an individual who does not have any medical illness but suddenly begins to experience different neurological symptoms like seizures, which affect both movement and senses of the body, this condition is understood as conversion disorder. Symptoms of conversion disorder include speech defect, sudden illness attacks or panic attacks, fatigue, ptosis or blepharoptosis, numbness in body parts, and vision problems [13,10].

5. **Illness anxiety disorder (Hypochondriasis):** - This is often a condition during which the Patients feel that they have a dangerous illness condition that is going to cause them major harm to their body. They often visit multiple doctors for consultation and to prove it [14,10].

6. **Pain disorder:** In these, an individual experiences severe pain in any part or joint of the body, which could last for a few days to many months without any physical cause or presence of symptom. The instance includes different types of headaches like tension headache, migraine headache, back pain, etc [11]. Here the symptom which features a major contribution to this disorder is pain and psychological factors contribute to its onset, severity, and continuation.

7. **Body dysmorphic disorder:** An individual gets stressed about how they look and the appearance of their body like a person severely suffering from anorexia [11].

Classification of Psychosomatic disorder

Psychosomatic disorder is often classified into three forms.

Form-1 It includes cerebral and medical illness.

Form-2 It includes a Psychiatric issue that is an immediate result of medical illness or its treatment.

Form-3 It includes somatoform disorder. These are psychiatric disorder which is displayed through physical issues [15].

What are the Symptoms of Psychosomatic Disorder?

Now we all know what psychosomatic disorders are and how psychological factors affect them. Let's discuss its symptoms It comprises of

1. Some common symptoms that contribute to this particular condition are fatigue or weakness-specific sensations, like pain or shortness of breath [16].

2. Symptoms that are not associated with any medical condition like cancer or heart disease but more significant to what's expected usually [16].

3. Person starts overthinking about the thoughts, feelings, or behavior-related or concerned to particularly those symptoms, which may further cause significant problems and make it difficult in functioning [16]. These thoughts, feelings, and behavior include:

- Constantly worrying about the possible illness.
- Viewing normal general, physical sensations as a sign of severe physical illness [17].
- Fearing that symptoms can be serious, even when there is no evidence/sign.
- Must be thinking that physical sensations are life-threatening or harmful to them [16].
- Also feels that medical evaluation and treatment have not been proper to cure them [16].
- Fearing that any type of physical activity may cause damage to their body. Check the body repeatedly or regularly to seek out any sort of abnormalities.
- Being sensitive to medication adverse effects or unresponsive to any sort of treatment.
- Also have more extreme disablement than usually expected from a medical condition.

Instead of having the above physical specific symptoms, one can also experience the way they react or interpret the symptoms and the way these symptoms cause an impact in their daily routine.

1. Avoiding social interactions or gathering,

2. Avoid repeatedly checking yourself in a mirror,

3. Seeking reassurance from others about your looks

Symptoms of somatization usually appear like neurological problems, and these can include:

1. Blindness
2. Difficulty in swallowing
3. Loss of balance or unsteadiness
4. Inability to speak (generally called Aphasia)
5. Loss of sensation
6. Paralysis or weakness
7. Seizures
8. Urinary retention

Symptoms that may indicate a significant or life-threatening condition [15]

1. Changes in eating habits, such as overeating or loss of appetite
2. Difficulty in concentrating or remembering things
3. Fatigue or lack of energy
4. Feelings of hopelessness, guilt, or worthlessness
5. Irritability and restlessness
6. Loss of interest in activities and hobbies including sex
7. Persistent feelings of sadness or emptiness
8. Sleep problems like insomnia or excessive sleeping

Etiology/ causes of Psychosomatic Disorder

It is still not clear how these mental conditions like depression, anxiety, and stress trigger physical symptoms. However, understanding the relationship between the psyche and the symptoms of these diseases researched by various scientists is still happening.

When an individual feels anxiety, depression, and stress, these cause an increase in nerve impulse activity and it is one of the contributing factors for the physical symptoms concluded by some reports. Sometimes, secretion of adrenaline and epinephrine (because of anxiety) also act as triggering agents of physical symptoms.

