



THE CONCEPT OF *ASATMYA INDRIYARTHA SAMYOGA* AND ITS ROLE IN CAUSING OCCUPATIONAL DISEASES

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Abstract: Ayurvedic classics have referred to three main dimensions for causation of diseases viz. *Atiyoga* (excessive), *Ayoga* (reduced) and *Mithya* (improper) *Yoga* of *Kala* (time), *Artha*(object) and *Karma*(actions) at the same time they also indicate that *Prajnaparadha*, *Asatmyendriyarth Samyoga* and *Parinama* are also the three reasons which lead towards generation of various diseases. Out of these, *Asatmendriyarth Samyoga* refers to unwholesome contact of the senses with their objects for that person and it results in an over stimulation or deficiency or malfunctioning of sensory activity. This harms the functioning of Mind and Body. Everyone needs to adopt an occupation for livelihood and every occupation has its pros and cons. An occupational disease is a disease or disorder that is caused by the actions needed to be done for the occupation or in conditioning in which this occupation should be carried out. It is mostly caused due to overuse, reduced use or misuse of all the *Indriyas*/ sensory and motor apparatus. As it is well said that, prevention is better than cure, many occupational diseases/hazards can be prevented by indulging sensory and motor apparatus in a right way along with practicing measures like *Dinacharya*, *Ratricharya*, *Rutucharya*, *Sadavritta* as well as *Yoga* practices. Present paper portrays a critical review of all such conditions which can be considered under *Asatmya Indriyarth Samyoga* and their role in producing various occupational diseases along with a general guideline for preventing such problems.

Keywords: *Asatmya Indriyarth Samyoga*, *Dinacharya*, *Lifestyle*, *Occupational diseases*, *Prajnaparadha*, *Parinama*

INTRODUCTION

Ayurveda is the ancient holistic science of life which deals with every aspect of life. The primary aim of *Ayurveda* is to preserve the health of healthy and cure the diseased one.^[1] It has described cause, manifestation, prevention and cure of the diseases as well as measures to preserve and enhance the health. The ultimate aim of a person is *Moksha* (salvation) which is one of the *Purushartha Chatushtaya* (four pursuits of life) viz. *Dharma* (right conduct), *Artha* (Material possessions), *Kama* (desires) and *Moksha* (salvation).^[2] Health is the prime requisite for fulfilling the same. *Sharira* (Body) and *Manas* (Mind) are the two sites for the health as well as diseases.^[3] A combination of practice (*Samyoga*) of proper (*Yukta*) food, lifestyle, balanced in work, proper sleeping and awakening person becomes free from diseases.^[4] The classics referred to three main causes for generation of diseases viz. *Atiyoga* (excessive), *Ayoga* (reduced) and *Mithya* (improper) *Yoga* of *Kala* (time), *Artha*(object) and *Karma*(actions)^[5] at the same time they also indicate that *Prajnaparadha*,

Asatmyendriyarthā Samyoga and Parinama are also the three reasons which lead towards generation of various diseases.^[6]

Prajna means intellect, and *Apradha* means offence. So, the literal meaning of *Prajnaparadha* is an offence committed by the intellect. Which is, doing things without discriminating as to whether it is beneficial or harmful for the body or mind. These actions may be verbal, mental or physical. *Asatmaya* means which is not wholesome for himself *Indriya* means apparatus, *Artha* is the objects of the apparatus/ senses and *Samyoga* means to combine or to link. The contact of *Indriya* and *Artha* which is unwholesome for that person is *Asatmyendriyarthā Samyoga*. Any work or function by a human body is done through *Indriyas* and in case of *Asatmyendriyarthā Samyoga*, it can also be correlated with *Hina, Mithya or Ati Yoga of Karma*.

An occupational disease is a health condition or disorder that is caused by work environment or activities related to work.^[7] The World Health Organizations (WHO) states that occupational disease is not defined solely by the diseases itself, it is a combination of an illness and its exposure, as well as the relationship between these two norms.^[8]

AIMS & OBJECTIVES:

1. To critically analyse and understand the concept and role of *Asatmyendriyarthā Samyoga* in causing of various occupational diseases/hazards
2. To be able to chart out a simple yet effective methodology for preventing occupational diseases/hazards

MATERIALS & METHODS

Careful perusal of the ancient Ayurvedic scriptures like *Bruhatrayee, Laghutrayee* along with the contemporary medical textbooks on social and preventive medicine and various relatable websites, is done.

