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## AYURVEDIC INTERVENTIONS FOR MALNUTRITION: ENHANCING INDIA'S NUTRITION PROGRAMS FOR CHILDREN

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#### **Keywords:**

Malnutrition, Nutrition programs, Balashosha, Phakka

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**ABSTRACT:** Malnutrition continues to be a significant public health concern, affecting the survival, growth, and well-being of both current and future generations, especially in developing nations such as India. This study examines the intricate characteristics of malnutrition, including insufficient and excessive nutrition, with a major emphasis on protein-energy malnutrition (PEM) in children, the high occurrence of stunting, wasting, and underweight conditions in children, based on data from the National Family Health Survey (NFHS-5) and multiple studies conducted in Jaipur. It emphasizes the notable gender discrepancies and socio-economic factors contributing to these conditions. Ayurveda emphasizes the significance of maintaining a well-balanced diet (Aahara) and recognizes the influence of Vata dosha in disturbing the process of digestion and absorption of nutrients, resulting in ailments like Karshya, Balashosha, and associated disorders. Ayurvedic therapies prioritize dietary alterations, herbal supplementation, and lifestyle adjustments to restore physiological equilibrium and enhance overall well-being. This article suggests incorporating Ayurvedic concepts into current government nutrition initiatives, such as POSHAN Abhiyaan and Pradhan Mantri Matru Vandana Yojana (PMMVY). Concrete suggestions encompass prenatal and postnatal care measures, guidelines for infant and toddler nutrition, and Ayurvedic therapeutic therapies aimed at improving maternal and child health outcomes. The integration includes customized nutrition regimens, prenatal yoga, herbal assistance, and educational workshops to promote comprehensive well-being. By integrating Ayurvedic principles with contemporary nutrition programs, this approach presents a hopeful plan to address the malnutrition epidemic in India by promoting long-term health and well-being, making a significant contribution to national development and the progress of public health.

**INTRODUCTION:** Growth and development are intimately correlated with nutrition. The greatest growth and development will occur throughout childhood. A child must receive appropriate nutrition supplements to meet the growing body's calorific needs.<sup>1</sup>



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Malnutrition, particularly protein energy malnutrition (PEM), poses significant challenges for children, exacerbated by various factors including poor habits and socio-economic issues. Malnutrition is referred to as a silent emergency <sup>2</sup>.

The term malnutrition encompasses excessive and insufficient nourishment, ranging from severe dietary deficits to obesity <sup>3</sup>. Approximately 155 million children (22.9%) and 52 million children (7.7%) worldwide are wasted and stunted, respectively. Children under five are becoming less nourished, with 11 out of 17 states experiencing a rise in stunting or chronic malnutrition, defined as

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low height relative to age. Thirteen out of 17 states have seen an increase in severely youngsters, a condition known acute malnutrition or wasting. At least 40% of children under five in Gujarat and Bihar are underweight, highlighting the need for improved nutrition and health outcomes for these vulnerable children <sup>4</sup>. 36% of children under age five years are stunted (short for their age); 19 percent are wasted (thin for their height); 32 percent are underweight (thin for their age); and 3 percent are overweight (heavy for their height) <sup>5</sup>.

Malnutrition is mostly caused by a poor diet and recurrent infections, which result in insufficient protein intake, carbohydrates, fats, and minerals. Children who are undernourished are more likely to severe and frequent experience infectious infections; even modest undernutrition raises the risk of morbidity and mortality in children. Longterm developmental issues in children can also result from chronic undernutrition. Undernutrition symptoms include thinning and dry hair, moon face, low sleep, pituitary hormone abnormalities, thyroid function changes, low body temperature, heart fat loss, lightheadedness, slow heart rate, mild anemia, fine-raised white hair, constipation, amenorrhea, brittle nails, subcutaneous fat loss, diminished muscle mass, dry skin, slower reflux, and edema <sup>6</sup>.

