



## Review Article

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### A REVIEW ON URBAN CHILD SYNDROME: A SIDDHA PERSPECTIVE ON MANAGING THE IMPACT OF URBANIZATION ON CHILDREN

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#### ABSTRACT

Urbanization has brought about significant transformations in lifestyle and environment, it catalyze major health difference in children those living in metropolitan areas. The term "Urban Child Syndrome" refers to a range of physical, mental, and emotional health issues resulting from urban stress factors such as pollution, overuse of technology, academic pressure, and lack of nature exposure. In this study we understood the concept and causative agents of urban child syndrome then explore the Siddha system's interpretation of modern paediatric urban health issues. This article is mainly based on a qualitative narrative review of traditional siddha literature and contemporary studies on child health in urban settings. This study suggest herbal remedies, thokkanam (oil massage), traditional diet and nutrition, Yoga and Kayakalpa, Lifestyle Regulation for UCS. The symptoms of Urban Child Syndrome closely align with Vali and Azhal imbalances in Siddha theory, manifesting as restlessness, poor digestion, disturbed sleep, and irritability. Siddha medicine offers a time-tested, holistic approach to restore balance and promote long-term health in children affected by urbanization

**Keywords:** Urban Child Syndrome, Siddha medicine, urbanization, child health, traditional healing, Siddha paediatric

#### INTRODUCTION

Urbanization refers to the increased number of people driven by factors such as industrialization, modernization, and economic development. While urbanization brings infrastructure development and access to better services, those also impose challenges such as increased pollution, sedentary living, digital overexposure, altered diets, and reduced social bonding. These factors contribute to a range of physical, emotional, and behavioral issues in children collectively understood as Urban Child Syndrome.<sup>1</sup>

Understanding these effects is crucial for creating policies that protect children's well-being in rapidly growing cities. Rapid urban development has revolutionized society, but it has also introduced new health challenges for children. These include increased cases of asthma, obesity, behavioral issues, developmental delays, sleep disturbances, anxiety, irritability, respiratory complaints, poor immunity, and social withdrawal. Although not officially defined in modern medical texts, it is increasingly recognized by pediatricians and mental health professionals.<sup>2</sup>

"Urban Child Syndrome" is an emerging conceptual framework that encapsulates these issues. The Siddha system of medicine, one of the oldest traditional systems in India, offers a holistic framework to understand and manage such syndromes. It addresses imbalances in the body's humours (Vali, Azhal, Iyyam) and emphasizes harmony between body, mind, and environment.

#### Understanding Urban Child Syndrome

Urban Child Syndrome is not an officially recognized medical diagnosis, but it is a conceptual term used to describe the physical, mental, emotional, and behavioural issues that children commonly experience due to the challenges of urban living.<sup>3</sup>



**Image 1: Urbanization vs Nature – Impact on child health**

#### Definition

Urban Child Syndrome refers to a collection of health and developmental problems observed in children who are raised in highly urbanized environments, where factors like pollution, noise, crowding, reduced outdoor activity, academic pressure, digital addiction, and limited family interaction affect their overall well-being.

#### Urban Child Syndrome is characterized by

Respiratory issues due to air pollution  
Attention disorders and vision problems linked to screen overexposure  
Poor nutrition and obesity from processed food consumption  
Sleep disturbances and emotional imbalances caused by stress  
Reduced physical activity and social interaction



Image 2: Children exposed to urban air pollution

**Contributing Urban Factors**

**Environmental Pollution:** Constant exposure to vehicular and industrial pollution affects respiratory conditions like Asthma and bronchitis

**Digital Overload:** Prolonged screen time impairs vision, sleep cycles, and social behaviour and cognitive development.

**Academic Pressure:** High expectations in urban education systems increase stress and anxiety.

**Sedentary Lifestyle:** Limited open spaces reduce children's physical activity.

**Dietary Changes:** Fast food and packaged meals lead to nutritional deficiencies, Obesity and digestive problems.

Table 1: Common symptoms of Urban child syndrome

Domain	Symptoms and Signs
Respiratory System	Increased Asthma and allergies
Mental health	Anxiety, Depression, Mood swings, poor self-esteem
Behavior	Aggression, Hyperactivity, Social withdrawal
Central Nervous System	Cognitive delays, Attention deficit (ADHD)
Immune System	Poor immunity, frequent infections
Sleep	Poor sleep quality due to noise and screen time
Gastro Intestinal System	Obesity, undernutrition

This article is based on a qualitative narrative review of traditional Siddha literature and contemporary studies on child health in urban settings.