Parameters that Influences the psychological factors

Influences of psychological factors

If a person is suffering from some familiar conditions like hypertension, fever, diabetics, etc., then psychological factors like anxiety and stress will influence the condition in any one of the subsequent ways mentioned below [13]:-

- 1. Stress altering time:** The period required either to cure or counteract the general medical condition can be altered by stress or anxiety. For instance, when a person is angry, it extends the duration of high blood pressure as anger causes secretion of one of the stress hormones adrenaline, which makes the heart beat faster and causes a rise in blood pressure [18].
- 2. Disruption of stress:** Treatment provided for the general medical condition might disrupt by psychological factors and create problems.
- 3. Exacerbation:** Factors such as stress and anxiety worsen the medical condition symptoms thereby increasing its severity.
- 4. Generation of risk factors:** The stress component can also generate and cause many other risk factors that are associated with health issues like diabetes, headache, etc [11].

Often, one of the main causes of this disorder is Emotional stress. So, now it is crystal clear to us how the state of mind can affect the body and produce symptoms. What we do not know is how to treat this disorder yet. This condition is not the physical one, unlike the symptoms. There

should be a balance between emotional and physical treatment for the affected people. These are some options that are highly recommended for treatment of the psychosomatic disorders [10].

How to Treat Psychosomatic Disorder?

The treatment plan is generally categorized into two parts:

- I. Non- Pharmacological therapy
- II. Pharmacological therapy

Following therapy are discussed below.

I. Non- Pharmacological therapy - Patients suffering from psychosomatic diseases respond to a combination of therapies such as yoga, exercises, psychoanalysis, and behavior therapy.

A. Yoga: Yoga functions like a self-soothing technique that alters the stress response system, by helping to “calm” and “quiet” down the nervous system [19]. As it reduces the SNS and increases the PNS, which results in a reduced heart rate and blood pressure, the brain takes the cues from the body, so when the body is calming down, the brain gets the message that all is well. In this manner, the mental benefits of yoga are witnessed with the reduction of stress by decreasing the levels of cortisol (stress hormone) in the body [20].

B. Meditation: It brings the body into a rest-and-digest mode. As it counterbalances our sympathetic nervous system, restoring the body to a state of calm and activating regular functions such as the secretion of saliva in the mouth or digestive enzymes in the stomach [21].

C. Hypnosis: Hypnosis is also referred to as hypnotherapy in this there is a decrease in activity in a specific area of the brain called the dorsal anterior cingulate [22]. “In hypnosis, the patient gets so engaged that they stop worrying about anything else. They can easily or strongly focus on a particular memory, idea, feeling, or sensation while obstructing all the distractions.

D. Cognitive Behavior Therapy: This is a form of psychotherapy that focuses on the examination of the patient’s thoughts and beliefs that impacts their mental condition. It helps to overcome those feelings of the patient that lead to an alteration in their behavior& thoughts. It

also helps to treat patients' problems and boosts their happiness by modifying dysfunctional emotions, behaviors, and thoughts [23,11].

E. Psychotherapy: This is also known as talking treatment. Here, the doctor and the patient have an interaction about the mental status and the patient's history like what traumatic events they have experienced in their past. This interaction is helpful for the therapist to analyze the mental illness that the patient is suffering from and to provide the appropriate therapy [11].

F. Psychoanalysis: This therapy is used to treat depression and anxiety disorder. It is a lengthy process that includes two to five sessions per week for several years. The psychoanalyst will take a note of the patient's childhood memories and dreams[11].

G. Group psychotherapy: It involves a group of 5 to 15 patients under a trained psychiatrist. Here they are given the practice to attain a normal balanced attitude. This therapy is for patients who have difficulty in balancing relationships, also suffering from medical illness[11].

H. Electroconvulsive therapy (ECT): This therapy is mainly provided for patients who are suffering from severe depression and other mental conditions [11,24]. It involves the transition of stable electric current through the brain, to trigger its activity to relieve the symptoms of mental illness.

I. Abreaction therapy: This therapy is not widely used as it requires a longer duration when compared to other therapies and it is used to relieve the emotions associated with traumatic events.

J. Acupuncture therapy: The principle of this therapy is based on stimulating the points in the body by the use of needles, to rectify irregularities in the energy flow through channels known as meridians. This is widely used to treat anxiety and depression.

K. Psychosomatic physiotherapy: This therapy helps to focus on attaining better health for the patient by regulating the emotional balance in the mind.

L. Osteopathy: This therapy is based to reduce stress by the employment of hand pressure (massage). The objective of this manual medicine is to provide a positive response in different

systems of the body such as the nervous, circulatory, and lymphatic systems. It helps to reduce anxiety and pain and provides an opportunity for the patient's body to heal itself.

