



# THE HEALER

International Journal of Ayurveda & Integrative Medicine

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## REVIEW ARTICLE

### Role of Panchakarma in Bala-Roga: A Review

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#### ABSTRACT:

**Introduction:** *Panchakarma* is considered as one of the specialties of *Kayachikitsa* which includes five major therapeutic procedures of detoxification and body purification, along with many other supportive procedures. In fact, *Panchakarma* can be used efficiently in all the branches of *Astang-Ayurved* and it can also be beneficial in *Kaumarbhritya* for a comprehensive cure for many child disorders. This review was carried out to study the concept of *Panchakarma* in children and explore the variations and significance of *Panchakarma* in *Bala-Roga*. **Materials & Methods:** References regarding *Panchakarma* in Children were collected from various classical *Ayurveda* textbooks, published research papers from Internet sources, previous work done and compilation was done. Concept of *Panchakarma* in Children was studied in detail. **Results:** Most of the previous studies have emphasized on the importance of *Panchakarma* in children; however there were limited clinical studies have been carried out on procedural effectiveness of *Panchakarma* in children. *Panchakarma* measures executed with precautions is equally effective in a child as it results in adult. **Conclusion:** The knowledge and experience of *Panchakarma* in pediatric conditions is the key to successful administration of *Panchakarma* in children. Increasing and mainstreaming *Panchakarma* procedures among children in *Ayurveda* hospitals will definitely provide a new hope in management of child disorders.

**Keywords:** *Ayurveda*, *Panchakarma*, *Kaumarbhritya*, *Bala -Roga*

#### INTRODUCTION

*Ayurveda*, the science of life is one of the oldest forms of holistic healthcare science that places great emphasis on prevention; and aims at bringing about and maintaining harmony of the body, mind and consciousness. *Ayurveda* encompasses diet and lifestyle guidelines, *Yoga*, herbal preparations and various therapies. *Ayurveda* treats diseases by using *Shodhana* (purificatory; cleansing or detoxification) and *Shamana* (pacificatory). *Panchakarma* therapies are an integral part of *Ayurveda*, which act as

preventive as well as curative measures and improve the body immunity. *Panchakarma* is considered as one of the specialties of *Kayachikitsa* which includes five major therapeutic procedures of detoxification and body purification, along with many other supportive procedures. In fact *Panchakarma* can be used successfully in all the branches of *Astang-Ayurved* and it can also be beneficial in *Kaumarbhritya* as a comprehensive cure for many child disorders. This review was carried out to study the concept of *Panchakarma* in children and explore the variations and significance of *Panchakarma* in *Bala -Roga*.

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Submitted: 23.04.2020

Received: 28.04.2020

Revised: 11.06.2020

Accepted: 27.06.2020

## MATERIALS & METHODS

References regarding *Panchakarma* in Children were collected from various classical Ayurveda textbooks, published research papers from Internet sources, previous work done and compilation was done. Concept of *Panchakarma* in Children was studied in detail.

### Description of *Panchakarma* in *Kaumarbhritya*

*Panchakarma* is purificatory procedure which includes *Purvakarma*, *Pradhanakarma* and *Paschatkarma*. *Purvakarma* (Pre- *Panchakarma* procedures) involves *Deepana* and *Pachana* (administering oral medicines to improve digestion in order to enhance *Agni*), *Snehana* (oleation) and *Swedana* (fomentation). *Panchakarma* *Pradhanakarma* (main procedures); *Vamana* (therapeutic emesis), *Virechana* (therapeutic purgation), *Basti* (enemas), *Nasya* (nasal administration), *Raktamokshana* (bloodletting) are performed to flush out unwanted substances from the body from the nearest tract. *Pashchatkarma* (Post- *Panchakarma* procedures) include precautions and diet regimen which are advised to prevent any further complications; to obtain desired results and also to bring back the patient's body to normal lifestyle. The scope of *Kaumarbhritya* includes proper antenatal care to post-natal care.<sup>1</sup> Childhood is a growing and development period with respect to physical, mental and social aspect. Although there are some variation but most classical texts have mentioned the *Balya-kala* (age) upto 16 years. The alterations in the *Panchakarma* with regards to Paediatric practice has been mentioned in the classics.

***Deepana and Pachana:*** It is prescribed to obtain *Niramavastha* of *Doshas* and to improve *Agni* before main *Panchakarma* procedure. Water boiled with *Shunthi* (dry ginger) or *Dhanyak* (dry coriander) can be used in pediatric patient. It is given warm and in small quantity initially.

***Snehana:*** *Snehana* is the process of oleation of the body by using medicated ghee and oils internally and externally. For proper growth and development, it is most important practice in children. *Ghrta*, *Taila*, *Vasa*, *Majja* are *Snehana* *Dravya* (substance); and among all of them, *Ghrta* has been given more importance for *Snehana* in children. Majority of *Acharyas* have described the use of *Snehana* in children. The importance of *Sneha* is advocated in *Kashyapa Samhita* *Lehaadhyaya* and *Navjaat Paricharya Adhyay* where *Madhu Ghrta* is indicated for use. *Snehana* (*Abhyanjana* with *Bala Taila*) is recommended in child soon after birth.<sup>2</sup> *Ghrta* has definite role in first four days feeding of newborn.<sup>3</sup> *Snehana* is indicated in *Purvakarma* (before cleansing therapy), *Vata-rogas*, *Rukshata* (body roughness), *Hikka* (hiccough) *Krishna Balaka* (emaciated child).<sup>4</sup> *Snehana* is contraindicated in *Kshirad Avastha* (breastfeed babies), *Chardi* (vomiting), *Kaphaja Vikara* such as *Sthoulya* (obesity), *Raktapitta* (bleeding disorders), *Atisara* (diarrhoea), *Jvara* (fever), *Galamaya* (throat disorder).<sup>5</sup> *Charak* has described *Sneha*

