



NAVAJATA SHISHU SAMSKARA FOR THE NEONATAL SENSORY  
DEVELOPMENT: A COMPREHENSIVE STUDY ON EARLY STIMULATION  
PRACTICES IN AYURVEDA

<sup>1</sup>Ayushi Patel

<sup>1</sup>Government Ayurved College, Raipur, C.G.

Review article

ABSTRACT

*Ayurveda*, the *Upaveda* of *Atharvaveda*, is the oldest and the most advanced system of medicine whose principles of treatment are relevant even in modern times. It is not only scientific but a holistic approach towards life from conception to death. The initial period after birth is a crucial period for the sensory development laying the foundation for cognitive, emotional and physical well being. For this, *Ayurveda* has a series of rituals which are practiced as soon as a newborn is delivered. These practices are collectively known as *Navajata Shishu Paricharya* or the *Navajata Shishu Samskara*. They have been designed for newborns in such a way that addresses the sensory aspects of the baby which later have an effect on the physical, mental and emotional aspects of a baby's development. This paper explores the profound significance of *Navajata Shishu Samskara* in engaging and nurturing the developing sense of a newborn. For example, *Ashmasanghattana* (striking two stones near the ear sends an auditory stimulus; *Parisheka* with Bala oil and sprinkling hot/cold water gives a tactile stimulus; *fumigation* by *Rakshoghna Dravyas* sends an olfactory stimulus to the baby because every *Dravya* has its own distinct smell; *Jatakarma*, *Svarnaprashnam samskara*, *Lehanam* for gustatory stimulus and *Krishnakapalikashoorpa* (winnowing basket made of black potsherd) although for stimulating respiration but the colour black also sends a visual stimulus because the babies eyes are initially sensitive to the high contrast provided by the black colour. By examining how these practices contribute to the sensory stimulation and development, we aim to shed light on the multifaceted impact of *Navajata Shishu Samskara* on early stimulation and sensory perception. Hence this paper specifically focuses on the role of *Navajata Shishu Samskara* in stimulating and enhancing the developing senses of the newborn.

**Keywords :** *Ayurveda*, *Navajata Shishu Samskara*, Sensory stimulation, Sense organs.

**INTRODUCTION:** *Ayurveda* is the science of life. It is a holistic approach towards a healthy life starting from the neonatal stage till death. In this whole life-span, human beings have to go through a series of events after birth, for example, education, marriage, having children etc. *Ayurveda* is considered as an *Upaveda* of *Atharvaveda*, which is the fourth one among the four *Vedas*. The concept of *Samskara* has originated from these *Vedas*

only. These *Vedas* have given an elaborated description of particular *Samskara* for each major life event. Each *Samskara* is considered a sacrament with specific purpose and significance. For example, as soon as a mother conceives, *Garbhasamskara* is initiated to develop and adapt the baby to the external environment in which he has to live ultimately. The moment a baby is delivered there is a series of rituals which are practiced for its adaptability to

the new world, these practices are known as *Navajata Shishu Paricharya* or *Navajata Shishu Samskara*. These practices are significant because the neonatal period is a very crucial phase of life. It lays the foundation for the further physical, cognitive and behavioural development of the child for his whole life. When we look into the individual practices described in the *Navajata Shishu Paricharya*, it looks like these practices not only resuscitate or adapt the newborn but also provide the sensory stimulation to the sense organs. This early sensory stimulation lays the foundation for the cognitive, emotional and physical development as it actively engages and nourishes the developing sensory pathways, thereby facilitating the maturation of the sensory organs, allowing the infants to explore the world around them. These early stimulus not only shape the immediate responses of the infant but also plays a pivotal role in establishing the neural connections that form the basis of future learning and behaviour.

#### AIMS AND OBJECTIVES

1. To study how the Navajata shishu Samskaras helps in the sensory stimulation of the newborn.
2. To explore how these early stimulation practices help in the cognitive development of the newborn.

