WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
Coden USA: WJPRAP Impact Factor 8.453
Volume 15, Issue 1, 66-77. Review Article ISSN 2277–7105

"ASSESSING THE PREVENTIVE ROLE OF SHADGARBHAKARABHAVAS IN AUTISM SPECTRUM DISORDER: A CRITICAL REVIEW"

Dr. Priyanka Katare[1], Dr. Priyanka Daundkar*[2], Dr. Deepak Khawale[3]

*[1]Post Graduate Student of Kaumarbhritya Department, Dr. D. Y. Patil College of Ayurved and Research Centre Pimpri, Pune; Dr. D. Y. Patil Vidyapeeth Pune (Deemed to be University), Pimpri, Pune 18.

[2]Associate Professor (PhD Scholar), Kaumarbhritya Department, Dr. D. Y. Patil College of Ayurved and Research Centre Pimpri, Pune; Dr. D. Y. Patil Vidyapeeth Pune (Deemed to be University), Pimpri, Pune 18.

[3]Professor, Kaumarbhritya Department, Dr. D. Y. Patil College of Ayurved and Research Centre Pimpri, Pune; Dr. D. Y. Patil Vidyapeeth Pune (Deemed to be University), Pimpri, Pune 18.

Article Received on 02 Dec. 2025,
Article Revised on 22 Dec. 2025,
Article Published on 01 Jan. 2026,

https://doi.org/10.5281/zenodo.18092299

***Corresponding Author**

Dr. Priyanka Daundkar

Associate Professor (PhD Scholar), Kaumarbhritya Department, Dr. D. Y. Patil College of Ayurved and Research Centre Pimpri, Pune; Dr. D. Y. Patil Vidyapeeth Pune (Deemed to be University), Pimpri, Pune 18.

How to cite this Article: Dr. Priyanka Katare[1]*, Dr. Priyanka Daundkar[2], Dr. Deepak Khawale[3]. (2026) "ASSESSING THE PREVENTIVE ROLE OF SHADGARBHAKARABHAVAS IN AUTISM SPECTRUM DISORDER: A CRITICAL REVIEW". "World Journal of Pharmaceutical Research, 15(1), 66–77.

ABSTRACT

Introduction: Autism Spectrum Disorder (ASD) is a growing pediatric concern characterized by impairments in social communication and repetitive behaviours. Ayurvedic principles, through **Shadgarbhakarabhavas** (six procreative factors), offer a holistic approach to prenatal care. This review focuses on the modifiable factors—**Rasaja** (nutrition), **Satmyaja** (environment), and **Sattvaja** (psychological health)—and their potential role in preventing ASD. **Methodology:** A review of classical Ayurvedic texts (Brihattrayi, Laghutrayi) and modern research (PubMed, Scopus) was conducted. The study critically analyzed the influence of Rasaja, Satmyaja, and Sattvaja Bhavas on fetal development and ASD prevention. **Results:** **Rasaja** (nutrition), **Satmyaja** (environment), and **Sattvaja** (psychological health) during pregnancy emerged as key factors in reducing ASD risk, aligning with both Ayurvedic teachings and modern science. **Conclusion:**

Shadgarbhakarabhavas offer actionable preventive strategies for ASD by targeting modifiable prenatal factors, advocating for an integrative approach with modern healthcare to improve maternal and fetal outcomes.

INTRODUCTION

According to Ayurvedic principles, the preparation of parents before conception is essential for ensuring a healthy progeny. Pre-conception care involves identifying and managing biomedical, behavioural, and social risks that impact both the mother and the baby. This holistic approach, which emphasizes both prevention and intervention before and during early pregnancy, aims to achieve optimal health outcomes for the child. In Ayurveda, the concept of Shadgarbhakarabhavas (six procreative factors) plays a significant role in this process. These factors—Matrija (maternal), Pitrija (paternal), Aatmaja (soul-related), Rasaja (nutritional), Satmyaja (environmental compatibility), and Sattvaja (psychological)—highlight that no single element can be solely responsible for the formation of a healthy fetus.[1] Instead, a confluence of these factors is necessary for the development of a healthy child, thus laying the foundation for a healthy family, society, and nation. One of the major pediatric concerns in the modern era is autism spectrum disorder (ASD), a neurodevelopmental disorder of unknown aetiology that begins in early childhood.

