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## Understanding Psychoneuroimmunology in Ayurveda Perspective

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### ABSTRACT

‘Psychoneuroimmunology’ is the term that defines about the study of the interaction among psychological process, nervous system and the immune system of the body. Though it seems to be a relatively new concept for the modern psychologists, it’s roots are deeply embedded in the age old science of *Ayurved*. **Purpose:** To explore this concept in light of modern and ancient principles of relationship among psyche (*man, chitta, gahantam bhawanayein* and *manovrrattiyan*), neurology (*buddhi vaisheshik*, type of *pitta, saadhak pitta*) and immune system (*deha*). **Material & Method:** It was clearly said in the paper that it is not a comparative study. Rather it is only an effort to understand the concept better. The idea occurred as the author felt the need to get rid of many physical and mental stresses which are the products of urbanized lifestyles. Immunity of body and health of psyche are being affected very commonly in today’s era. Varied neurological disorders are also on the rise. To understand or to explore the basic modern physiology was taken into account. The authentic textbooks of *Ayurveda* were also consulted. **Conclusion:** Mind, body and soul are independent subjects for understanding. In fact, these are interdependent and affect each other’s working. The modern concept of psychoneuroimmunology also works upon the same principles. It is also a truth that with the help of biochemistry, the contemporary science has detailed the topic with description about neurotransmitters, extracting knowledge about specific proteins etc. It was established that priority may be given to the counseling aspect of the problem rather than to go only for pharmaceutical method.

### KEYWORDS

*Psychoneuroimmunology, Saadhakpitta, Manovratti, Endocrine gland, Neurotransmitter.*



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## INTRODUCTION

'Psychoneuroimmunology' is the term that defines about the study of the interaction among psychological processes, nervous system and the immune system of the body. Dr. Robert Ader in 1975 coined this term to show that there exists a link between the way people think and about their health<sup>1</sup>. Before that, it was believed by the western system of medicine, that these three systems act independently. In easier terms, if the components of the psychoneuroimmunology be explored, one may find the following truth –

Psyche – The mind; human's deepest feelings and attitudes. (*man, chitta, gahantam bhawanayein and manovrattiyam*)

Neuro – The Brain-a branch of medicine that deals with the study and treatment of disorders of the nervous system- (*buddhi vaisheshik, type of pitta, saadhak pitta*)

Immunology – A branch of biology that covers the study of immune systems in all organisms-Body (*deha*)

It means it is a relationship or interdependency of Mind, Body and Soul which unfolds all secrets of psychoneuroimmunology. It is told in *Ayurveda* in a very beautiful manner<sup>2</sup>–

*Sattvammatma shariram cha traiyemetat tridandvat,*

*Lokastishthati sanyogatra sarvam pratishthatam. (Ch.Su.1/46)*

Means - mind, body and soul are the three pillars which hold the life. These have to be united or should work in perfect harmony.

The following paper will deal with the modern and *Ayurveda* concept in this regard. It is not a comparative study between the ancient and contemporary science, but it is only a small effort to understand this complex issue.

## AIM AND OBJECTIVES

- 1.To understand the psychoneuroimmunology
- 2.To explore the concept of psychoneuroimmunology in science of Ayurveda
- 3.Objective is to help the society through counselling about the relationship of psyche, neurological system and immunity

## MATERIAL AND METHODS

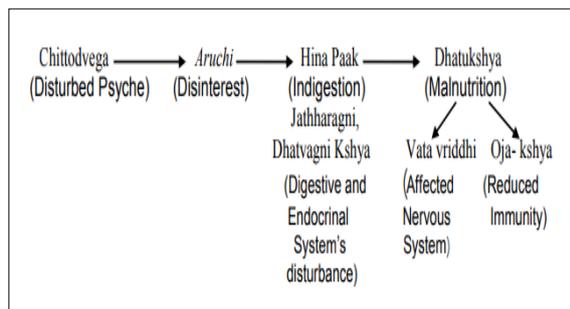
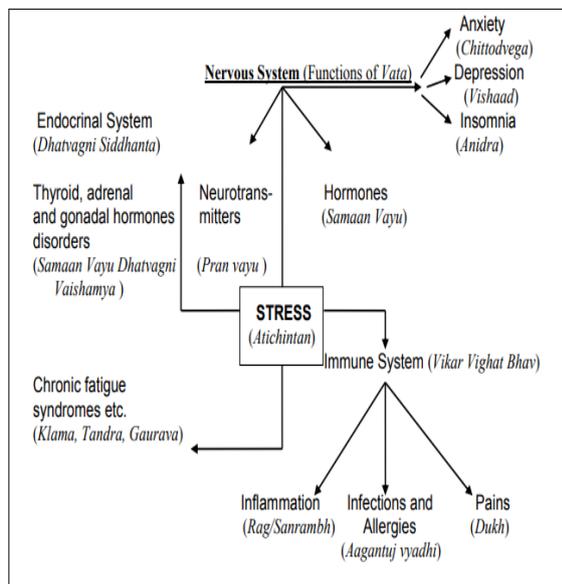
**Research design:** - Exploratory Research

