

# Role of *Brimhana nasya* in psychosomatic disorders

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## Abstract

Psychosomatic means mind (psyche) and body (soma). The term “psychosomatic disorder” is mainly used to mean “a physical disease that is thought to be caused, or made worse, by mental factors.” The term is also used when mental factors cause physical symptoms but where there is no physical disease. For example, chest pain may be caused by stress and no physical disease can be found. The greed for wealth and our excessive efforts for it brings psychosomatic disorders. We find psychosomatic disorders as a result of modern lifestyle. The incidences of psychosomatic disorders are increasing due to changing lifestyle. These symptoms are due to increased activity of nervous impulses sent from the brain to various parts of the body. As per the Ayurvedic texts, the *tridoshas* are the main causative factors in the pathogenesis of any disease. In *Ayurveda*, detailed description is given about psychic (*Manasika*), somatic (*Sharirika*), and psychosomatic disorders (*Manodaihika Vyadhi*). Meanwhile, to overcome the root pathology involved in the manifestation of psychosomatic disorders, *brimhana* (*nourishment*) *chikitsa* occupies the prime seat in the line of treatment of psychosomatic disorder. *Nasya karma* is the main line of treatment in *Jatru urdhwa vyadhi* (diseases above the neck) which can be adopted in this disorder.

**Key words:** *Brimhana Nasya, Manasika, Sharirika*

## INTRODUCTION

Psychosomatic disorders are caused by psychological imbalances or issues that a person may be experiencing in life his are manifested as physical and biological illnesses. Despite their confusing nature, psychosomatic illnesses are not uncommon.<sup>[1]</sup> Suspicion of psychosomatic disorders occurs when physical symptoms for which there is no medical explanation. It is, therefore, of psychological disorders manifested by physical symptoms.<sup>[2]</sup> When all the possible medical causes of an illness have been ruled out, attention must be given to the possible psychological causes.<sup>[1]</sup> Psychosomatic disorders are a complicated type of disorders which are not easy to diagnose. Many cases remain undiagnosed because the basic reason behind all these disorders was stress and the patient was unaware of the fact that stress is creating such huge changes in his life without his will.

A psychosomatic disorder, by definition, is a stress disorder whose principal cause is psychological in origin, but its manifestations are predominantly observed in the body. Stress

is a non-specific response of the body to any demand made on.<sup>[3]</sup> Such a response consists of a series of neurohumoral, endocrine, and metabolic changes with related physiological alterations involving entire body parts and systems though to varying degrees.<sup>[4]</sup> Normally, these stress-induced physiological changes are adaptive, compensatory, and self-limiting but when stressful conditions are frequent, intense, and override certain limits, these physiological changes become rather irreversible and pathological in nature.<sup>[5]</sup> Stress being the main cause of these disorders which is caused by over worrying. Dr. Edward Podolsky entitled “stop worrying and get well” has some of the chapter titles like - what worry does to the heart, high blood pressure is fed by worry, rheumatism can be caused by worry, worry less for your stomach’s ache, etc., which shows the importance of stress in causing various diseases.<sup>[6]</sup>

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General symptoms of stress causing psychosomatic disorders include fatigue, exhaustion, and pain. Cardiovascular and gastrointestinal problems are also common.<sup>[7]</sup> The birth of psychosomatic disorders resulting from the combination of several factors including biological, psychological, and social. The main psychosocial factors are as follows: Stress causing permanent organ dysfunction, vicious cycle of physical symptoms, leading to fear, and increased surveillance of these symptoms, often unconscious psychic conflicts (fear, rage, and anger) manifesting as physical symptoms.<sup>[7]</sup> Indeed, a high prevalence of psychological symptoms and psychoneurotic personality traits has been identified in IBS patients, compared to healthy controls. Prolonged and aggravated muscle response under stress is the root cause of etiopathology of rheumatoid arthritis. Increased bronchoconstriction and mucosal edema are the principal factors in the pathogenesis of bronchial asthma.<sup>[4]</sup> In *Ayurveda*, detailed description of psychic (*manasika*), somatic (*sharirika*), psychosomatic (*manodaihika vyadhis*), and their treatment protocols is found. In somatic diseases, the psychological aspect cannot be neglected, similarly, in psychological diseases, the organic (somatic) affairs have given due consideration for its better management. *Manasikabhava* (psychic factors) plays an important role for the manifestation psychic and psychosomatic conditions.<sup>[8]</sup>

*Ayurveda* describes three categories of etiological factors, namely

1. *Asatmendriyārtha Samyoga*,
2. *Prajnaparadha*,
3. *Parinama*.