According to ancient Ayurvedic texts, one of the Trayopsthambha of life is Aahara (food) <sup>7</sup>. Ahara, Viharaja, and Mansika are the causes of undernutrition, according to Ayurveda. Energy production and the maintenance of living tissues are the two primary objectives of the Aahara. Vata dosha is the primary element to make children malnourished. Vitiated vata results in Rukshta and Agni mandyata that proceeds to cause improper digestion of food. This leads to emaciation in children as the body will not get appropriate nutrients. Emaciation of body fat and muscles results from undernutrition, which vitiates bodily tissues, causes dryness, and interferes with their ability to absorb nutrients <sup>8</sup>. The primary risk factor for this condition is Ahara Dosha; in particular, erroneous intake habits called Alpasana and Vishamasana lead to the development of Karshya. Karshya is a Vata-Pradhan Aptarpanjanya Vyadhi <sup>9</sup>. Malnutrition is referred to in Ayurveda as

Apatarpanjanya Vyadhis <sup>10</sup>. These conditions can be classified as *Karshya*, *Phakka*, *Parigarbhika*, and *Balashosha* depending on their severity and cause.

### **Prevalence of Malnutrition in Jaipur:**

- **1.** A cross-sectional study on 1007 under 5-year children, was conducted by Sharma et al in 2021 in Jaipur, and they found that 22.8% of children were malnourished <sup>11</sup>.
- **2.** Gupta *et al* in their record-based retrospective analytical observational study which was conducted in Jaipur in the year 2023, found that 86% of children out of 264 enrolled malnourished children were below 2 years of age group <sup>12</sup>.
- **3.** Pragati Chaudhary *et al.* conducted a community-based cross-sectional study from 2016 to 2017 in a slum area of Jaipur city, Rajasthan. A total of 2007 children aged 6-59 months were selected for the study. Among the screened children, 35.7% were found to be underweight, 43% were stunted, and 10.5% were wasted. Additionally, 2.5% of the children had severe acute wasting, and 8.0% had moderate acute wasting <sup>13</sup>.

# Different Disorders can be Corelated to Malnutrition in Ayurveda:

*Karshya*: It is a condition characterized by excessive emaciation, caused by factors such as a fat-free diet, excessive fasting, inadequate food intake, over-administering of *Sanshodhan* treatment or *Panchkarma* procedures, *Shoka*, *Ruksha udvartan*, *Krodha*, *Ativyayam*, *etc*.

Clinical features include Daurbalya, Dhamanijaladarshanam, Sthula parva, Nidra nasha, Shushka-sphika- udara-griva. Excessive emaciation can lead to Pleeharoga, Kasa, Kshaya, Shwasa, Gulma, Arsha, Udara roga, Grahani roga

**Principle of Treatment** <sup>15</sup>: Acharya Charak has advised *Brimhana* and *Laghu Santarpan*.

- 1. Daivyapashray- Gandha Malya Dharan.
- **2.** Yuktivyapashray- Nava anna, Nava Madhya, Gramya-anupa-audakamansa rasa, Dadhi,

Sarpi, shali, masha, godhuma, gud-vaikrit, Basti, Taila abhyanga, Udwartan, timely dosha-avasechan, rasayan.

**3.** Satvavjaya- Swapna, Harsha, Sukh shaiyya, Chinta viram, Priya darshan.

**Balashosha:** Balashosha is only described by Acharya Vagbhatta in his books Astangasangraha and Astangahridaya. Other Acharya like Charak and Sushruta discussed the term 'Shosha' and 'Krusha', Sharangadhara named it 'Gatrashosha' and 'Daurbalya' and Yogaratnakara termed it 'Karshyaroga' 16.

Ashtang Hridaya <sup>17</sup> and Ashtang Sangrahya <sup>18</sup> describe symptoms of Bala Shosha, including Arochaka, Pratishyaya, Jwara, Kasa, Shosha, Snigdha mukha, Snigdha netra, Suklamukha, and Suklanetra.

**Principle of Treatment:** Acharya Vagbhatta provides a comprehensive treatment plan for *Balashosha*, with a focus on addressing the root reasons, balancing the *Dosha*, and rejuvenating *Agni* at every level. The treatment is divided into two categories: one for the mother (*Dhatri*) and the other for the child.