RESULT

The concept of *Asatmyendriyarthā Samyoga* was found in *Charaka Samhita*^{[9][10]} and *Ashtanga Hrudaya*^[11] There is no direct reference of occupational diseases in *Ayurvedic classics* except description of some occupations in concept of *Sadatura*⁷ but there are some indirect references which can be correlate with occupational diseases/hazards.

The unique concept of *Sadaatura* or *Nitya Vyadhita* (person is suffering from ill health always) viz. *Shrotriya* (Student/ one who has to listen), *Rajyasevaka* (Government servant/ a person who is service of the king), *Veshya*(prostitute), *Panyajeevi* (businessmen) has been explained in Ayurvedic classics which holds much relevance in the current scenario of occupational diseases.^[12]

OBSERVATIONS

Table No. 1 *Asatmyendriyartha Samyoga* and relatable Occupational Disorders/hazards in current era

| Name of the Indriya | | <i>Indriyartha Samyoga</i> | Symptoms | Occupation | Occupations related disorders/hazards |
|---------------------|-------------------------|--|---|--|---|
| Gyanendriya | <i>Chakshu Indriya</i> | <i>Atiyoga</i> (Over involvement) | Inordinately gazing at excessively luminous objects | Computer job work, Glassblowers, Factory workers | Computer vision Syndrome, Occupational cataract, eye fatigue, headache |
| | | <i>Ayoga</i> (Less involvement) | Looking at very small objects/ in insufficient light or not to look at anything at all/ Reduced use o | Mine workers, Working in constant darkness | Accident, decreased capacity of eyes , Psychological disorders |
| | | <i>Mithyayoga</i> (Improper involvement) | Gaze at objects that are too close or too remote, terrible, hateful, frightful, monstrous, alarming etc. | Factory workers, welding, jewellery, nuclear station and radiological imaging | Eye chemical burns (Acid, Alkali, Irritants). Occupational cataract Allergic conjunctivitis, blindness ^[13] |
| | <i>Shravana Indriya</i> | <i>Atiyoga</i> (Over involvement) | Listen inordinately to such sound as loud thunder-claps, beating of kettle drums, loud cries or any other loud noise etc. | Manufacturing and Factory workers, Airline workers, Construction workers, Miners, Carpenters, railway workers, Musicians | Hearing loss, tinnitus, noise triggering headache, mood alteration, balancing problems nervousness, fatigue, impaired communication of speech, annoyance, hypertension, cardiovascular diseases, sleep disturbance, psychosomatic disorders ^[14] |
| | | <i>Ayoga</i> (Less involvement) | Not to listen to any sound at all | - | Hearing capacity get decreased, hallucination |
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|-----------------------|--|--|--|--|
| | <i>Mithyayoga</i> (Improper involvement) | To listen to sound that are harsh, joy killing, afflicting, humiliating, terrifying etc. | Manufacturing and Factory workers, Airline workers, Construction workers, Miners, Carpenters, railway workers, Musicians | Cardiovascular diseases, miner's diseases, headache, Psychological disorders |
| <i>Ghrana Indriya</i> | <i>Atiyoga</i> (Over involvement) | Smell of <i>Tikshna</i> (strong), <i>Ugra</i> (acrid), <i>Abhishyandi</i> | fragrance industry workers, Chemical industry workers | Anosmia, headache, coughing, wheezing or other breathing problems, dizziness, nausea |
| | <i>Ayoga</i> (Less involvement) | Not to smell at all | - | Decreases smell perception, accident |
| | <i>Mithyayoga</i> (Improper involvement) | To smell odours that are putrid, hateful, unclean, putrefying, poisonous, cadaverous etc | Garbage collectors, Chemical industry workers, Forensics | Anorexia, vomiting Occupational and allergic rhinitis [15] |
| <i>Rasanendriya</i> | <i>Atiyoga</i> (Over involvement) | To indulge the tongue inordinately | Chemical industry workers, Tasters, food industries | Dysgeusia anorexia |
| | <i>Ayoga</i> (Less involvement) | To abstain altogether from all tastes | - | Decreases taste perception |
| | <i>Mithyayoga</i> (Improper involvement) | Not taking food according to Ahara vidhi Visheshayata na | - | indigestion [16] |
| <i>Sparshnendriya</i> | <i>Atiyoga</i> (Over involvement) | To expose oneself inordinately to extreme cold and heat | Manufacturing and Factory workers, Construction workers, Miners, Chemical | Burns, heat cramps heat exhaustion, heat stroke, frostbite, Skin cancer and Dermatitis |