Autism is characterized by impairments in social interaction, communication, imagination, and behavioural patterns, with a wide range of symptoms and severities.[2] While some individuals with autism can live independently, others face significant disabilities requiring lifelong care. In addition, co-occurring conditions such as epilepsy, anxiety, and attention deficit hyperactivity disorder (ADHD) are common among autistic individuals, further complicating the quality of life for both patients and their caregivers.

From an Ayurvedic perspective, the Shadgarbhakarabhavas play a critical role in fetal development. While the Matrija, Pitrija, and Aatmaja Bhavas are determined by parental and past-life influences and cannot be modified, the other three factors—Satmyaja, Rasaja, and Sattvaja—are subject to intervention.[3] By properly managing these factors, it is possible to create a healthy intrauterine environment, thereby promoting the psychosomatic health of the mother and positively influencing fetal development.

Modern science now acknowledges that environmental factors can alter genetic expression, aligning with the Ayurvedic view that proper nurturing of these three Bhavas can prevent disorders such as autism.

Although no definitive medical or biological therapies are currently available for the treatment of ASD, focusing on preventive strategies is both cost-effective and scientifically rational.[2] In this context, the application of the Shadgarbhakarabhavas, particularly the modifiable Satmyaja, Rasaja, and Sattvaja factors, holds promise in reducing the risk of autism. This review critically examines the applied aspects of Shadgarbhakarabhavas in the prevention of autism.

MATERIAL AND METHODS

Data were sourced from classical Ayurvedic texts (Brihattrayi, Laghutrayi, and commentaries) and modern databases (PubMed, Scopus, WHO, APA reports). Findings from Ayurveda were cross-referenced with contemporary autism research to identify overlaps and gaps. This analysis informs recommendations for integrating Ayurvedic principles with modern autism prevention strategies.

Review Of Literature

Shadgarbhakar Bhava

1. Matrija Bhava

- Matrija Bhava encompasses the maternal contributions to fetal development, particularly structural components such as skin, muscle, blood, adipose tissue, and vital organs like the heart, pancreas, kidneys, and the gastrointestinal system. Ayurveda postulates that these elements are inherited from the mother, emphasizing the importance of maternal health during conception and gestation.[4]
- Modern research corroborates this concept, highlighting the role of maternal nutrition, health status, and environmental exposures in determining fetal development outcomes.
- Nutrient deficiencies or maternal illness can disrupt normal embryogenesis, potentially leading to developmental disorders. Within the context of neurodevelopmental disorders like Autism Spectrum Disorder (ASD), maternal factors such as nutritional deficiencies, infections, or toxin exposure during pregnancy may increase the risk of abnormal brain development, thereby predisposing the child to autism.[3]

2. Pitrija Bhava

- Pitrija Bhava refers to the contribution of the paternal genetic material to the fetus, influencing characteristics such as hair, nails, and the connective and vascular tissues. According to Ayurvedic texts, the father's genetic input is critical in determining the structural framework of the offspring.[5]
- From a contemporary biomedical perspective, paternal genetic inheritance plays a crucial role in the etiology of various neurodevelopmental disorders, including autism. Genetic mutations or abnormalities in paternal DNA, particularly those associated with brain development and synaptic function, have been implicated in autism. Studies have shown that advanced paternal age, leading to de novo mutations, may also contribute to an elevated risk of ASD in offspring.[3]

3. Atmaja Bhava

- Atmaja Bhava encompasses the contribution of the soul or consciousness to the fetus, influencing intrinsic aspects like intelligence (buddhi), memory (smriti), and psychological attributes (manas). Ayurveda considers the soul as the driving force behind the cognitive and emotional faculties of an individual, impacting their overall mental development and personality.[6]
- Concerning autism, the concept of Atmaja Bhava can be interpreted as encompassing the higher-order neurological functions that are affected in individuals with ASD, such as cognitive processing, emotional regulation, and social interactions. While modern medicine focuses on the neurobiological and genetic aspects of autism, Ayurveda's focus on the soul suggests a more integrative understanding of these developmental challenges, potentially opening avenues for holistic therapeutic approaches.[3]

4. Satmyaja Bhava

- Satmyaja Bhava pertains to the fetal adaptation to environmental and dietary factors. Ayurveda highlights the importance of the mother's environment, lifestyle, and diet in influencing fetal health, with an emphasis on harmony and balance during pregnancy.[7]
- Evidence from epidemiological studies supports the role of prenatal environmental exposures and maternal diet in shaping fetal neurodevelopment.[3] Exposure to teratogens such as heavy metals, pollutants, or excessive stress during pregnancy has been linked to adverse developmental outcomes, including autism. Satmyaja Bhava reinforces the

Ayurvedic emphasis on creating an optimal prenatal environment to mitigate the risk of neurodevelopmental disorders.