#### MATERIALS AND METHODS

This study employs a multifaceted methodology, drawing insights from the classical *Ayurvedic* texts such as *Charaka Samhita*, *Sushruta Samhita* and *Kashyap Samhita*. Specific chapters and verses detailing *Navajata Shishu Samskara* are scrutinized for their impacts on the sensory pathways of the newborn. Additionally, contemporary research on early stimulation practices and sensory development in infants is

studied to establish parallels and enrich our understanding.

#### OBSERVATION AND DISCUSSION

##### Auditory stimulus

According to *Acharya Charaka*, *Pranapratyagamana* is the first ritual which is taken immediately after the birth. Under this practise, *Acharya Charaka* mentions the *Ashamnosanghattana* i.e. striking of the two stones near the base of the ear.<sup>[1]</sup> *Acharya Vagbhata* mentions the chanting of *Mantras* in the right ear of the newborn.<sup>[2]</sup> These two practices mentioned by the *Acharya* sends an auditory stimulus to the baby. Striking of the two stones near the mastoid or the base of the ear produces intense sound stimulating vestibule cochlear nerve. This nerve is a sensory nerve whose afferent branch carries sensation to its nuclei situated on the floor of the fourth ventricle. Chanting of the *Mantras* near the baby's ears also serves as an auditory stimulus to the baby.<sup>[3]</sup> The cochlea of the internal ear and the auditory cortex in the temporal lobe are the most important in the development of the auditory system. They are easily affected by the care practices in the neonatal period. The period from the 25 weeks gestation to 5-6 months of age is the most critical in the development of the neurosensory part of the auditory system. The auditory system requires the outside auditory stimulation.<sup>[4]</sup> Hence these practices described in *Ayurveda* are traditional way of giving an auditory stimulus to the newborn for the development of the auditory sensory development.

##### Tactile stimulation

Along with the striking of two stones, chanting *Mantras* to resuscitate the newborn, sprinkling of hot water (in winters) or cold water (in summers) on the face of the baby is mentioned as a resuscitative

procedure by Acharya Charaka. Acharya Vagbhata mentions *Parisheka* with *Bala* oil is done for the revival of the newborn. These procedures directly stimulate the skin of the newborn. Skin is the largest sensory organ and it has numerous sensory nerve endings. Sprinkling hot or cold water or *Parisheka* with *Bala* oil provides tactile stimulation to the newborn skin which helps in activating the nerve signals beneath the skin's surface that inform the body of textures, temperatures and touch sensations.<sup>[5]</sup> These stimulations directly or indirectly enables the babies to know more about the external world which further helps them to reach their developmental milestones faster as well aid in the development of the motor skills.<sup>[6]</sup>

**Olfactory stimulation :** In *Ayurveda*, while describing the *Sutikagara* in detail, it also mentions *Rakshakarman* which means the protection of the newborn and the new mother. Under this procedure, fumigation with *Rakshoghna Dravyas* is done in the *Sutikagara* daily.<sup>[7]</sup> According to Acharya Charaka, *Rakshoghna Dravyas* are also hunged on the door and also tied around the neck of the mother and baby.<sup>[8]</sup> Vagbhata follows Acharya Charaka with a slight addition, he has advised use of herbs such as *Brahmi*, *Indrayana*, *Jivaka* and *Rishbhaka* to be around the hands or neck of newborn.<sup>[9]</sup> Since all these *Ayurvedic drugs* are considered *Panchbhautika*, they also have all the five *Gunas* and works also through *Gandha guna*. The *Gandha Guna* is perceived by the *Ghranendriya* i.e the sense organ of olfaction.

Perception of smell during the early stage is an essential prerequisite for the adaptation of the newborn to the new extra uterine world. Few hours after birth and early neonatal period are crucial for olfactory

learning. Olfactory signals help the new born to distinguish his mother's odour from other odours. These signals are also responsible for the cortical activation in the brain.<sup>[10]</sup> The olfactory sense of the newborn is more developed than the other senses. The olfactory memory of the new born is also long lasting. More the newborn is exposed to different olfactory stimuli, more signals are sent towards newborn's brain which ultimately leads to the maturation of sensory pathway. Olfactory stimulation has also been found to be helpful in the development of the preferences towards a particular food in later life. Through fumigation practices, lighting fire outside *Sutikagara* with *Tinduka*, and tying different drugs in the hands and neck of mother, the newborn and his mother is not only protected from microbes but also the newborn is exposed to different odour of the different drugs which stimulates his olfaction and helps in the sensory development of the newborn.