An overview about the nervous, endocrinal and immune system will be taken in context of Psyche. Similarly the idea of concept of *mana – buddhi – ojas* being studied here to meet the goal of the article.



However, the micro details are difficult to present here, as it would exceed the preview of a normal length paper. The gross proposition may be <sup>3</sup> –

The relation:-



## DISCUSSION

The contemplation reveals that the nerves in the brain and spinal cord make up the CNS, while the immune system is made of organs and cells that defend the body against infection. Both systems contain messengers between the two systems i.e. small molecules and proteins. Neurotransmitters are messenger in CNS,

while proteins called cytokines are used by the immune system to communicate between the two systems<sup>4</sup>. As in the diagram above, if one sees for the connection of stress with nervous, endocrinal and immune system, it is found that cytokines are the small proteins that are released by cells, especially those in one's immune system. There are many kinds of cytokines, but the one's that are generally stimulated by stress are called pro inflammatory cytokines. Stress also is related with endocrinal system. In fact during times of stress, the hypothalamus, a collection of nuclei that connects the brain and the endocrinal system signals pituitary gland to produce a hormone which in turn signals the adrenal glands. The situation provokes basis for thyroid hormones related disorders, growth hormones or gonadal hormones related disorders etc. In a way it passes the way for disturbing neuro-endocrine system. It is the mechanism by which the hypothalamus maintains homeostasis, regulating reproduction, metabolism, eating and drinking behavior, energy utilization, osmolality and blood pressure. Not only this but stressed nervous system signals the adrenal glands to release hormones called adrenaline (epinephrine) and cortisol (hydro cortisone), which are responsible for the emotional signs of



stress including depression, anxiety, irritability etc.

A very strange similarity is seen, when it comes to explanation about ‘*Oja kshya*’ (represents overall strength of the body, especially the immune system) *Acharya Charaka* says – “that to save ‘*oja*’ keep the mind away from sorrow and other negative emotions” (*Ch.Su.30/13*)<sup>5</sup>. The symptoms told by *Acharya Charaka* were; fear, weakness, excessive worrying, affected perception, dull look, low will power, dryness and low energy levels (*Ch.Su.17/73*)<sup>6</sup>. On the other hand *Acharya Sushruta* describes three stages of ‘*Oja*’ insufficiency (*Su.Sutra.15/28*)<sup>7</sup>. These are *Visrans*, *Vyapad* and *Kshya*. The reasons for these conditions are told as injury, emaciation, anger, sorrow, anxiety or starvation. (*Su.Sutra. 15/27*)<sup>8</sup>.

In *Visrans* stage the physical symptoms like chronic fatigue, laziness are seen. In second stage the aggravation of first stage symptoms is seen with stiffness and heaviness in body, along with feeling of helplessness, mental clouding. The last stage includes unconsciousness, muscle atrophy, non-differentiation, irrelevant speech & even death. (*Su.Sutra.15/29*)<sup>9</sup>.

## CONCLUSION

All the above exploration infers that mind, body and soul are independent subjects for

understanding. In fact, these are interdependent and affect each other’s working. The modern concept of psychoneuroimmunology also works upon the same principles. It is also a truth that with the help of biochemistry, the contemporary science has detailed the topic with description about neurotransmitters, extracting knowledge about specific proteins etc. It has also taken the help of biomedical science to understand the issue in a transparent way. The paper has established that priority may be given to the counseling aspect of the problem rather than to go only for pharmaceutical method.



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