5. Rasaja Bhava

- Rasaja Bhava relates to the nourishment provided to the fetus through maternal diet and its effect on growth, vitality, and immunity. The quality of the maternal diet is crucial for the formation of Rasa Dhatu (nutritional essence), which supports fetal development.[8]
- Modern science recognizes the impact of maternal nutrition on fetal brain development. Essential nutrients like folate, omega-3 fatty acids, and vitamins play a pivotal role in neurodevelopment. Deficiencies in these nutrients during critical windows of brain development have been linked to increased risks of neurodevelopmental disorders, including autism.[3] Rasaja Bhava aligns with contemporary understanding of the necessity for optimal maternal nutrition during pregnancy to ensure favorable neurodevelopmental outcomes.

6. Sattvaja Bhava

- Sattvaja Bhava refers to the mental and emotional stability inherited by the fetus, influenced by the mental state of the parents, particularly the mother during pregnancy. Ayurveda asserts that maternal psychological well-being has a profound impact on the psychological and emotional development of the child.[9]
- Psychiatric research supports the notion that maternal mental health, particularly during the prenatal period, can affect fetal brain development and increase the risk of developmental disorders. High levels of maternal stress, anxiety, or depression have been associated with altered neurodevelopment, potentially increasing the risk for autism.[3]
- This correlation underscores the importance of Sattvaja Bhava in the prenatal care paradigm, advocating for psychological well-being as part of holistic prenatal care. Autism Spectrum Disorder (ASD)

Autism Spectrum Disorder[2]

Autism Spectrum Disorder is a complex neurodevelopmental condition characterized by deficits in social communication and the presence of restricted, repetitive behaviors. The prevalence of ASD has been rising globally, with an estimated 1 in 100 children affected. The spectrum nature of autism reflects varying degrees of severity and diverse manifestations of the condition.

Aetiology and Risk Factors

- The aetiology of autism is multifactorial, involving both genetic and environmental factors. Extensive research has identified numerous genes associated with synaptic function, neural development, and neurotransmitter systems that are implicated in the pathogenesis of autism.
- Furthermore, epigenetic mechanisms, particularly those influenced by environmental exposures during pregnancy, have been recognized as potential contributors to the disorder. Paternal factors, such as advanced age and genetic mutations, as well as maternal influences like nutritional deficiencies and prenatal exposure to toxins, are also significant risk factors for ASD.
- The hypothesis of a link between autism and vaccinations, particularly the measles, mumps, and rubella (MMR) vaccine, has been definitively disproven by large-scale epidemiological studies. Current scientific consensus firmly supports the safety of vaccines in relation to neurodevelopmental outcomes.

Diagnosis and Management

- Autism is diagnosed based on the identification of core behavioral symptoms, typically emerging in early childhood. Early diagnosis, often by the age of 2, is critical to ensuring timely intervention and better prognostic outcomes. Standardized diagnostic tools, such as the Autism Diagnostic Observation Schedule (ADOS) and Autism Diagnostic Interview-Revised (ADI-R), are commonly used to assess and diagnose ASD.
- Management of autism typically involves a multidisciplinary approach, integrating behavioral therapies, speech and language interventions, and educational support. Early intensive behavioral interventions, such as Applied Behavior Analysis (ABA), have been shown to improve social, communication, and adaptive skills.
- Pharmacological interventions may be considered for comorbid conditions such as anxiety, attention-deficit/hyperactivity disorder (ADHD), or epilepsy, which are frequently associated with autism. Public Health and Rights Individuals with ASD have the right to access comprehensive healthcare and social support systems, in line with the highest attainable standard of physical and mental health. Despite this, many individuals with autism face barriers to accessing appropriate medical care, educational opportunities, and social inclusion.