A critical examination of the nature of these three categories of etiological factors would indicate an excellent classification of stress factors which are responsible for stress and psychosomatic disease.<sup>[9]</sup> The Sushruta's concept of *Satkriyakala* has also been recently studied by the author and his associates in the context of psychosomatic diseases. In the light of the nature of biological response, one may include the six *Kriyakala*'s within the above-mentioned four phases of psychosomatic disease as per following scheme.

1. Psychic phase - *Sancaya*
2. Psychoneurotic phase - *Prakopa* and *Prasara*
3. Psychosomatic phase - *SthanaSamsraya* and *Vyakti*
4. 4. Advanced organic phase - *Bhedavastha*.<sup>[9]</sup>

The psychic factors such as *Kama* (lustre), *Krodha* (anger), *Shoka* (grief), *Bhaya* (fear), *Chinta* (stress), and *Irshya* (envy) are regulated by the body itself within physiological limit, which is defined as *Prakruta Manasika-bhava*, when this *Bhava* crossed the physiological limit termed as *Manasika-Vikara* or psychic disorders. Some examples of psychosomatic disorders are irritable bowel syndrome ulcerative colitis, gastric and duodenal ulcers anorexia essential hypertension, ischemic heart disease, etc.<sup>[8]</sup>

*Charaka* mentioned that the somatic and psychic disorders following one another occasionally occur together. These *Sharirika* (Somatic) and *Manasika* (psychic) disorders in long term associated with each other as somatic to somatic, psychic to psychic, somatic to psychic, and psychic to somatic. These references from *Ayurvedic* texts reflect that a great stress has been laid by *Ayurvedists* on the psychosomatic approach toward diseases.<sup>[10]</sup> Therapies described for these types of disorders are of three kinds, namely *Daivavyapashraya* (spiritual therapy), *Yuktivyapashraya* (therapy based on reasoning, i.e. physical properties), and *Satvavajaya* (psychotherapy treatment by self-control). Spiritual therapies are incantation of *mantras* talisman, wearing of gems, auspicious offerings gifts, oblations, observance of scriptural rules, atonement, fast, chanting of auspicious hymns, obeisance to the gods, going on pilgrimage, etc., administration of proper diet and medicinal drugs comes under the second category. Withdrawal of mind from harmful objects constitutes psychic therapy.<sup>[11]</sup> In *Yuktivyapashryachikitsa*, in case of brain-related disorders, targeting toward brain is the main hurdle. There is a strong relation between stress and our brain. Longstanding stress can affect cognitive function, including changes in learning, memory, and emotional well-being.<sup>[12]</sup> To overcome this problem, any treatment which gives nourishment to the brain can be beneficial in this case. Nasal route is easily accessible and efficient route.<sup>[13]</sup> Hence, nasal route for drug administration is preferred by modern medicine also which in other words is *Nasya* in *Ayurveda*. Hence, here, review is presented about action of *Brimhana Nasya* on psychosomatic disorders according to *Ayurveda* and modern science.