**Treatment for Mother:** In *Ksheerapa* and *Ksheerannada*, breastfeeding is the mother's primary source of nourishment for her child. However, imbalanced doshas can impact the child's health. To prevent this, the mother should follow three steps: 1) *Nidana Parivarjana*, which prioritizes prevention over cure, 2) *Samsodhan Chikitsa*, which treats impaired or corrupted breast milk, and 3) *Samsarjana karma*, which includes a healthy and nutritious diet and the use of "*Stanya Sodhaka*" and "*Stanya Janana*" medications.

Acharya Kashyapa classifies Pathadi and Patoladigana as "Stanya Sodhaka" gana, while Acharya Charaka recommends medications with Tikta, Kashaya, Katu, and Madhura tastes for Stanya Shodhana. The Stanya Shodhaka Dasemani formula includes Patha, Shunthi, Devdaru, Musta, Murva, Guduchi, Kutaja, Kiratatikta, katurohini, and Sariva.

Treatment for Children: Ayurvedic treatment for children includes multiple modalities, including

Nidana Parivarjana, Samshodhana, and Basti treatment. In Balashoshaa, the Amarasa creation occurs due to the deterioration of Jatharagni states. leading to *srotasa* obstruction and increased *Kapha* dosha. Deepana-Pachana medicines, such as Chitraka, help disrupt the pathogenesis of Balashoshaa. Balashoshaa treatment prioritizes clean air, sunlight, proper cleanliness, and loving attention. Aushadhi Chikitsa, Anupana, powdered medications, and Aushadha can be used to treat Balashoshaa. Malnourished children and individuals with anorexia can also be treated using various herbal remedies and powdered substances.

**Dusthaand Kshina Stanya:** Nutritional deficit in children aged up to 1 year, known as *Ksheerapa*, is primarily caused by inadequate food or a lack of breast milk (referred to as *Kshina Stanya* or *Stanya Kshaya*). Malnutrition causes a decrease in both the amount and quality of breastfeeding, leading to insufficient production of bodily tissues (*Dhatus*) and imbalance of the *Vata dosha* <sup>19</sup>. As a result, this causes irregular digestion and extreme thinness. The *Kapha Dosha* <sup>20</sup>, which is responsible for the growth and development of children, might be further weakened if it is already weakened.

Sushka Revati <sup>21</sup>: The condition is characterized by a gradual wasting away of all bodily parts, accompanied by symptoms such as diarrhea, loss of appetite, changes in the skin, swollen nodules in the abdomen, and a condition known as geographic tongue. Personal hygiene procedures like as anointment, bathing, fumigation, seclusion, and cleaning of surrounds are employed to control it. Several medications such as Swarna Basant Malti, Shilajatvadi Lauha, Shringa Bhasma, Vardhaman Pippali, and medicated Ghrita are recommended.

**Phakka Roga:** Phakka is a term used to describe slow movement in children due to inadequate physical growth and alterations in psychomotor function. It is categorized into three groups: Kshiraja Phakka, Garbhaja Phakka, and Vyadhija Phakka. Kshiraja Phakka refers to malnutrition during infancy, while Garbhaja Phakka is a complication arising from various infant disorders. Vvadhiia Phakka is marked by extreme malnourishment, weak limbs, subcutaneous fat mobilization. increased stool and urination frequency, irritability. The chapter "Phakka Chikitsa Adhyaya" by Acharya Kashyapa discusses the treatment of Phakkaroga by balancing the Kapha and Vatadoshas. The treatment can be divided into two main categories: one for Dhatri (wet nurse) and the other for Balaka (child). The severity of Stanya vitiation in Dhatri is

caused by *Kapha Dosha*, resulting in symptoms like *Jadatva*, *Mukatva*, and *Pangutva Samprapti*. Agnimandya, caused by *Samprapti Vighatan*, *Dushta Stanya*, *Stanyabhava*, and other ailments, leads to undernourished *Dhatu*, resulting in a frail and malnourished body in infants.