- Public health initiatives focused on raising awareness, early diagnosis, and fostering inclusive environments are critical to improving the quality of life for individuals with autism.
- Understanding the intricate interplay between the Ayurvedic concept of Shadgarbhakar Bhava and modern interpretations of autism offers a unique perspective on the developmental origins of neurodevelopmental disorders.
- This integrative approach underscores the potential for developing preventive and therapeutic strategies that combine Ayurveda with contemporary scientific knowledge.

RESULT

Modern medical science identifies three critical phases of intrauterine growth: the zygote, embryo, and fetus. Each phase is influenced by factors such as genetic constitution, maternal nutrition, placental function, uterine capacity, and environmental exposures (e.g., infections like rubella or toxins like alcohol). Period I (zygote phase, weeks 1-2) focuses on cell division and implantation. Period II (embryonic phase, weeks 3-8) is critical for organogenesis, and exposure to teratogens during this period can cause major congenital malformations. Period III (fetal phase, weeks 9-38) involves further growth and maturation, with minor anomalies resulting from teratogen exposure.

The tables below emphasize the importance of Shadgarbhakar Bhavas from an Ayurvedic perspective, specifically focusing on their role in the prevention of ASD. The Ayurvedic concepts of diet, lifestyle, mental state, genetics, and karmic influences provide a holistic framework for preventing neurodevelopmental issues like ASD.

Matrija Bhavas and Prevention of ASD[3][10]

Matrija Bhava	Ayurvedic Description	Impact on Prevention of ASD
Vaya (Age)	Vriddha matru vaya (advanced maternal age) increases risks.	Elevated risk of manasa and sharirika vikriti (neurodevelopmental disorders) such as ASD.
Aahar-Vihar (Diet and Lifestyle)	Shuddha matru aahar-vihar (pure lifestyle and balanced diet).	Supports healthy fetal buddhi-vikara (mental development) and reduces risk of ASD.
Kula (Genetic Lineage)	Ati-sambandha (consanguineous marriage) leads to dosha prakopa (vitiation of doshas).	Increased risk of janmaja roga (congenital disorders) like ASD.

Pitrija Bhavas and Prevention of ASD[3][11]

Pitrija Bhava	Ayurvedic Description	Impact on Prevention of ASD
Vaya (Age of Father)	Vriddha pitru vaya (advanced paternal age) increases dosha vitiation.	Higher risk of beejadusti (genetic mutations) contributing to ASD.
Beeja Dosha (Genetic Defect)	Vitiated shukra (abnormal sperm) due to dosha prakopa.	Leads to abnormal buddhi-vikriti (cognitive impairments) associated with ASD.
Parisarika Karaka (Environmental Factors)	Ashuddha parisarika dosha (environmental toxins).	Increases risk of garbha dosha (fetal abnormalities) linked to ASD.

Atmaja Bhavas and Prevention of ASD[3][12]

Atmaja Bhava	Ayurvedic Description	Impact on Prevention of ASD
Atma (Soul)	Atma-janma vichar (karma from past life influencing health).	Explains idiopathic or untraceable causes of manasa vikara (psychological disorders) like ASD.
Karma	Purva janma karma (past life deeds affecting current birth).	Karmic influence may explain idiopathic cases of ASD.

Satmyaja Bhavas and Prevention of ASD[3][13]

Satmyaja Bhava	Ayurvedic Description	Impact on Prevention of ASD
Kalasatmya (Seasonal and Timing Suitability)	Proper ritu and kala (timing) for conception.	Prevents vikriti (disorders) due to ritu-asatmya (improper seasonal timing), reducing ASD risk.
Deshasatmya (Suitability to Region)	Adaptation to desa (geographical region).	Prevents pratiloma vikara (genetic disorders) arising due to improper adaptation to regional factors.
Sahaja Satmya (Hereditary and Family Suitability)	Kulaja dosha (hereditary disorders).	Prevention of ASD through minimizing genetic risks linked to specific populations or tribes.
Modern Insight	Epigenetic factors influencing dhatu vikriti (genetic variations).	Ensures optimal fetal development by addressing beejadosha (genetic influences) linked to ASD.