**Siddha Medicine Perspective**

In Siddha, disease results from an imbalance of the three doshas: Vatham (vadha), Pitham (Pitha), and Kabham (Kabha). Urban lifestyles typically elevate Pitham (heat/stress) and Vatham (movement/instability), leading to mental and physical disturbances in children.

**Management Through Siddha**

**Herbal Remedies:** Brahmi (*Bacopa monnieri*), Aswagandha (*withania samnifera*), and Vallarai (*centella asiatica*) for cognitive and emotional stability.

Nilavembu (*Andrographis paniculata*), Adathodai (*Adhatoda Vasica*) and Thoothuvalai (*Solanum trilobatum*) for respiratory health.

**Thokkanam (Therapeutic Massage):** Improves circulation, calms the nervous system, and supports growth.

**Traditional Diet and Nutrition:** Inclusion of millet-based foods, herbal teas, and seasonal vegetables.

**Yoga and Kayakalpa:** Enhances mental focus, emotional control, and physical flexibility.

**Lifestyle Regulation:** Structured routines, reduced screen time, nature-based activities.

**Siddha Literature**

**Traditional Bathing Practices in Siddha Medicine**

According to Siddha texts, bathing should be done early in the morning, before sunrise. Morning baths are considered the most

beneficial for overall health. However, due to heat and physical activity during the day, it is also essential to wash the body parts in the evening to remove dirt and sweat. For those engaged in intense labor, a full-body bath with warm water in the evening is more beneficial than just washing body parts. It also promotes sound sleep.<sup>2</sup>

Bathing should be done by pouring water over the head, using water stored in earthen pots so that the entire body gets wet. Partial baths, where the head remains dry while only the body is washed (called Kanda Snamam) are discouraged. This is because any moisture left on the body without washing the head can spread internal heat unevenly and cause discomfort or illness. For patients, children, and the elderly, or for those who have applied medicinal oils over the body, warm water must be used. Bathing should be adapted to seasonal changes, regional climate, and individual body types. The water may be infused with neem leaves, gooseberry (amla), or lime or mixed with lime powder, as per requirement. Bathing in natural water bodies like rivers, ocean confluences (sangamam), etc., is highly revered in ancient texts for its purifying effects.

In Southern India, it is customary for women to bath using turmeric paste. As mentioned in the text Patharthaguna Chintamani, this practice helps eliminate body odor, facial skin issues, phlegm-related disorders, and sweat-related impurities. As per Panchakarpa tradition, a decoction made by boiling kasturi, turmeric, black pepper, neem seeds, kadukkai (haritaki) peel, and amla lentils in cow's milk can be applied to the scalp during bathing. This practice is believed to prevent diseases completely. Oils such as castor oil, traditional herbal oil mixtures (mukkuttu nei), cow's ghee, and other high-quality medicated oils can be applied twice a week before bathing. Even if one feels slightly weak after such oil baths, it enhances the function of the five sense organs, relieves headaches, strengthens knees and hair roots and improves hair growth. Daily abhyangam (oil massage) nourishes the skin, removes dryness, and enhances bodily strength and glow. It is also effective in preventing conditions such as lethargy, kapha disorders, glandular swellings (thirithodaththondham), indigestion, and dental diseases.

Today, many people use commercially available fragrant soaps, which often contain high levels of lime, which can damage the skin. Hence, it is advised to use soap varieties that contain minimal harmful chemicals and are proven beneficial through experience. If water has high salt content, it cannot properly cleanse oil or dirt, making soap ineffective. In such cases, grain-based scrubbers should be used instead.

For proper cleansing with fragrance, use herbal scrub powders made of green gram flour, vetiver (khus root), sandalwood, korai kizhangu, carpoga arisi, kuruvai root or kichili kizhangu, mixed and ground into a fine powder called "Nalangu Maavu." This traditional bath powder serves as an effective and natural replacement for modern soaps, offering a pleasant fragrance.