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**TABLE 1: PREVIOUS CLINICAL STUDIES** 

| S. no. | Author                                 | Journal   | Title and Year   | Study type, Interventional   | Findings   |
|--------|--|---|--|--|--|
|        |  | Name  |  | groups, Route, Anupam,   | ****   |
| 1      | Renu B<br>Rathi et<br>al <sup>23</sup> | International<br>Journal of<br>Ayurvedic<br>Medicine  | A comparative study on the effectiveness of Pathadichurna and Protein powder in Karshya (Undernutrition) among preschool children 2023   | Randomized parallel group<br>open label, N=30, Group A-<br>15, <i>Pathadichurna</i> with one<br>cup of milk, Group B-15,<br>Protein powder with one cup<br>of milk   | With <i>Pathadichurna</i> , 66.67% of weight gain has been seen, while with Protein powder 60% of weight gain has been seen.   |
| 2      | Neha<br>Vats et al<br><sup>24</sup>    | Ayushdhara-<br>An<br>International<br>Journal of<br>Research in<br>AYUSH and<br>Allied<br>Systems | A clinical study to evaluate the effect of karshyahar yoga granules and ksheerbalatailaMatra Basti in karshyaw.s.r to undernutrition in children 2022                                | Open label, N=40 karshyahar yoga granules-130 mg/kg bd with milk & honey, ksheerbalataila Matra Bastiaccording to age, Age (years) -Dose 1. 2-3 - 15ml 2. 4-5 - 20ml 3. 6-11 - 40ml 4. 12-16 - 80ml  | 12.5% patients showed marked improvement, 42.5% patients showed moderate improvement and 45% patients showed mild improvement. No adverse effect of the trial drug was observed during the study |
| 3      | Sagar et<br>al <sup>25</sup>           | International<br>Ayurvedic<br>Medical<br>Journal  | Ayurvedic understanding<br>and management of <i>Karshya</i><br>(malnutrition) in children: A<br>case report. 2019  | Case study<br>N=01   | Significant changes were found in different parameters, including body weight, bowel status, generalized weakness etc., after 10 days of treatment.  |
| 4      | Bhagyas<br>hre<br>et al <sup>26</sup>  | Indian Journal<br>of Applied<br>Research  | Effectiveness of ayurvedic<br>nutritious therapy in<br>prevention and management<br>of malnutrition, illness<br>reduction and health<br>improvement of mothers and<br>children. 2019 | Randomized control trial N=2054 (1035-case, 1019- control), 4 groups A. 6 months-1 year child- 2.5 gm - ayurvedic kalp -twice a day. B. 1–3-year child- 2.5 gm - ayurvedic kalp - twice a day, 1 biscuit -5 gm - once a day. C. 3-6 years children- 2.5 gm ayurvedic kalp and 1 biscuit 5 gm twice daily. D. In women- 5 gm kalpa, 2 biscuits twice daily. | It was found that, weight has been significantly increased (case-97.1%, control-82.2 %)  Nutritional- increased (case-40%, control- 8.4 %)  Hb%- increased (case-91%, control-36.51%)            |
| 5      | Firke AR<br>et al <sup>27</sup>        | Journal of<br>Ayurvedic and<br>Herbal<br>Medicine   | An Exploratory Clinical Trial to Evaluate Efficacy of Kushmanda(Benincasa hispida) for weight gain in Malnourished Children. Journal of Ayurvedic and Herbal Medicine 2019           | An open end, randomized, controlled clinical study 2 groups a. <i>Kushmandkalpa</i> with regular diet, 10gm b. Regular diet only   | It has been found that the therapy used in the trial group, i.e.<br>Kushmandakalpa, is more effective in increasing weight than the regular standard diet group                                  |
| 6      | Kamlesh<br>mali et al                  | International Journal of Novel Research and development   | Ayurvedic Management of<br>Karshya -A case Report<br>2023  | A Single case study N=01 Dashmooladilehya- 2 teaspoon with Sukhousnajala; 3 times a day, diet (Ahara) &  | Significant improvement was seen as after treatment of one month there was 25.1 kg weight as compared to before treatment which was 22.8 kg. <i>Greeva</i> &                                     |