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|--------------------|-------------|--|--|---|--|
| | | | | industry workers | |
| | | <i>Ayoga</i> (Less involvement) | To refrain from all tactile stimuli | Workers who have to wear PPE kit regularly | Sensitivity to heat, sunlight, accident |
| | | <i>Mithyayoga</i> (Improper involvement) | Contact with uneven surfaces, trauma, unclear things, evil spirits etc. | Chemical industry workers | Skin cancer, allergic dermatitis ^[17] |
| | <i>Pada</i> | <i>Atiyoga</i> (Over involvement) | Inordinately walking, running or standing | Watchmen, Teachers, Hoese wives, traffic police, soldiers, Athletes | Varicose vein, calf muscle pain, sciatica, degenerative damage to the tendons and ligaments, corns, heel spurs, bursitis, knee meniscal lesion, fractures, <i>Padadari</i> or <i>Vipadika</i> (cracks) <i>Karshya roga</i> (Asthenic body) piles |
| | | <i>Ayoga</i> (Less involvement) | Not using legs at all | Desk jobs, sedentary lifestyle | <i>Sthaulya</i> (obesity) ^[18] |
| | | <i>Mithyayoga</i> (Improper involvement) | Incorrect habit of walking, running etc, walking without footwear or with uncomfortable footwear | Athletes, trackers | Sprain, strain, calcaneus spur, ligament injury |
| Karmendriya | <i>Pani</i> | <i>Atiyoga</i> (Over involvement) | Excessive movements of hand | Sportsman, Computer workers, House wives, painters, drillers, writers etc | Carpel tunnel syndrome, back and neck pain, tendonitis, cramps of the hand and forearm, hand-arm vibration syndrome |
| | | <i>Ayoga</i> (Less involvement) | Decreased use of hands | - | Venous thrombosis, cardiovascular diseases, |

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| | | | | | diabetes, obesity [19] muscles atrophy |
| | | <i>Mithyay oga</i> (Improper involvement) | Improper use | Computer workers | Shoulder pain, back pain, neck pain |
| <i>Vak</i> | | <i>Atiyoga</i> (Over involvement) | Speaking loudly or excessively | Teachers, Singers, Public speakers | Occupational dysphonia, headache, vocal atrophy, pain in tempero mandibular joint, hoarseness of voice, laryngitis [20] |
| | | <i>Ayoga</i> (Less involvement) | Speaking very less | - | Agni mandya, Psychological problems |
| | | <i>Mithyay oga</i> (Improper involvement) | Speaking untruth, harsh, abusive, threatening, <i>Akalvachana</i> | Police, Politicians, lawyers, salesmen | Problems in social relationships, Psychological problems |
| <i>Guda</i> | | <i>Atiyoga</i> (Over involvement) | Dairrhea | - | Piles, fissures, fistula, constipations |
| | | <i>Ayoga</i> (Less involvement) | Constipation | - | Constipation |
| | | <i>Mithyay oga</i> (Improper involvement) | Mala and Apana Vega Dharana | - | Constipation, piles, fissures, head ache, rhinitis, bloating, distension of abdomen, less metabolism, blurring of vision, pain in calf regions |
| <i>Upastha</i> | | <i>Atiyoga</i> (Over involvement) | Excessive coitus | Prostitutes, sex workers | <i>Yonivyapada</i> , Urinary calculi, dysuria, burning micturition, <i>Shosha</i> |
| | | <i>Ayoga</i> (Less involvement) | <i>Vegadharana</i> , <i>Bramhacharya</i> | - | - |