In *Ayurveda*, a suitable route of drug administration is identified mainly on the basis of regional propinquity of the site of pathology. Similarly, *Nasya Karma* which involves nasal route of drug administration can be taken as the best line of treatment in the management of cervical spondylosis as it is the nearest possible route of drug administration with which one can counter attack the site of pathology.<sup>[14]</sup> *Nasya karma* is one of the therapeutic procedures of the *Panchkarma*, wherein the drug is administered through the nasal route. This is one of the *Panchakarma* procedures that not only alleviates the vitiated *doshas* but also causes complete eradication of the vitiated *dosha* and the disease. The *Nasya karma* especially exerts its effects on the *urdhvajatrugata pradesha*.<sup>[15]</sup> According to *Charaka Samhita*, *Nasya* is the best treatment for *shirorogas*. As nose is gateway for *shirah* (head), medicine administered through it occupies various parts of the head and removes morbid *doshas* adherent to it. It not only removes *doshas* but also gives strength to organs, channels, etc., in the head so useful in healthy conditions also.<sup>[16]</sup> Acharya Vagbhata has stated that, "*Nasa hi shiraso dwaram*" that is, the nose is the easiest and closest opening for conveying the potency of medicines to the cranial cavity. He is the first person to narrate the mode of action of drugs by *Nasya karma*. The drugs administered will reach the *Shringataka marma* and

spread through the opening of the *shiras* of the eyes, ears, throat, and so on, to the head.<sup>[17]</sup>

Acharya Sushruta opines that the *Shringataka marma* is a *sira marma*, situated at the site of the union of the *siras*, supplying to the nose, ear, eye, and tongue.<sup>[18]</sup> Acharya Vaghbata defines the effect of *Nasya* as it acts on *Skanda*, *Greeva*, *Mukha*, and *Vaksha* and makes it healthy and strong.<sup>[19]</sup>

As the procedure of *Nasya* itself involves massaging and fomenting over maybe the *marmas* existing on the face and head, this also helps in the alleviation of *marmaksobha* and *Vata shamana*. The action of *Nasya karma* depends on the *dravya* used in it. Based on these, it is divided into *shodhana*, *shamana*, and *Brimhana*.<sup>[14]</sup> In *Brimhana Nasya*, drug used is *Sneha*, i.e. *Shatavari ghee*, medicated milk, *niryas*, *mamsa rasa*, etc. This treatment is mainly given in *Vata* type of disorders. It is beneficial to cure migraine headache, hemicranias, and dryness of voice, constriction of the eyes, defects of the vision, toothache, earache, tinnitus, and difficulty in speech, nervousness, anxiety, fear, dizziness, and emptiness.<sup>[20]</sup>

*Brimhana Nasya* provides nourishment to the *shiroindriya* and other organs and alleviates the vitiated *Vata*. Hence, it is useful in *Vatajanya* ailments,<sup>[21]</sup> thus highly efficient in psychosomatic disorders. Negative thoughts can be vanished by undergoing this treatment. It imparts strength to *Hanu*, *Danta*, *Sira*, *Greeva*, *Trika*, *Bahu*, and *Vaksha*.<sup>[14]</sup>

## DISCUSSION - PROBABLE MODE OF ACTION OF NASYA<sup>[21]</sup>

### Modern Anatomical and Physiological Aspect of Nose

The nose is connected through vascular system, nerve plexus of olfactory nerve, and ophthalmic and maxillary branches of trigeminal nerves to the brain.

#### Neurological pathway

It is concerned with olfactory stimuli. The olfactory nerve differs from other cranial nerves in its close relation with the brain. The peripheral olfactory nerves are chemoreceptor in nature. The olfactory nerves are connected with the higher centers of brain, i.e., limbic system, consisting mainly of amygdaloidal complex, hypothalamus, epitheliums, anterior thalamic nuclei parts of basal ganglia, etc., so the drugs administered through nose stimulate the higher centers of brain which shows action on regulation of endocrine and nervous system functions.

#### Thus hypothalamus regulates

1. Autonomic nervous system which is the major regulator of visceral activities.

2. Hormone synthesis due to direct contact with pituitary gland and hence responsible for integrating the functions of the endocrine system

#### Regulation of emotional and behavioral patterns

Hypothalamus together with limbic system participate in expression of rage, aggression, pain, pleasure and behavioral pattern etc. Thus directly helps in preventing various psychosomatic disorders.

#### Diffusion of the drug

Lipid-soluble substances have greater affinity for passive absorption through the cell walls of nasal mucosa. "The cilia of the olfactory cells and perhaps the portions of the body of the olfactory cells contain relatively large quantities of lipid materials." It is a route of absorption of some nutrients and excretion of waste by body cells which are lipid soluble. Further, drug absorption can also be enhanced by local massage and fomentation.