**Traditional Bathing Method (Kuliyal)**

After oil application and allowing it to absorb for some time, boil mango leaves in water. Cool the water appropriately and store it in two wide bathing tubs. First, scrub the body using herbal powders so the oil is removed. Then, immerse in the first tub to soak the entire body. After that, immerse in the second tub to complete the cleansing. After bathing, immediately wipe off water and sweat using a clean cloth. Change into dry and clean clothes without delay. Failing to dry off promptly may expose the body to cold air, leading to issues like chills, fever, or cold-related illnesses.<sup>4</sup>

### Pranayamam in Siddha

Prana = vital energy

Ayamam = regulation or expansion

It involves controlled inhalation, retention, and exhalation to harmonize bodily functions.

In Siddha medicine, Prāṇāyāma (breath regulation) is explained in detail. Thirumoolar, in his Thirumandiram, beautifully describes the process:

Pooragam (Puraka) → Inhalation of external air.

Kumbagam (Kumbaka) → Holding the breath inside.

Resagam (Rechaka)→ Exhalation of the breath.

Time Ratio for Prāṇāyāma

According to the verse, the time taken for each stage is:

Stage	Action	Time Count
Pooragam (Puraka)	Inhalation	16 Mathirai
Kumbagam (Kumbaka)	Holding the breath	64 Mathirai
Resagam (Rechaka)	Exhalation	32 Mathirai

Thus, the correct ratio is: Pooragam:Kumbagam:Resagam = 1 : 4 : 2<sup>5</sup>

### Siddhar Yoga

In Siddha, through the practice of Yogāsana, the internal organs of the body become strong. Unnecessary fat accumulation does not occur. The body grows in a well-shaped, healthy, and disease-free manner. Yogāsanas promote proper blood circulation throughout all parts of the body. As a result, the practitioner develops agility, mental clarity, improved memory, and alertness. To practice Yogāsana correctly, guidance from a well-trained teacher is essential. Practicing wrongly without proper supervision may lead to harmful effects. Yogasanas should not be practiced immediately after eating a heavy meal. It should be done only after a few hours of digestion. Similarly, the practice should not be done when the bladder or bowels are full; these should be emptied before beginning. While practicing, one should avoid breathing through the mouth; inhalation and exhalation must be done through the nose.<sup>6</sup>The place of practice should be well-ventilated and free from suffocation. People who regularly practice Yogāsana often live without premature greying of hair, cataracts, or early aging-related diseases. Yogāsanas not only help maintain the body in a healthy state but also prevent diseases from entering the body and assist in curing existing illnesses. "In Siddha, yoga is not just physical exercise, it is a science of body, mind, and spiritual evolution, deeply interlinked with medicine, lifestyle, and moral living. Yoga offers a natural, effective solution to support their physical, mental, and emotional development."<sup>7</sup>

### Siddha Diet and Nutrition

Urbanized children face unique challenges due to lifestyle, environment, and food habits. The Siddha system recommends time-appropriate foods (morning, afternoon, night) based on body needs and natural cycles. These traditional guidelines are highly relevant for modern urban children.<sup>8</sup>

1. Morning Diet – For Energy and Focus

Payaru (Pulses), Kadalai (Chickpeas), Thuvarai(Toor dal), Ulundhu (black gram), Ellu(Sesame seeds), mustard, Milagu (pepper), Perungayam (asafoetida)

2. Afternoon Diet – For Cooling and Digestion

Kizhangu(tubers), fruits, cooling foods, mild fermented products, buffalo curd, buttermilk

3. Evening/Night Diet – For Calmness and Sleep

Avarai pinju(Tender cluster beans), Aththikkai (Fig buds), cow's milk, drumstick buds, toor dal, Thoonthulangkai (Night shades)

### Siddha Detox Therapy

The traditional Siddha detox regimen

It involving vanthi (emetic therapy), pethi (purgation), nasiyam (nasal drops), and kaṇ marunthu or Anjanam (eye drops)

Emetic Therapy (Vamanam) - Given 6 Months once

Purgation (Viresanam) - Given 4 Months once

Nasal drops (Nasiyam) - Once in Month

Eye drops (Anjanam) - 3 Days once Before sunset

According to Siddha philosophy:

Vānthi reduces azhal (fiery temperament and digestion)

Pēthi reduces vāyu (imbalanced air/nerve activity)

Nasiyam brings down Iyyam (coldness, sluggishness in mind)

Eye drops or Anjanam enhances acuity of vision (clarity, both visual and mental)

These therapies must be used under proper Siddha physician guidance, especially for children. Dosages, herbs, and timings need to be customized for age and constitution (udal thāthukkal).