|    |                 | (IJNRD)                     |  | Vihara was planned                                       | <i>Udara</i> circumference also increase post one month treatment.         |
|----|-----------------|-----------------------------|--|--|--|
| 7  | Raj             | International               | Role of Mashadi Yoga in the                      | A Randomized Controlled                                  | Mashadi yoga B was more  |
| ,  | kumar <i>et</i> | Journal of                  | Management of Balashosha                         | Trial  | effective than <i>Mashadi yoga</i> A.                                      |
|    | $al^{29}$       | Research in                 | with Special Reference to                        | N=40(20 in each group)                                   |  |
|    |                 | Academic                    | Protein-Energy Malnutrition                      | 2 groups   |  |
|    |                 | World                       | in Children: A Randomized                        | a. <i>Mashadi yoga</i> A                                 |  |
|    |                 |                             | Controlled Trial<br>2024                         | b. <i>Mashadi yoga</i> B                                 |  |
| 8  | Arun Raj        | International               | Effectiveness of Ayurveda                        | A clinical study   | The study group showed a   |
|    | GR et al        | Journal of                  | intervention in the                              | N=27   | statistically significant result in  |
|    |                 | Research in                 | management of Karshya                            | 2 groups   | improving children's weight with   |
|    |                 | Ayurveda<br>Pharmacy        | (Grade I and II Under Nutrition) in children     | a. Study group 1. Deworming 2. Chitrakadivati ½ BD for 3 | Karshya than the control group.  AmritapraashaGhrita is effective          |
|    |                 | 1 Harmae y                  | 2019   | days 3. Amritprashaghrita 6ml                            | in improving weight and in   |
|    |                 |                             |  | BD<br>b. Home-based food along                           | reducing the associated complaints of <i>Karshya</i> like <i>Dourbalya</i> |
|    |                 |                             |  | with 1. milk-150 ml 2.                                   | (general weakness) and improving   |
|    |                 |                             |  | Seasonal fruit-1or2 3. egg - 1                           | Kshudha (appetite), Cheshta  |
|    |                 |                             |  | 2  | (interest in activities) and <i>Aakruti</i>                                |
|    |                 |                             |  |  | (appearance)   |
| 9  | Dinesh          | World Journal               | Clinical study to evaluate the                   | A clinical study   | Ashwagandha Modaka has a   |
|    | ram et al.      | of                          | efficacy of                                      | N=30   | Madhura Vipaka and exhibits  |
|    | 31              | Pharmaceutica               | ashwagandhamodaka in                             | Ashwagandha Modaka orally                                | Laghu and Snigdha qualities.   |
|    |                 | l and Medical Research.     | karshya<br>2020.                                 |  | These properties contribute to an increase in <i>Kanha</i> doshe in the    |
|    |                 | Research.                   | 2020.  |  | increase in <i>Kapha</i> dosha in the body, making <i>Ashwagandha</i>      |
|    |                 |                             |  |  | Modaka particularly beneficial in  |
|    |                 |                             |  |  | managing <i>Karshya</i> (emaciation or                                     |
|    |                 |                             |  |  | undernourishment).   |
| 10 | Divya S.        | International               | An Approach                                      | A single case study N=01                                 | Improvement was seen in terms of   |
|    | Gupta et        | Journal of                  | towardsManagement of                             | Lashunadivati 125 mg for 7                               | weight, height & MAC. Weight   |
|    | $al^{32}$       | Pharmaceutica               | Balshosha (Moderate Acute                        | days with luke warm water                                | before treatment was 10 kg and   |
|    |                 | l Research and Applications | Malnutrition) by Ayurveda regimen- A Single Case | Chaturjatisambharak4 gm BD with ghrita for 28 days       | after treatment was 10.8 kg, while height was 86 cm before treatment       |
|    |                 | 2022                        | Study  | RUTF+otherdiet for 28 days                               | and 87.3 cm after treatment. MAC   |
|    |                 |                             | 2022   | 113 11 . Gallet all the Land                             | increased from 13 cm to 13.5 cm.   |
| 11 | Dhanawa         | International               | To study the effect of                           | An open randomized                                       | ShatavaryadiChurna provides  |
|    | de et al 33     | journal of                  | Shatavaryadichurna in                            | controlled trial design                                  | greater relief than  |
|    |                 | research in                 | balakarshyaw.s.r. to under-                      | N=30   | VidaryadiChurna in symptoms like   |
|    |                 | Ayurveda and                | weight children                                  | 2 groups   | weight gain, loss of appetite  |
|    |                 | medical                     | 2019   | a. Shatavaryadichurna b.                                 | (Kshudhamandhya), and mid-upper  |
|    |                 | sciences                    |  | Vidaryadichurna  | arm circumference (MUAC) in cases of <i>Balkarshya</i> (childhood          |
|    |                 |                             |  |  | malnutrition). However, in terms of  |
|    |                 |                             |  |  | DhamanijalaPradarshan (visible   |
|    |                 |                             |  |  | veins), both groups showed equal   |
|    |                 |                             |  |  | effectiveness  |