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|---------------------|---------------|--|-----------------------|--|---|
| | | <i>Mithyayoga</i> (Improper involvement) | <i>Vegadharana</i> | Prostitutes, sex workers | STD, AIDS, Yonivyapada, dysuria, nervous diseases, psychological disorders, pain and swelling at genitals |
| | <i>Manasa</i> | <i>Atiyoga</i> (Over involvement) | Excessive thoughts | Most of the job nowadays are stressful | Anxiety, Depression, other behavioural disorders, headache, psychosomatic disorders |
| Ubhayendriya | | <i>Ayoga</i> (Less involvement) | Less thinking | Lazy workers | Lethargy, Lassitude etc |
| | | <i>Mithyayoga</i> (Improper involvement) | Not thinking properly | - | Harmful/destructive life-threatening thoughts, schizophrenia, psychosis etc |

Table No. 2 *Dinacharya* procedures as a preventive measure for *Gyanendriyas*^{[21][22][23][24]}

| Sr No | <i>Dinacharya</i> procedure | <i>Gyanendriya</i> name |
|-------|--|-------------------------|
| 1 | <i>Ushahpana, Mukha and Netra prakshalana, Anjana, Abhyanga, Padabhyanga, Padatradharana, Padaprakshalana, Snana, Chatradharana, Ushnish Dharana, Mukhalepa, Achaman, Dakshini Vayu sevana, Nasya</i> Yoga: Practice of relevant <i>Asana</i> and <i>Pranayama</i> , <i>Shatakarma</i> procedures (<i>Neti, Trataka</i>) | <i>Chakshu Indriya</i> |
| 2 | <i>Nasya, Gandusha, Karna Abhyanga, Karna Purana</i> Yoga: Practice of relevant <i>Asana</i> and <i>Pranayama</i> (<i>Bhramari</i>), <i>Shatakarma</i> procedures (<i>Neti, Pranava Uccharana</i>) | <i>Shravanendriya</i> |
| 3 | <i>Nasya, Dhumapana, Anjana</i> Yoga: Practice of relevant <i>Asana</i> and <i>Pranayama</i> (<i>Nadi Shuddhi, Bhastrika</i>), <i>Shatakarma</i> procedures (<i>Neti, Dhauti</i>) | <i>Ghranendriya</i> |
| 4 | <i>Jivha Nirlekhana, Danta Dhavana, Gandusha, Kavala, Tambula sevana, Nasya, Dhumapana</i> Yoga: Practice of relevant <i>Asana</i> and <i>Pranayama</i> (<i>Nadi Shuddhi, Shitli, Sitkari</i>), <i>Shatakarma</i> procedures (<i>Neti, Dhauti</i>) | <i>Rasana Indriya</i> |
| 5 | <i>Abhyanga, Seka, Utsadana, Udvartana, Mardana, Samvahanana, Snana, Lepana, Aabhushana, Ratna Dharana, Vastra Dharana,</i> Yoga: Practice of relevant <i>Asana</i> and <i>Pranayama</i> , <i>Shatakarma</i> procedures | <i>Sparshanendriya</i> |

Table No. 3 Dinacharya procedures as a preventive measure for Karmendriyas

| Sr No | Dinacharya procedure | Karmendriya name |
|-------|--|------------------|
| 1 | <i>Pada Prakshalana, Padabhyanga, Padatra Dharana, Abhyanga, Vyayama, Udvartana, Samvahana, Mardana, Snana</i> | <i>Pada</i> |
| 2 | <i>Abhyanga, Vyayama, Udvartana, Samvahana, Mardana, Snana</i> | <i>Pani</i> |
| 3 | <i>Ushapana, Nasya, Danta Dhavana, Manjana, Gandusha, Kavala, Dhumapana, Abhyanga</i> | <i>Vak</i> |
| 4 | <i>Mala marga Shuddhi, Snana</i> | <i>Upastha</i> |
| 5 | <i>Guda Prakshalana, Snana</i> | <i>Payu</i> |
| | | |

Table No. 4 Dinacharya procedures as a preventive measure for Ubhayendriya

| Sr No | Dinacharya procedure | Ubhayendriya name |
|-------|---|-------------------|
| 11 | <i>Sadavritta, Achara Rasayana</i> <i>Yoga: relevant Asana, Pranayama, Dharana, Dhyana Samadhi</i> | <i>Manas</i> |

DISCUSSION:

An occupation is any activity in which a person is engaged or a person's usual or principal work or business, especially as a means of earning a living or the state of being occupied. [25]