M. Lifestyle changes: It includes daily routine changes like limiting caffeine intake, having a balanced diet, intake of vitamin supplements, and avoiding alcohol and smoking to relieve anxiety to a particular extent [11].

PHARMACOTHERAPY

Pharmacological treatment of psychosomatic disorders includes the following:

1. Anti-anxiety drugs

These medications help to reduce the symptoms of anxiety such as panic attacks or extreme fear and worry [25]. Some examples are given below:

- Benzodiazepines like Diazepam (The most common anti-anxiety medications)
- Alprazolam

2. Antidepressants drugs -

It is a category of drug which is used to prevent or treat depression. The most used antidepressant drugs include SSRIs or selective serotonin reuptake inhibitors, MAOIs, or monoamine oxidase inhibitors[26].

SSRIs:

- fluvoxamine (Faverin)
- citalopram (Cipramil)

Monoaminoxidase inhibitors:

- Phenzelzine
- Isocarboxazid

3. Tricyclic antidepressants

A class of drugs is used to prevent or treat depression [27]. Examples of Tricyclic antidepressants include:

- Amitriptyline – this drug is helpful to overcome panic attacks, generalized anxiety, post-traumatic stress disorder (PTSD), and depression [28].
- Nortriptyline - this drug is widely recommended for treating neuropathic pain [29].

4. Sedatives-hypnotics

Sedative-hypnotics are a class of drugs that cause CNS depressants and induce sedation, sleep, and unconsciousness with increasing doses [30]. Some examples are given below:

- Benzodiazepines
- Melatonin agonists.
- Barbiturates

Management of psychosomatic disorders

Various treatment modalities which tried out are:

a. Self-observation: It helps individuals to become more aware of how they respond to problems & situations. Patients must keep a record of how they responded to challenging or stressful events that are occurring every day [31].

b. Relaxation training: Engaging patients into relaxation regularly responds by stopping the negative effects of stress and bringing back the body and mind into a state of equilibrium. This response of relaxation can help people to counteract the toxic effects of chronic stress by reducing the breathing rate, relaxing the muscles, and reducing the blood pressure. Relaxation skills can be extremely useful in overcoming stress [31].

c. Biofeedback: Biofeedback teaches the patient to recognize the physical signs and symptoms of psychological factors such as stress and anxiety. Such as increased pulse, blood heat, and muscle tension. During biofeedback, the patient is connected to various electrical sensors that

help them to receive information about their body. This feedback helps patients to form subtle changes in their body, like relaxing certain muscles, to realize the results they need [32].

CONCLUSION

In day-to-day life psychological stress is one of the major problems among human beings. In this review, we tried to explain the relationship between psychosomatic disorders the physiological factors like stress, anxiety, and depression by providing examples of different disorders such as heart attack, cancer, and coronavirus. Following this, we explained different types, symptoms, classification, and lastly, how to treat this type of disorder by providing different pharmacological and non-pharmacological therapies.

REFERENCES

1. Dr. Hayley Willacy(30th June). *Psychosomatic Disorders*.<https://patient.info/mental-health/psychosomatic-disorders>
2. PeeyushShivhare, Syed Parveez Ali (July 29, 2017). *Oral Psychosomatic Disorders*. <https://www.lap-publishing.com/catalog/details/store/gb/book/978-3-659-75399-2/oral-psychosomatic-disorders>
3. KushneetKukreja(8th August 2019). *Psychosomatic Disorder: Causes, Symptoms, Types, And Treatments*. <https://www.stylecraze.com/articles/psychosomatic-disorder-causes-symptoms-treatments>
4. (September 25, 2013). *The Biopsychosocial model explained*. <https://savvywillingandable.wordpress.com/2013/09/25/the-biopsychosocial-model-explained/>
5. Leo Pozuelo (April29,2019).*Depression & Heart Disease*. <https://my.clevelandclinic.org/health/diseases/16917-depression--heart-disease>
6. Jeanie Lerche Davis (6th October 2004). *Clinical Depression, Bipolar Disorder Raise Cancer Risk at Younger Age*. <https://www.webmd.com/mental-health/news/20041006/mental-health-linked-to-cancer-risk>
7. *What is coronavirus? The different types of coronaviruses*. (July 7, 2020). <https://coronavirusexplained.ukri.org/en/article/cad0003/>
8. Hifsa Nisar, Rahul Srivastava. The fundamental concept of psychosomatic disorders: a review. *International Journal of Contemporary Medicine Surgery and Radiology*. 2018;3(1):12-18.
9. Ananth Chaams. *MY LD*. <https://www.scribd.com/document/323333399/MY-LD>
10. KushneetKukreja(8th August 2019). *Psychosomatic Disorder: Causes, Symptoms, Types, And Treatments*.<https://www.stylecraze.com/articles/psychosomatic-disorder-causes-symptoms-treatments/>
11. AfsanehKhetrapal (Feb 17, 2021). *Psychosomatic Disorders*. <https://www.news-medical.net/health/Psychosomatic-Disorders.aspx>
12. Heidemarie Haller, Holger Cramer, Medic, Romy Lauche, Dr.rer., Gustav Dobos (2015 Apr 17). *Somatoform Disorders and Medically Unexplained Symptoms in Primary Care*.<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4442550/>
13. Dr. Peter Hercules. *Psychosomatic Disorders*. <https://www.drpeterhercules.com/conditions/psychosomatic.phtml>
14. Brenda Goodman, MA (November 17, 2020). *Somatic Symptom and Related Disorders*.<https://www.webmd.com/mental-health/somatoform-disorders-symptoms-types-treatment>
15. Healthgrades Editorial Staff (November 30, 2020). *Psychosomatic Illness*. <https://www.healthgrades.com/right-care/mental-health-and-behavior/psychosomatic-illness>