Malnutrition, often known as *Karshya*, is a state marked by a sequence of physiological disturbances. The main dosha implicated is *Vata*, which can be exacerbated by circumstances such as inadequate food, stress, and excessive physical exertion. *Pitta* and *Kaphadoshas* may also have an influence. When *Vata* aggravation occurs, it impairs *Agni*, which is responsible for digestion and metabolism. This impairment leads to

difficulties in digestion and the absorption of nutrients. When *Agni* is not functioning properly, it leads to the creation of *Ama*, which blocks the digestive pathways and hinders the absorption of nutrients. Dysfunctional *Agni* disrupts tissue metabolism, resulting in insufficient feeding of bodily tissues, specifically muscle and adipose tissue. *Ama* and an imbalanced *Vata dosha* obstruct the body's pathways, leading to nutrient

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insufficiency and subsequent weight loss. *Karshya* is characterized by the presence of symptoms such as extreme thinness, weakness, reduced desire to eat, dry skin, and overall physical weakness.

Government **Schemes** for **Combating** Malnutrition: The Government has accorded high priority to the issue of malnutrition and is implementing several schemes/programs different Ministries/Departments through States/UTs to address various aspects related to nutrition. The Ministry of WCD is implementing POSHAN Abhiyaan, 'Pradhan Mantri Matru Yojana', Anganwadi Services Vandana Scheme for Adolescent Girls under the Umbrella Integrated Child Development Services Scheme as direct targeted interventions to address the problem of malnutrition in the country including the State of Rajasthan. Under the Anganwadi Services of the Umbrella ICDS Scheme, Supplementary Nutrition is provided to children under 6 years of age in the form of Take-Home Ration, Morning Snacks and Hot Cooked Meals as per the provisions of the National Food Security Act. 2013. Supplementary Nutrition is provided to bridge the gap between the Recommended **Dietary** Allowances (RDA) and the Average Daily Intake (ADI) among this age group as per the nutritional norms provided under Schedule II of the Act. Severely malnourished children are provided additional nutrition in the form of food supplements providing 800 Kcal of energy and 20-25 g of protein <sup>34</sup>.

**DISCUSSION:** Malnutrition remains a significant public health challenge, especially in developing nations like India. This condition, encompassing both undernutrition and overnutrition, detrimentally impacts children's immune systems and mental development, contributing to high rates of infant and child mortality. Protein-energy malnutrition (PEM), a prevalent form of undernutrition, is particularly concerning as it leads to various health complications. In India, the prevalence of malnutrition is alarming, with numerous children suffering from stunting, wasting, and being underweight, as highlighted by the National Family Health Survey (NFHS-4). These conditions are predominantly driven by inadequate diets and recurrent infections, resulting in insufficient intake of essential nutrients. Ayurveda, an ancient system

medicine, offers valuable insights into addressing malnutrition. According to Ayurvedic principles, factors like improper diet and lifestyle choices contribute to conditions like Karshya, Balashosha, and other related disorders. Ayurvedic texts emphasize the significance of a balanced diet (Ahara) and suggest that imbalances in Vata dosha can lead to malnutrition by impairing digestion and nutrient absorption. Ayurvedic treatments focus on approaches, holistic including dietary modifications, herbal supplements, and lifestyle interventions, to restore balance and promote optimal health.