Rasaja Bhavas and Prevention of ASD[3][14]

Rasaja Bhava	Ayurvedic Description	Impact on Prevention of ASD
Aahara Rasaja Bhava (Dietary Influence)	Balanced diet influences sapta dhatus (seven tissues).	Proper nourishment of garbha (fetus) prevents manasa dosha (mental disorders) like ASD.
Vata-Vruddhikara Aahar (Vata-Aggravating Diet)	Ruksha aahar (dry, light foods).	Increases vata dosha, leading to buddhi-vikriti (neurological issues) linked with ASD.
Kapha-Vruddhikara Aahar (Kapha-Aggravating Diet)	Guru, snigdha aahar (heavy, oily foods).	Kapha vruddhi (increase) may lead to genetic defects predisposing the child to ASD.

Modern Insight	Exposure to toxins and madhya (alcohol).	Toxins during pregnancy cause garbha vikara (fetal anomalies) linked to ASD.

Sattvaja Bhavas and Prevention of ASD[3][15]

Sattvaja Bhava	Ayurvedic Description	Impact on Prevention of ASD
Manasa Prakriti (Parental Mental Temperament)	Shuddha or ashuddha manasa guna of parents affect fetus.	Proper manasa vikara (mental development) of the child prevents psychological disturbances like ASD.
Garbhini Vritti (Mental State of Mother)	Mother's mental state during pregnancy (garbhini paricharya).	Positive impressions reduce manasa vikriti (mental issues) and ASD risk.
Purva Janma Karma (Past Life Karma)	Influence of past life's karma on the current birth's mental and psychological health.	Karmic influences may explain idiopathic cases of ASD.
Dauhrida Bhava (Special Desires of Pregnant Woman)	Non-fulfillment of pregnant woman's desires (dauhrida vrutti).	Suppressing dauhrida bhava impacts manasa dosha, leading to mental disorders like ASD.
Modern Insight	Maternal stress influencing vata and manas.	Elevated stress increases risk of manasika vikara (mental disorders) like ASD and ADHD.

DISCUSSION

Autism Spectrum Disorder (ASD) is an increasing concern in pediatrics, marked by social, behavioral, and cognitive impairments. Ayurveda's Shadgarbhakarabhava framework provides a preventive approach to fetal development, particularly through the modifiable Rasaja, Satmyaja, and Sattvaja Bhavas—which focus on maternal nutrition, environment, and mental well-being.

Rasaja Bhava underscores the role of maternal nutrition in fetal physical and cognitive development. A balanced diet, aligned with the mother's Dosha, supports the development of the seven Dhatus (tissues), including the brain, preventing conditions like Vata vruddhi, which are linked to neurological disorders like autism.

Satmyaja Bhava emphasizes environmental harmony during pregnancy. An environment that aligns with the mother's constitution fosters healthy fetal growth, while exposure to environmental toxins and seasonal imbalances can lead to Garbha vikara (fetal abnormalities) and increase the risk of neurodevelopmental issues, such as autism.

Sattvaja Bhava relates to the psychological well-being of the mother during pregnancy. Practices like Garbhini Paricharya (pregnancy care) are vital in maintaining mental and

emotional balance, reducing stress, and preventing Manasa Vikara (mental imbalances) in the mother that could predispose the child to psychological disorders, including autism.

Ayurveda's focus on the modifiable Rasaja, Satmyaja, and Sattvaja Bhavas presents a proactive framework to reduce the risk of ASD and support healthy fetal development.

CONCLUSION

Ayurveda's Shadgarbhakarabhava framework provides valuable insights into preventing autism by focusing on modifiable factors like rasaja, satmyaja and satwaja bhava. By optimizing these aspects, Ayurveda offers a holistic approach to reduce the risk of neurodevelopmental disorders like ASD. This preventive strategy underscores the importance of prenatal care rooted in both physical and mental health, aligning with Ayurvedic principles to ensure the healthy development of the child.