16. Mayo clinic staff (May 08, 2018). *Somatic symptom disorder*. <http://web.archive.org/web/20210207150155/https://www.mayoclinic.org/diseases-conditions/somatic-symptom-disorder/symptoms-causes/syc-20377776>
17. *Individuals with somatic symptom disorders?* .<http://myday.uz/files/assassin-s-cdo/3592d0-individuals-with-somatic-symptom-disorders-%3F>
18. Alana Biggers, Jayne Leonard (December 5, 2019). *What is the link between anxiety and high blood pressure?*<https://www.medicalnewstoday.com/articles/327212>
19. “*Whole Health Holistic Wellness*” <https://midwestrecoveryandwellness.com/wellness/>
20. Jessica Migala (August 23,2017). *What Yoga does to your Brain*.<https://www.nbcnews.com/better/health/what-yoga-does-your-brain-ncna794531>
21. Ram (13 Nov). *What is Meditation? Definition, Goal, Benefits and How-to*. <https://www.arhantayoga.org/blog/scientifically-proven-long-term-health-benefits-of-meditation/>
22. Carl Zimmer (July 28, 2016). *In patients under hypnosis, scientists find distinctive patterns in the brain*. <https://www.statnews.com/2016/07/28/hypnosis-psychiatry-brain-activity/>
23. Pramod Kerkar (March 1, 2019). *Psychosomatic Pain: Types, Causes, Symptoms, Treatment, Alternative Therapies*. <https://www.epainassist.com/mental-health/psychosomatic-pain>
24. William McDonald, Laura Fochtmann (July 21019.). *What is Electroconvulsive therapy (ECT)?*.<https://www.psychiatry.org/patients-families/ect>
25. Zara Risoldi Cochrane, Ann Pietrangelo (January 29, 2019). *About Anxiolytics*. <https://www.healthline.com/health/anxiolytics>
26. Timothy J. Legg, Ph.D., Christian Nordqvist (February 16, 2018). *All about antidepressants*. <https://www.medicalnewstoday.com/articles/248320>
27. Marcia Purse, medically reviewed by Daniel B. Block (October 05, 2020). *Overview of Tricyclic Antidepressants Older-generation drugs still have their place in treatment*.<https://www.verywellmind.com/tricyclic-antidepressants-379652>
28. *Amitriptyline for pain and migraine* (September 16, 2020). <https://www.nhs.uk/medicines/amitriptyline-for-pain/>
29. Sheena Derry, corresponding author Philip J Wiffen, Dominic Aldington, R Andrew Moore, and Cochrane Pain, Palliative and Supportive Care Group (January 8, 2015). *Nortriptyline for neuropathic pain in adults*.<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6485407/>
30. *Sedative-hypnoticdrugs*(July 27, 2021).https://www.amboss.com/us/knowledge/Sedative-hypnotic_drugs
31. Hifsa Nisar, Rahul Srivastava. Fundamental concept of psychosomatic disorders: a review. International Journal of Contemporary Medicine Surgery and Radiology. 2018;3(1):12- 18
32. Huma Sheikh (July 21, 2021). *What Is Biofeedback?*.<https://www.verywellmind.com/what-is-biofeedback-2794875>