Malnutrition, mostly caused by Vata, can be alleviated by the use of different herbs and practices. Herbs infused with Guru, Shlakshan, Ushna, Pichila, and Guna are employed to allievate Vata. Deepana and Pachana substances are utilized to augment Agni. To rectify Rasavahasrotodushti, Langhanchikitsa is indicated. Balya and Brimhana Chikitsa are therapeutic approaches aimed at conditions such as Daurbalyata addressing kshaya (depletion of vital (weakness). Oia essence), stunted and stature along with low body mass. Nidana Parivarjana encompasses changes in nutrition, lifestyle, and dietary interventions. Ahara encompasses a nourishing diet that include easily digestible foods like as milk, ghee, fruits, vegetables, whole grains, and pulses.

Medhya Rasayana incorporates cognitiveenhancing herbs such as Brahmi and Shankhapushpi to improve memory and cognition. Vihara encompasses a daily regimen that includes sufficient rest, physical activity, and methods for relaxing. Engaging in Yoga and Pranayama exercises helps aid digestion, alleviate stress, and promote general well-being. Herbal medications encompass Balya and Brimhana herbs, Agni Deepana and AmaPachana, well as Panchakarma, which refers to cleansing therapy. Rasayana Therapy utilizes revitalizing herbs and formulations such as Chyawanprash and Triphala. Tonics are specialized remedies designed to enhance the body's immune system and promote optimal feeding of tissues. In Jaipur, the prevalence of malnutrition among children is notably high, with significant percentages suffering from varying degrees of underweight, stunting, and wasting.

Studies indicate that malnutrition rates are higher among female children compared to males, underscoring the need for targeted interventions. These interventions should address both the immediate nutritional needs and the underlying socio-economic factors contributing to malnutrition.

Integrating Ayurvedic principles into existing government nutrition programs can significantly enhance their effectiveness. Initiatives like POSHAN Abhiyaan and Pradhan Mantri Matru Vandana Yojana (PMMVY) can incorporate Ayurvedic dietary plans, prenatal yoga, and herbal support to improve maternal and child health outcomes.

Anganwadi centers can offer Ayurvedic-inspired meals and snacks, along with herbal liquids such as decoctions of specific medicines, specific *Yusha/Ksheerpak* preparations *etc.* indicated in *Karshya Chikitsa*, *Rasayan* and *Brimhana* formulations, to provide holistic nutritional support. For adolescent girls, personalized nutrition plans and workshops on Ayurvedic lifestyle practices can address specific needs related to growth, development, and menstrual health.

### Implementing Ayurveda to Address Malnutrition:

#### **Antenatal Care:**

Ayurvedic Dietary Guidelines for Pregnant Women: Promote a well-rounded diet which is abundant in whole grains, vegetables, fruits and dairy products. Incorporate *Garbhini Paricharya*. It includes month wise dietary plan for the mother and each month has different pattern of herbal and dairy supplements to fulfill needs of growing fetus.

**Prenatal Yoga and Meditation:** Advocate for the adoption of prenatal yoga and meditation practices to guarantee the mother's physical and emotional well-being.

**Education and Training:** Organize educational workshops for pregnant women, providing guidance on Ayurvedic nutrition and lifestyle practices to promote a healthy pregnancy.

#### **Postnatal Care:**

**Postpartum Nutrition:** Recommend a diet including of readily digested foods such as khichdi,

soups, and herbal teas to facilitate recuperation and promote lactation. *Sutikaparicharya* can be followed for better health of the mother.

**Ayurvedic Postpartum Therapies:** Implement *Abhyanga* (oil massages) and other Ayurvedic therapies to facilitate recuperation and alleviate postpartum depression.