REFERENCE

1. Agnivesha. *Charaka Samhita*, Reprint Edition. In: Sharma PV, editor. Sharir sthana, Khuddikagarbhavakranti Adhyaya; Chapter 3, Verse 3. Varanasi: Chaukhambha Orientalia; 2011.
2. World Health Organization (WHO). Autism spectrum disorders [Internet]. 2023 [cited 2024 Sep 20]. Available from: https://www.who.int/news-room/fact-sheets/detail/autism-spectrum-disorders
3. Dhiman K, Kumar A, Dhiman KS. Shad Garbhakara Bhavas vis-a-vis congenital and genetic disorders. Ayu., 2010 Apr; 31(2): 175-84. doi: 10.4103/0974-8520.72384. PMID: 22131707; PMCID: PMC3215361.
4. Agnivesha. *Charaka Samhita*, Reprint Edition. In: Sharma PV, editor. Sharir sthana, Khuddikagarbhavakranti Adhyaya; Chapter 3, Verse 6. Varanasi: Chaukhambha Orientalia, 2011.
5. Agnivesha. *Charaka Samhita*, Reprint Edition. In: Sharma PV, editor. Sharir sthana, Khuddikagarbhavakranti Adhyaya; Chapter 3, Verse 7. Varanasi: Chaukhambha Orientalia, 2011.
6. Agnivesha. *Charaka Samhita*, Reprint Edition. In: Sharma PV, editor. Sharir sthana, Khuddikagarbhavakranti Adhyaya; Chapter 3, Verse 8. Varanasi: Chaukhambha Orientalia, 2011.

7. Agnivesha. *Charaka Samhita*, Reprint Edition. In: Sharma PV, editor. Sharir sthana, Khuddikagarbhavakranti Adhyaya; Chapter 3, Verse 11. Varanasi: Chaukhambha Orientalia, 2011.
8. Agnivesha. *Charaka Samhita*, Reprint Edition. In: Sharma PV, editor. Sharir sthana, Khuddikagarbhavakranti Adhyaya; Chapter 3, Verse 12. Varanasi: Chaukhambha Orientalia, 2011.
9. Agnivesha. *Charaka Samhita*, Reprint Edition. In: Sharma PV, editor. Sharir sthana, Khuddikagarbhavakranti Adhyaya; Chapter 3, Verse 13. Varanasi: Chaukhambha Orientalia, 2011.
10. Role of Maternal Nutrition in Fetal Development – This article examines the influence of maternal nutrition on fetal outcomes, aligning with the Ayurvedic concept of Rasaja Bhava.

    Reference: Barker, D.J.P. (1998). *Maternal Nutrition and the Fetal Origins of Adult Disease*. J R Soc Med., 91(11): 581–585.
11. Paternal Age and Autism Risk – This study explores the connection between advanced paternal age and an increased risk of autism, providing evidence for the Ayurvedic understanding of Pitrija Bhava. Reference: Reichenberg, A., et al. (2006). *Advancing Paternal Age and Autism*. Archives of General Psychiatry, 63(9): 1026–1032.
12. Prenatal Environmental Exposures and Autism – A review highlighting the link between prenatal environmental factors and autism risk, corresponding with the concept of Satmyaja Bhava. Reference: Shelton, J.F., Hertz-Picciotto, I., Pessah, I.N. (2012). *Tipping the Balance of Autism Risk: Potential Mechanisms Linking Pesticides and Autism*. Environmental Health Perspectives, 120(7): 944–951.
13. Psychological Stress During Pregnancy and Neurodevelopment – This paper discusses how maternal psychological health during pregnancy can affect fetal brain development, aligning with Sattvaja Bhava. Reference: Sandman, C.A., Glynn, L.M., Davis, E.P. (2013). *Is There a Critical Period for Maternal Stress? Impacts on the Offspring in Context of the Developmental Origins Hypothesis*. International Journal of Environmental Research and Public Health, 10(7): 3041–3078.
14. Genetic Factors in Autism – A comprehensive review of genetic contributions to autism, relevant to the concept of Pitrija Bhava. Reference: Geschwind, D.H. (2011). *Genetics of Autism Spectrum Disorders*. Trends in Cognitive Sciences, 15(9): 409–416.
15. Early Diagnosis and Behavioral Interventions in Autism – This article focuses on the importance of early intervention and behavioral therapy in the management of autism,

which corresponds to the holistic view of child development in Ayurveda. Reference: Dawson, G., Rogers, S., Munson, J., et al. (2010). *Randomized, Controlled Trial of an Intervention for Toddlers with Autism: The Early Start Denver Model*. Pediatrics, 125(1): 17–23.