**Gustatory stimulation:** In *Navajata Shishu Paricharya*, there are various rituals which can be considered as a gustatory stimulation to the newborn. For example, *Jatakarma*, *Swarnaprashanam*, and *Lehanam*. According to Acharya Charaka, *Jatakarma* is the first *Samskara* which is done after birth. It involves feeding the newborn, *Mantra* sanctified *Madhu* and *Ghrita*, followed by breastfeeding from the right breast.<sup>[11]</sup> Acharya Sushruta mentioned licking *Madhu*, *Ghrita* and *Ananta* on the second and third days while offering only a small amount of *Madhu* and *Ghrita* on the fourth day after that the newborn should be exclusively breast-fed.<sup>[12]</sup> Acharya Vagbhata follows Maharshi Sushruta with a slight variation that he suggests offering *Ghrita* and *Navneeta* to

the newborn on the fourth day followed by initiation of breastfeeding.<sup>[13]</sup> Acharya Kashyap has mentioned the Swarnaprashana in the Pushya Nakshatra of every month for the babies from 0-16 years.<sup>[14]</sup> Acharya Vagbhata also advised Hemadiprashana i.e feeding of Svarna with four groups of drugs.<sup>[15]</sup> These practices involves giving so many stimulations to the taste buds of the new born. The Swallowing of the amniotic fluid are the first chemosensory stimulus to the foetus and marks the beginning of the flavour learning. A similar response pattern is seen shortly after the birth and early days after birth. This period is significant in the flavour learning process. Not being exposed to the flavours of healthy foods in early life can have detrimental consequences. Taste occurs when chemicals come in contact with the taste receptors on the tongue, palate and throat and they send signals to the brain. The development of these chemical senses has inherent plasticity that interacts with early life experiences to shape and modify flavour and food experiences for the later life. Early flavour experiences influences the acceptances of food.<sup>[16][17]</sup> Hence we can say that exposing the newborn to different tastes by doing Jatakarma Samskara and Swarnaprashana Samskara in the early period is not only is responsible for their protection and nutrition but also responsible for the development of sensory pathways for the taste sensation.

**Visual stimulations:** Vision is the least developed sense at birth. In Ayurvedic procedure of Pranapratyagamana described by the Acharya Charaka, there is a practise of waving a Krishnakapalika Shoorpa ( a blackened surface broken earthen pot) until the baby is fully revived.<sup>[1]</sup> Studies suggest that infant colour perception points to

remarkably rapid visual and perceptual development in the early months after birth. Bold black colours stimulate the development of optic nerves and encourage young baby's cognitive development. Black colour provides high contrast with other colours/ patterns or visuals are easy for the infants to focus on and can encourage their vision development.<sup>[18]</sup> Hence we can say that although waving a Krishnakapalika shoorpa is for the resuscitation of the baby but the black colour also provides the visual stimulation to the newborn, because it is easier for the infants to focus on the high contrast objects during the early months. This forms the basis for highly trending black and white infant stimulation cards which are said to encourage the visual development. Krishnakapalika Shoorpa can be considered as the Ayurvedic version of this modern prevalent practise.

**CONCLUSION:** In conclusion, the Navajata Shishu Samskaras described in Ayurvedic texts encompass a series of practices that extend beyond mere resuscitation; they actively contribute to the sensory development of the newborn. Auditory, tactile, olfactory, gustatory, and visual stimuli are deliberately incorporated into these rituals, offering a holistic approach to early sensory stimulation. The practices not only engage the newborn's senses but also play a vital role in shaping neural connections, laying the foundation for cognitive, emotional, and physical development.

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### Corresponding

### Author:

Dr.Ayushi Patel,Government Ayurved College, Raipur, C.G.

Email: [aaayu1205@gmail.com](mailto:aaayu1205@gmail.com)

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