

## Understanding Role of Psychosocial Factors in Management of Hypertension - A Review Article

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### Abstract

Genetic and behavioral factors alone do not fully explain the development of hypertension, and there's growing evidence suggesting that psychosocial factors may play a significant role as well. Chronic stress exposure has been proposed as a risk factor for hypertension, and aspects such as occupational stress, stressful social environments, and low socioeconomic status have been extensively studied. Research on the mechanisms underlying the effects of stress on hypertension has primarily focused on cardiovascular reactivity, but the delayed recovery to pre-stress levels is increasingly being examined as another potential pathway.

The development of hypertension can be influenced by a person's unique constitutional makeup, whether inherited or acquired, along with various environmental factors, both internal and external. Homeopathic remedies take into account the genetic and constitutional characteristics of individuals, addressing the underlying causes of ailments, diathesis, and susceptibilities, thereby correcting internal imbalances and promoting healing.

Homeopathy adopts a holistic approach, focusing on the individual as a whole and stimulating the body's innate healing responses, resulting in an overall improvement in quality of life across all dimensions. This article reviews recent findings in each of these areas and discusses directions for future research.

**Keywords:** Hypertension, Stress, Homoeopathy, Constitution

### Introduction

Blood pressure is the force that circulating blood exerts on the walls of blood vessels as it moves throughout the body. When this pressure stays consistently elevated, the condition is referred to as hypertension.

Hypertension (HTN) is a rapidly pervasive condition found in various parts of the world. It leads to a range of chronic health issues in the human body, (1) often without noticeable symptoms, which is why it is frequently referred to as a silent killer.(2)

Hypertension is one of the seven psychosomatic diseases for which mental causes were proposed in the 1950s.(3) Studies conducted over the last decade have reported significant relationships between HTN and psychological factors such as anger, anxiety, and depression.

Causes of essential hypertension are still unknown. The intensity and duration of exposure to chronic stressors are presumed to be important determinants of risk. Effects of acute stressors on blood pressure (BP) have been demonstrated, but ongoing exposure to stress may be more plausibly linked to sustained BP elevations and hypertension incidence (4)

Homeopathy views humans as integrated beings, with both mind and body interconnected. It takes a holistic approach, assisting patients in adapting to environmental and psychosocial changes.

### Understanding role of different Psychosomatic factors on Hypertension

#### Stress

Excessive pressure on an individual, resulting in adverse reactions that affect them both mentally and physically, is termed "stress". Stress is understood as the perception of environmental demands that are thought to exceed one's ability to adapt to the situation(5)

The intensity and duration of exposure to stress is more closely associated with sustained BP elevations and the incidence of hypertension.(4)

Mimicking chronic stress by experimentally elevating glucocorticoids in the brain results in enhanced adrenocorticotrophic hormone (ACTH) responses.(8) It increases both baseline arterial blood pressure and the blood pressure and heart rate responses to an acute novel stressor(9), as demonstrated in numerous animal studies. There is extensive documentation supporting the role of psychosocial factors as the primary risk for hypertension (HTN).(4,11,12) Consequently, national HTN guidelines recommend psychosocial intervention as a strategy to prevent or delay the onset of HTN.(13,14,15)

### **Anger**

Anger is a fundamental emotion that can range from mild irritation to intense fury in response to feeling threatened or hurt. Anger if escalates, it can lead to devastating effects on the body, particularly on the heart.(6) It has been observed that even healthy individuals may experience a noticeable increase in blood pressure when they are angry.(7,16) Studies explain that anger is an arousing state, with feelings ranging from slight irritation to intense fury or rage.(17)

### **Social Isolation and Marital Stress**

Social relationships are vital sources of emotional and practical support, The absence which deprives individuals of these resources but can also be a significant source of stress itself. Acute episodes of marital conflict have shown to result in elevated blood pressure in laboratory studies.

A number of longitudinal studies have shown that high job strain is associated with increases in blood pressure and the development of hypertension.(19)

In general, marital stress seems to affect women more strongly than job stress (18)

### **Socioeconomic Status**

A cross-sectional analysis of 2,612 participants from 495 neighborhoods included in the Multi-Ethnic Study of Atherosclerosis (MESA) found that poorer conditions regarding the walking environment, availability of healthy foods, safety, and social cohesion were each associated with a greater likelihood of hypertension (20).