#### Vascular path

Vascular path transportation is possible through the pooling of nasal venous blood into the facial vein, which naturally occurs, at the opposite entrance, the inferior ophthalmic vein also pools into the facial vein. "The facial vein has no valves." It communicates freely with the intracranial circulation not only at its commencement but also by the supraorbital veins which are connected with the ophthalmic vein, a tributary of the deep facial vein, which communicates through the pterygoid plexus with the cavernous venous sinus. Such a pooling of blood from nasal veins to venous sinuses of the brain is more likely to occur in head lowering position due to gravity, the absorption of drug into meninges and related intracranial organ is a point of consideration.<sup>[21]</sup>

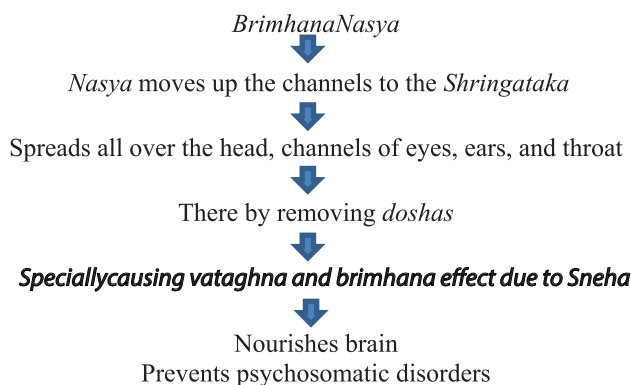
Nose is a highly vascular structure and its mucous membrane provides a good absorbing surface. Hence, Siddha *Sneha*, on their administration, spread along the nasal mucous membrane. An active principle along with *Sneha* gets absorbed inside the olfactory and respiratory mucosa and from there is carried to different places.<sup>[22]</sup> *Sneha* provides nourishment to the nasal structures and other organs of the head also. The networks of nasal blood and lymph vessels have many communications with those of the subdural and subarachnoid spaces. This fact is one of the important factors contributing to the extension of the *Brimhana* drugs from the nose into the cranial cavity.<sup>[14]</sup>

The myelin sheath is the first covering of the nerve fiber. Neurolemma is the second. The myelin sheath is composed of lipid material. The blood-brain barrier (BBB) is highly permeable for lipid substances and substances that are fat soluble. Therefore, these substances can pass easily through the BBB and can exert their actions. Certain lipids are used for providing energy to the nervous tissue. Some of the active principles may reach certain levels in the nervous system where they can exert their *Vataghna* property; *brimhana*

*nasya* provides nourishment to the nervous system and helps in removing the irritation. It may act as an anti-inflammatory agent also. On its nasal administration, it reaches different *Shirogata indriya* and causes *Vata shamana* and has *Brimhana* effect.<sup>[14]</sup>

According to Acharya Vagbhata, “*Brimhanam shamantvev pitta anila syat cha* (बृंहणं शमन्त्वेव वयोः पित्तानिल स्यात् च),<sup>[23]</sup>” thus *brimhana nasya* alleviates vitiated *vata* and *pitta*.

The *shringataka marma* has been explained by recent authors as the middle cephalic fossa of the skull consisting of paranasal sinuses, meningeal vessels, and nerves. One can see the truth of the narration made by Vagbhata here - the drug administered enters the paranasal sinuses, that is, the *Shringataka*, where the ophthalmic vein and the other veins spread out. The sphenoidal sinuses are in close relation



with the intracranial structures. Thus, there may be a so far undetected root between the air sinuses and the cavernous sinuses, establishing the transudation of fluids as a whole. The mentioning of the *Shringataka* in this context seems to be more reasonable.<sup>[24]</sup> Thus, through hypothesis:

## CONCLUSION

The history of psychosomatic problem is as old as the *Ayurveda* as the history of human civilization. There are so many somatic diseases in which mental symptoms have been also described, whereas in the description of mental diseases, somatic characteristics have been mentioned.<sup>[11]</sup> The unwholesome conjunction of the sense organs with their objects (*Asatmendriyarthasanyoga*), intellectual blasphemy (*Pragyapradha*), and transformation (*Parinama*) - these are 3-fold causes of diseases (psychic, somatic, and psychosomatic). Proper utilization of the objects, action, and time is beneficial to the maintenance of normal health.<sup>[11]</sup> *Ayurveda* has considered the mental and physical diseases as two separate specialized subjects. However, no clear line of demarcation has been drawn between the mental and physical illness, and a flexible psychosomatic approach

has been worked out. The main procedure *Nasya*, in which drug administered through nasal route should be done in psychosomatic disorders. Nasal medication is advocated in many mental disorders, it is considered a port for brain for drug delivery.<sup>[3]</sup> *Nasya* is most convenient and has greater acceptance among the users due to their easy procedure, low economic cost, and minimum side effects. Intranasal delivery bypasses the BBB to target central nervous system, reducing systemic exposure of drug, thereby reducing the systemic side effects. It also bypasses the hepatic first-pass metabolism and drug can directly enter into the systemic circulation.<sup>[25]</sup> Stress and brain have a strong relation with each other. By providing nourishment to brain, stress can be eliminated from root and hence helps in preventing psychosomatic disorders. Hence, we can say that *Ayurveda* can be a promising alternative in psychosomatic disorders. Further, clinical trials are needed to establish a standard management of psychosomatic disorders.

## REFERENCES

- 3 Most Common Causes of Psychosomatic Illnesses India. Available from: <http://www.psychmechanics.com/2015/12/3-most-common-causes-of-psychosomatic.html>. [Last cited on 2017 Nov 21].
- Psychosomatic Disorders: Definition, Causes, Symptoms and Treatment India. Available from: <http://www.rayur.com/psychosomatic-disorders-definition-causes-symptoms-and-treatment.html>. [Last cited on 2017 Nov 21].
- Rout OP, Acharya R, Gupta R, Inchulkar SR, Karbhal KS, Sahoo R. Management of psychosomatic disorders through Ayurvedic drugs-a critical review. *World J Pharm Pharm Sci* 2013;2:6507-37.
- Mishra KK, Pandey HP. A study on physiological changes in certain psychosomatic disorders with reference to cortisol, blood glucose and lipid profile. *Indian J Physiol Pharmacol* 1996;40:151-4.
- Makara GB. Mechanism by which stressful stimuli activate the pituitary adrenalsystem. *Fed Proc* 1985;44:149-53.
- Carnegie D. How To Stop Worrying and Start Living. Part I. What Worry May Do To You. Ch. 3. Do To You. Ch. 3. 330/2, Burari, Delhi - 110084: Paperclip books. p.33-34
- Psychosomatic Disorders: Definition, Causes, Symptoms And Treatment India. Available from: <http://www.rayur.com/psychosomatic-disorders-definition-causes-symptoms-and-treatment.html>. [Last cited on 2017 Nov 24].
- Preventive-Role-Of-Ayurveda-In-Psychosomatic-Disorders-w-s-r-to-Grahani-Ibs. India Available from: [http://www.healthdocbox.com/Chronic\\_Pain/67473115-Preventive-role-of-ayurveda-in-psychosomatic-disorders-w-s-r-to-grahani-ibs.html](http://www.healthdocbox.com/Chronic_Pain/67473115-Preventive-role-of-ayurveda-in-psychosomatic-disorders-w-s-r-to-grahani-ibs.html). [Last cited on 2017 Nov 27].
- Singh RH. The psychosomatic disorders and their