### DISCUSSION

Benefits of Siddha bathing in urbanized children are<sup>9</sup>

**Detoxification:** Daily herbal bathing with neem, turmeric, or vetiver helps cleanse pollutants and toxins from the skin. Prevents skin infections common in polluted urban environments.

**Balancing Body Heat:** Oil bath (Ennai Kuliya) reduces excess Pittam (heat) common in children living in hot, concrete-heavy urban areas. Cooling herbs (like vetiver or mint) in bathwater help regulate body temperature naturally.

**Enhancing Immunity:** Herbal baths improve skin health and strengthen the body's resistance to infections. Regular oil application and bath nourish the skin and nerves, supporting immune function.

**Improved Sleep and Mental Calmness:** Urban noise, screen exposure, and stress affect sleep. A warm bath before sleep calms the nervous system and improves sleep quality in children. Oil bath helps in relaxing the muscles and mind, reducing irritability and tantrums.

Promotes Hygiene and Mental Discipline

Incorporating daily bath as a routine (Nithya Karma) encourages discipline.

It instills awareness of personal hygiene, which is crucial in crowded urban settings with higher risk of infections.

**Promotes Holistic Well-being:** Siddha bathing is not just a physical cleansing; it's a therapeutic ritual. It: Builds routine and discipline Connects children with nature and tradition. Enhances parent-child bonding when done as a family practice. In urban environments siddha bathing is a natural antidote to stress, pollution, and lifestyle disorders. It aligns body, mind, and spirit—supporting a child's growth, immunity, and emotional balance.

### Pranayamam

#### Benefits of Pranayamam

**Respiratory Health:** Urban children are frequently exposed to pollutants and allergens. Prāṇāyāma strengthens lung function and reduces symptoms of asthma and bronchitis.

**Stress and Mental Health:** Children face academic pressure and social stress. Prāṇāyāma calms the nervous system, improves memory, sleep, and reduces anxiety.

**Lifestyle Disorders:** Obesity, poor digestion, and fatigue are common in urban setups. Breath regulation enhances Agni (digestive fire) and regulates metabolism.

**Immune Support:** By harmonizing body systems, Pranayama supports immune function, reducing susceptibility to infections. Prāṇāyāma, as described in Siddha medicine, is a simple yet powerful tool that aligns physical health and mental wellness. Its inclusion in urban child health protocols could offer a preventive, non-invasive, and cost-effective strategy for mitigating the negative impacts of urbanization. Further clinical validation and awareness programs can enhance its acceptance in mainstream paediatric care.

## Yoga

### Benefits of Yoga for Urbanized Children

#### Improves Physical Health

Enhances flexibility, strength, and posture.  
Reduces risk of obesity, asthma, and digestive problems.  
Helps in better immunity and resistance to frequent infections.

#### Enhances Mental Focus and Memory

Calms the mind, sharpens attention span, and boosts memory.  
Helps manage ADHD, learning difficulties, and exam anxiety.

#### Reduces Stress and Emotional Imbalance

Balances mood swings and reduces anger or sadness.  
Helps manage peer pressure, loneliness, and academic stress.

#### Improves Sleep Patterns

Relaxes the nervous system and promotes deeper, uninterrupted sleep.

Essential for growth, mood stability, and brain development.

#### Builds Confidence and Self-Awareness

Yoga teaches children to understand and respect their body and emotions.

Improves self-esteem, discipline, and mind-body coordination.

#### Connects Them to Nature and Inner Self

In an urban world of noise and distractions, yoga brings inner stillness. Encourages a balanced lifestyle away from gadgets and unhealthy habits.

Improve concentration and memory.

Reduce mental stress and screen-induced hyperactivity.

Strengthen immunity and prevent lifestyle disorders.

Cultivate moral values and emotional intelligence.

Yoga in Siddha is a comprehensive life science. It balances body, mind, and soul through ancient practices that remain highly relevant in today's urban, stressful world. For children especially, Siddha yoga builds a strong foundation for lifelong health and harmony.