In many populations, hypertension is significantly more prevalent among economically disadvantaged groups, characterized by low income and limited educational opportunities. These behaviors contribute to the clustering of components that constitute metabolic syndrome, which prominently includes hypertension, obesity, and insulin resistance.(22,23)

Characteristics of low SES also include financial strain, inadequate housing conditions,elevated levels of chronic stress,uhealthy working conditions, which may involve repetitive physical tasks and a lack of job security or autonomy.(24,25)

### **Mechanisms Underlying the Stress-Hypertension Relationship**

The impact of stress on the development of hypertension is believed to involve a sympathetic nervous system response, in which release of catecholamines leads to increased heart rate, cardiac output, and BP. It may be repeated activation of this system, failure to return to resting levels following stressful events, failure to habituate to repeated stressors of the same type, responsible for the development of hypertension [21].

### **Clinical evidence and Research on role of psychosocial factors in Hypertension**

Nealey-Moore et al. studied cardiovascular reactivity to positive, neutral, and negative interactions among 114 young couples. Compared to positive and neutral discussions, negative discussions led to larger increases in blood pressure, heart rate, and cardiac output, as well as greater decreases in peripheral resistance and pre-ejection period.(22)

According to Rutledge (2009), among the known psychological factors that predispose individuals to develop hypertension, the ones with the strongest epidemiological evidence include anxiety(18,19,20)(, hostility, anger, (21 )Type A behavior pattern(21,22,27 ), and depression

### **Essential Hypertension as a Psychosomatic Disorder:**

Psychosomatic disorders are illnesses where the symptoms originate from a person's mental state rather than actual physiological causes.

Essential Hypertension is recognized as one of the seven psychosomatic diseases.

Research indicates that prolonged periods of depression, insomnia, stress, anxiety, or acute and intense mental trauma are also significant contributors to hypertension.

### **Role of Homoeopathy in management Hypertension from psychological point of view**

In homeopathy, the remedy is selected by evaluating the entirety of a person's symptoms and circumstances, including personality, behavior, fears, reactions to the environment

An individual's constitutional makeup, whether inherited or acquired, along with environmental influences—both internal and external—can predispose a person to develop hypertension. Therefore, the combination of various characteristic symptoms described by the patient, coupled with unique signs, guides the homeopath toward a similar remedy that alleviates both overall symptoms and those associated with increased blood pressure.

The fundamental difference between allopathic and homoeopathic approaches is highlighted in the Organon of Medicine, which states, "There are no diseases, only sick people." Dr. Kent articulates this idea more profoundly in his book within the chapter entitled "The Sick."

We base our prescriptions on constitutional symptoms, placing significant emphasis on both mental and distinctive physical symptoms. Consequently, each prescription from a homeopathic physician inevitably incorporates a psychosomatic perspective.

In 1813, Hahnemann articulated this holistic approach in his renowned essay, "Spirit of the Homeopathic Doctrine of Medicine," where he discusses the living unity of the organism. Hufeland quotes the philosopher Kent, stating, "We do not deny the influence of the physical on the spiritual for a moment, but the psychological power of the spirit on the body is equally astonishing, if not greater. It can induce ailments; it can kill, and it can revive."

In aphorism 213(28), it states: "To effect a cure in harmony with nature, one must adhere to homeopathic principles; for in every individual case of illness, even acute ones, we must simultaneously consider the changes occurring in the patient's psychic or mental state."

Thus, Hahnemann is rightly recognized as the true pioneer of psychosomatic medicine. While he may not have been the first to address the connection between the spirit and the body, he was the first to outline the practical fundamentals of therapeutic measures for tackling the resulting ailments.

### **Homoeopathic Materia medica in psychological aspect of Disease**

As Dr. Catherine Coulter (29) explains, "The homeopathic physician does not treat the disease itself but the collection of symptoms experienced by individuals suffering from conditions such as heart disease, arthritis, migraine headaches, colitis, cystitis, influenza, dysmenorrhea, insomnia, or the common cold."

A thorough examination of the Homeopathic Materia Medica, developed through systematic proving of drugs on healthy individuals, shows that every drug produces distinct alterations in overall personality, marked by emotional and mental shifts in addition to affecting general vitality and specific organs. Each case of experimental and spontaneous pathology presents a unique combination of mental, emotional, and physical symptoms. This complexity remains consistent and specific to each drug. Since each drug can be effectively matched to a particular state of a "similar" spontaneous disorder, it remains equally precise for each case of pathology. The only difference lies in the intensity, prevalence, or completeness of the symptom groups observed in the individual prover or patient. This specificity validates the targeted efficacy of homeopathic medicines in treating psychosomatic conditions, such as essential hypertension.

#### **Conclusion**

Overall, there is increasing empirical support for the hypothesis that exposure to chronic psychosocial stress contributes to the development of hypertension. Additional prospective studies are necessary before a causal relationship can be established, especially in cases of discrimination. This underscores the importance of identifying the types of stressors that are most harmful to different groups, as well as the factors that may exacerbate or buffer the effects of stress.

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