- management in ayurveda. *Anc Sci Life* 1981;1:41-8.
10. DeshpandeGayatri S, Abhijeet HJ. Hypothetical Evaluation of Action of *Nasya* on Central Nervous System. *IAMJ*. p. 17. Available from: [http://www.iamj.in/posts/images/upload/607\\_612.pdf](http://www.iamj.in/posts/images/upload/607_612.pdf). [Last cited on 2017 Dec 03].
  11. Singh AK, Panda RK, Mishra SC, Singh M, Parida AN. Psychosomatic disorders and its management through Ayurveda. *Int J Bioassays* 2016;5:4764-7.
  12. The Scary Things that Happen to Your Brain when you Are Stressed- and how to calm Down by Kimberly Hiss. Available from: <https://www.rd.com/health/wellness/effects-of-stress-brain/>. [Last cited on 2018 Mar 03].
  13. Mehra R. A comparative clinical study of shamana *nasya* and brimghana *nasya* in cervical spondylosis. *Int Ayurvedic Med J* 2015;3:1409-14.
  14. Das B, Ganesh RM, Mishra PK, Bhuyan G. Mode of action of the *Nasya karma* a study on *Apabahuka* (frozen shoulder) and its management by *Laghumasha taila Nasya*. *Ayu* 2010;31:488-94.
  15. Gayatri SD, Abhijeet HJ. Hypothetical Evaluation of action of *nasya* On central nervous system. *Int Ayurvedic Med J*. Available from: [http://www.iamj.in/posts/images/upload/607\\_612.pdf](http://www.iamj.in/posts/images/upload/607_612.pdf). [Last cited on 2017 Oct 21].
  16. Samhita C, Kashinath S, Chaturvedi G. *Vidyotini Hindi Commentary*. Edition: Reprint, Siddhi Sthana, Trimarmeeya Siddhi Adhyaya. Ch. 9. Verse 88. Varanasi: Chaukhambha Bharati Academy; 2011. p. 1070.
  17. Hridaya A, Gupta KA. *Vidyotini Hindi Commentary*. Edition: Reprint, Sutra sthana, *Nasya Vidhim Adhyaya*. Ch. 20. Verse 1. Varanasi: Chaukhambha Prakashan; 2013. p. 172.
  18. Samhita S, Shastri A. *Ayurveda tatva sandeepika* Hindi commentary. Edition: Reprint. Sharir Sthana, *Pratyekmarma Nirदेश Sharir*. Ch. 6. Verse 28. Varanasi: Chaukhambha Orientalia; 2011. p. 75.
  19. Hridaya A, Gupta KA. *Vidyotini Hindi Commentary*. Edition: Reprint, Sutra Sthana, *Nasya Vidhim Adhyaya*. Ch. 20. Verse 39. Varanasi: Chaukhambha Prakashan; 2013. p. 176.
  20. Samhita S, Shastri A. *Ayurveda Tatva Sandeepika Hindi Commentary*. Edition: Reprint. Chikitsa Sthana, *Dhoomnasyakawalgrih Chikitsa*. Ch. 40. Verse. 55. Varanasi: Chaukhambha Orientalia; 2011. p. 229.
  21. Lokhande S, Patil S, Chogule A, Patil V. Probable mode of action of *nasya*-an overview. review article. *Int Ayurvedic Med J* 2016;4:360-4.
  22. Shweta H, Manjula C, Vedpathak SM. Conceptual Study of *Mashadi Siddha Taila Nasya* In *Avabahuka*. *Int Ayurvedic Med J* 2017. Available from: [http://www.iamj.in/posts/images/upload/453\\_457.pdf](http://www.iamj.in/posts/images/upload/453_457.pdf). [Last cited on 2017 Feb 21].
  23. Sangraha A, Gupta KA. *Vidyotini Hindi Commentary*. Edition: Reprint. Sutra Sthana, *Nasya Vidhim Adhyaya*. Ch. 24. Verse 7. Varanasi: Chaukhambha Prakashan;2013.p. 221.
  24. Krishnaprabha A, Mishra R, Kumar KK. A case study on the ayurvedic management of *apabahuka* with *karpasasthyadi taila nasya* and physiotherapy. *Global J Res Med Plants Indigen Med* 2016;5:137-45.
  25. Asutkar S, Bende Y, Sharma VH, Jadhao VP, Asutkar VG, Gulhane C. *Nasya karma* (Intranasal Therapy); An alternative route of drug administration into the brain. *Int J Ayu Pharm Chem* 2015;4:77-90.

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