Yoga helps urbanized children thrive in a high-stress environment by nurturing holistic well-being. Just 15–30 minutes a day can lead to lifelong health, calmness, and clarity.

## Diet

In Siddha Morning diet Provides plant-based protein for growth and muscle development, Improves concentration and memory – essential for school activities, Boosts digestion and metabolism which are often weak due to sedentary lifestyle.

Afternoon diet Balances body heat caused by environmental heat and physical exertion in cities, aids easy digestion during peak digestive time (midday), fruits and roots provide vitamins and minerals to fight pollution and stress, Buttermilk/curd promotes gut health and improves immunity.

Night diet Encourages deep sleep, which is often disturbed due to screen exposure or stress, soothes the nervous system, reducing

hyperactivity and anxiety, milk and mild vegetables support hormonal balance and bone health.

By following the Siddha principles of seasonal and time-appropriate food, urbanized children can develop, better immunity, healthy digestion, mental clarity, emotional stability, balanced growth.

### Siddha Detox Therapy – Benefits for Urbanized Children

Vandhi - Removes accumulated toxins from the stomach, counters junk food effects, reduces excess azhal (pitta-like fire energy) which is common in fast-paced urban lives

Pethi - Clears the bowels and digestive tract, improves metabolism and appetite, Reduces restlessness and hyperactivity  
Nasiyam - Stimulates brain function via the olfactory nerve, improves sleep and concentration, clears respiratory issues from polluted air

Kaṇ Maṛuntu - Relieves eye strain from screens, Enhances visual clarity and mental calm, Helps reduce stress and irritability

The symptoms of Urban Child Syndrome closely resemble with Vali and Azhal imbalances in Siddha theory, due to it manifesting as restlessness, poor digestion, disturbed sleep, and irritability. Siddha internal medicines like **Amukkara Choornam, Nilavembu Kudineer, Thalasadhi Choornam, and Aswagandha Lehyam** support immunity, digestion, and strengthen the nervous system. **Pattiyam** (dietary discipline or pathyam) helps regulate digestion and mental clarity; emphasis on traditional, seasonal, and sattvic foods is critical. **Thokkanam** (medicated massage) with herbal oils calms hyperactivity and enhances circulation. Siddha yoga and breathing exercises, such as Balasana are beneficial for emotional regulation and mental focus. A structured daily routine (**Kuliyal, food diet, Detox therapy**) aligned with Siddha guidelines promotes balance between body and environment. These approaches collectively form a non-invasive, culturally accepted framework to support urban children's health, emphasizing prevention over cure.

## CONCLUSION

Urban Child Syndrome has emerged as a significant health challenge in the modern world, reflecting the physical, mental, and emotional strain placed on children due to rapid urbanization. The shift from traditional lifestyles to fast-paced, technology-driven routines has contributed to poor dietary habits, reduced physical activity, increased stress, and exposure to environmental pollutants. These factors collectively disrupt the natural balance of body, mind, and spirit, leading to various chronic and lifestyle-related disorders among urban children.

Siddha medicine, one of the oldest traditional medical systems, offers a holistic and preventive approach to address this growing concern. Its emphasis on maintaining harmony among the three humors—Vatham, Pitham, and Kapham—along with guidance on balanced diet, seasonal regimen (Kaala Ozhukkam), and daily discipline (Nithya Ozhukkam), provides an effective framework for promoting child health in the urban environment. Siddha principles highlight the importance of natural foods, herbal remedies, proper sleep, yoga, and pranayama for both physical vitality and mental clarity.

Integrating Siddha concepts with modern pediatric care can offer a sustainable model for preventing and managing Urban Child Syndrome. Schools, parents, and healthcare professionals must collaborate to reintroduce traditional practices—such as nutritious indigenous foods, outdoor activities, and mindfulness routines—into children's daily lives. Through such integrative and culturally rooted approaches, we can cultivate resilience,

improve immunity, and ensure the holistic development of children growing up in urban settings.

In conclusion, Urban Child Syndrome is not merely a medical condition but a reflection of the imbalance created by modernization. By embracing the wisdom of Siddha medicine and encouraging a return to natural living, we can nurture healthier, happier, and more balanced future generations.

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