**Herbal Supplements for New Mothers:** Offer Ayurvedic tonics and supplements such as *Dashamoola* and *Bala* to aid in postpartum recuperation and enhance lactation. Care for Infants (Ages 0-6 Months).

**Breastfeeding Support:** Encourage the practice of exclusively breastfeeding for the initial six months, with the aid of Ayurvedic techniques to improve the quality and quantity of breast milk. *Shatavari churna* should be used to enhance lactation. In non-availability of breast milk, milk from *Dhatri* should be taken.

**Maternal Nutrition:** It is important for the mother to consume a nourishing and well-balanced diet that includes Ayurvedic foods. This will help in the baby's development through breast milk. Childcare for Toddlers (Ages 6 Months - 3 Years).

**Introduction of Solid Foods:** Gradually incorporate semi-solid foods made using Ayurvedic principles, such as rice porridge, pureed fruits, and vegetables. *Acharya Kashyapa* prescribed to give Anna (solid food) in 10th month of life.

**Nutrient-Rich Foods:** Incorporate Ayurvedic foods that are high in nutrients, such as ragi (finger millet), ghee, and seasonal fruits, to promote healthy growth and development.

**Natural drinks and Decoctions:** Give moderate herbal teas such as fennel or cumin water to improve digestion and enhance immunity.

**Establishing Regularity and Discipline:** Implement consistent meal schedules and routines based on Ayurvedic principles to foster healthy eating habits and optimize digestion.

Monitoring Growth and Development: Consistently observe and evaluate the progress and nutritional condition of toddlers, administering supplementary Ayurvedic supplements as necessary.

**Parental Education:** Provide parents with information about the significance of adopting an Ayurvedic lifestyle for their children's overall wellbeing, with a specific emphasis on dietary choices, sleep patterns, and daily routines Integrated Approach.

Partnership with Healthcare Providers: Provide comprehensive training to Anganwadi workers and healthcare personnel in Ayurvedic practices to enhance their ability to provide knowledgeable guidance and assistance.

Holistic Health Camps: Arrange camps that offer comprehensive Ayurvedic health evaluations, dietary guidance, and botanical supplements for expectant mothers and young individuals.

Community Outreach Programs: Conduct awareness campaigns and seminars to educate

communities about the advantages of Ayurvedic nutrition and lifestyle practices from pregnancy to early childhood.

**CONCLUSION:** Incorporating Ayurvedic concepts into current government nutrition programs may provide a comprehensive method for tackling malnutrition in India. Ayurveda places great importance on maintaining a harmonious diet, ensuring efficient digestion, and adopting lifestyle habits that contribute to general well-being.

By integrating Ayurvedic dietary principles, herbal supplements, and therapies into initiatives such as POSHAN Abhiyaan and Pradhan Mantri Matru Vandana Yojana (PMMVY), the nutritional and health results for mothers, children, and adolescents can be greatly enhanced. This collaboration will address current dietary requirements and promote long-term health and well-being, ultimately contributing to the country's progress.

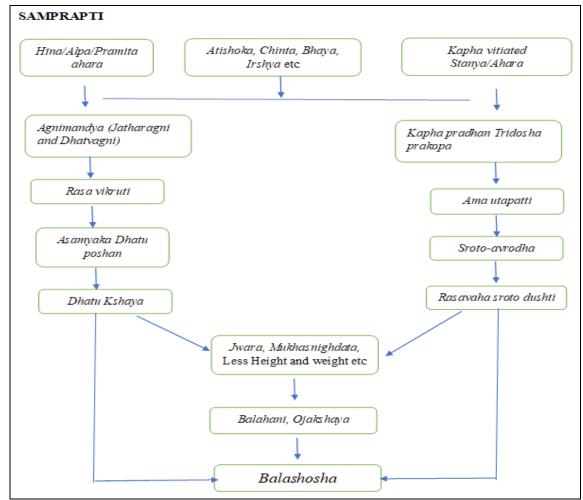


FIG. 1: PROBABLE SAMPRAPTI OF MALNUTRITION

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