Everyone needs to adopt an occupation for livelihood and every occupation has its pros and cons. The occupational health represents a dynamic equilibrium or adjustment between the worker and his occupational environment. An occupational disease is a disease or disorder that is caused by the actions needed to be done for the occupation or in conditioning in which this occupation should be carried out. Broadly classified into five types. They are: Physical, Chemical, Biological, Mechanical and Psycho-social Hazards. [26]

According to *Ayurvedic ideology* manifestation of occupational diseases can be correlated with overuse, reduced use or misuse of all the *Indriyas/* sensory and motor apparatus. wholesome contact (*Samayoga*) of sensory and motor organs with their objects leads to pleasure or health while excessive (*Atiyoga*), improper (*Mithayoga*) and reduced use (*Hinayoga*) of the sensory and motor organs leads to suffering or diseases related to both body and mind with concern of particular *indriya/* apparatus/ otherwise.

Production of occupational diseases can be manifested due to the sequential process of *Prajnaparadha*, *Asatmyendriyarth* *Samyoga* and *Parinama*.

Prajnaparadha refers to act which is done by one who is deranged of *Dhee* (intellect), *Dhruti*(will), *Smruti*(memory)^[27] That is called derangement of understanding whereby the *Nitya* (eternal) and *Anitya* (non-eternal), *Hita* (Good) and *Ahita* (bad) are mistaken one for the other. Here in case of occupational disease if the person knows and follows the proper guidelines and instructions while indulging in his work, there is a lesser chance of producing diseases. But as mentioned above if due to unawareness or negligence person does not follows the right way of doing that work, he becomes prone for the disease production. The next is *Asatmendriyarth* *Samyoga*. *Asatmya* means unwholesome. It is the contact of *Indriya* with their object which is unwholesome for that person and it is the individualistic process. The level of unwholesomeness might be differed from person to person. The last one is *Parinama* or *Kala* which refers to time or season and it is of two types, *Nityaga* and *Avasthika*. Seasons, years, months etc can be refer as *Nityaga Kala* while six stages of the diseases and age can be taken as *Avasthika Kala*.^[28]

If due to negligence (*Prajnaparadha*) person indulges in unwholesome contact of *Indriya* and their objects (*Asatmyendriyarth* *Samyoga*) for a longer period of time (*Parinama*) it will ultimately produce the various occupational diseases.

Nidana Parivarjana is mentioned as first line of treatment in Ayurvedic doctrine. [29] *Nidana* means cause or causative factors while *Parivarjana* means avoid. So, avoiding or removing the causative factors is termed as *Nidana Parivarjana*.

As it is well said that, prevention is better than cure, many occupational disorders and/or hazards can be prevented by indulging sensory and motor apparatus in a right way along with the measures like *Dinacharya*, *Ratricharya*, *Ritucharya*, *Sadavritta* as well as *Yoga* practices.

***Dinacharya* as a preventive measure:**

Primary function of all these procedures is to maintain the equilibrium state of *Dosha*, *Dhatu*, *Mala* thus will help to prevent the relevant occupational diseases. Some procedures eliminate the harmful substance/ toxins and clears the pathways, some of them enhances the blood circulations, lymphatic drainage and maintain pH level, few of them relaxes, removes stiffness, strengthens the muscles and stimulates the nerves. Thus, it will ultimately enhance the strength of *Indriya*/ apparatus and can prevent the concern occupational diseases.

Satvavajaya Chikitsa, *Sadavritta*^{[30][31][32]} *Achara Rasayana* [33] can be indicated for preventing mental disorders. It gives the detail knowledge about what to do, what should not to do and how to live. Following the code of right conducts described in Ayurveda is highly effective in reducing the diseases and helps to live healthy life. By following *Sadvritta*, the person can achieve two aims together such as *Arogya* (health) and *Indriya Vijaya* (control over the sense organs).

CONCLUSION

It may be concluded by going through the above description` that in modern era occupational diseases/hazards are more likely to happened because of increase in occupations and their types, use of various machines/ instruments and gazettes in different occupations in household and different industries. Occupational disorders can be prevented and/or well managed by judiciously practicing different measures like *Dinacharya*, *Ratricharya*, *Ritucharya* and *Sadavritta* as mentioned in ayurvedic classics as well as various practices of *Yoga* in day-to-day life.

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