as contraindication in *Grah Pidit* and *Talu Sosha*. Although *Achcha Sneha* is the best type of *Snehana*; however *Accha Sneha* is most often difficult to be administered in children, and then *Sneha Bicharna* is practiced. *Susruta* has mentioned the use of various medicated *Ghrta* during summer in children of different age group i.e. *Ksirada*, *Ksirannada* and *Annada*.<sup>6</sup> *Kashyapa* has restricted the *Snehana* in *Ksirada*.<sup>7</sup> *Charak* has advocated the use of small amount of *Sneha* in children.<sup>8</sup> *Snehana* can be done with *Ghrta* preparations<sup>9</sup> like *Ashwagandha Ghrta*, *Kumar Kalyan Ghrta*, *Samvardhana Ghrta*, *Abhaya Ghrta*, *Panchagavya Ghrta*, *Ashtang Ghrta*, *Shishu Kalyanaka Ghrta*, *Brahmi Ghrta*, *Shodhana Ghrta*, *Ashtamangala Ghrta*. In the same way, *Narayana Taila*, *Mahanarayana Taila*, *Mahamasha Taila*, *Bala Taila*, *Mashaadi Taila*, *Lakshadi Taila* are also used. *Acharya Vagbhatta* has described *Abhyanga* with *Bala Taila* in *Navajjat Paricharya* during *Prana Pratyagamana* (resuscitation).

***Swedana:*** The procedure that induces sweating (sudation) is called as *Swedana*. It relieves heaviness, stiffness and coldness of the body. *Kashyapa* has given extensive description of *Swedana Karma*.<sup>10</sup> It is used in child suffering from *Staimitya* (rigidity), *Kathorata* (hardness), *Malabandha* (constipation), *Anaha*, *Vani Nigraha* (suppression of voice), *Hrillasa* (nausea), *Aruchi* (anorexia), *Alasaka* (tympanitis), *Kampana* (cramps). *Swedana* may be mild, moderate or strong in nature according to the body parts exposed for *Swedana*.<sup>11</sup> The eight types the *Swedana*<sup>12</sup> - *Hast*, *Pradeha*, *Nadi*, *Prastara*, *Sankar*, *Upnaha*, *Avgaha* and *Parisheka*. *Hastha Sweda*, and *Pata Sweda* are considered useful in neonates and infants especially in abdominal colic (citation). Conditional *Swedana* is recommended for *Krishna* (thin) and medium strength child.<sup>13</sup> *Hasta Sweda* is recommended upto 4 month of age. *Nadi Sweda*, *Prasthara*, *Sankara*, *Pradeha*, *Upanaha*, *Avagaha*, *Parisheka* are other types which are practically applicable in children. *Shashtika Shali Pinda Sweda* is the general method of *Swedana* commonly used in neuromuscular disorders in pediatric patients. *Swedana* is indicated in *Purvakarma*, *Vata Rogas* (hemiplegic, cerebral palsy) *Jadya*, *Kathinya* and *Ruksha Sharira* (heaviness, stiffness, dryness of body), *Shwasa* (asthma), *Kasa* (cough), *Pratishyaya*, rheumatic and degenerative conditions, obstruction to *Mala* (stool), *Mutra* (urine) and *Shukra* (semen). *Swedana* is contraindicated in *Dagdha* (burnt), *Navajwar* (acute fever), *Kamala* (jaundice), *Pittarogi*, *Madhumehi* (diabetic), *Chhardi* (vomiting), *Trishna* (dehydrated), *Karshya* (emaciated), *Hridaya Rogas* (cardiac diseases), *Raktapitta* (bleeding disorders) and *Vishart* (poisoned). During the process of *Swedana* various articles like pearls, *Candrakantamani* and pots filled with cold water should be kept continuously in contact of *Hridaya Pradesh* (cardiac region).<sup>14</sup> Mouth should be filled with powder of *Karpura* or with juice of citrus fruits mixed with unrefined sugar or with *Draksha* for easy procedure.<sup>15</sup>

**Vamana:** It is the process by which *Doshas* are eliminated through mouth by the act of vomiting.<sup>16</sup> The first act of emesis is performed immediately after birth for elimination of *Garbhodaka* using *Saindhava* and *Ghritha*.<sup>17</sup> *Mridhu Vamana* with full stomach milk or breast milk followed by physical stimulation of the throat by physician or by mother has been indicated. Normally 2-3 vomiting are appropriate for children. If vomiting is not appropriate, the child should be given decoction of *Apamarga* (*Achyranthes aspera*), *Pippali* (*Piper longum*), *Sirisa* (*Albizia lebbek*) with rice to remove remaining *Kapha*. After emesis, exertional activities should be restricted for few hours.<sup>18</sup> *Acharya Kashyapa* mentioned that, babies who emit vitiated milk from stomach repeatedly; will never suffer from diseases. *Vamana* is indicated in *Ajeerna* (indigestion), *Peenasa* (Sinusitis), *Madhumeha* (Diabetes), *Unmada* (Schizophrenia), *Kushtha* (skin diseases), *Kasa* (Cough), *Shwasa* (bronchial Asthma) and *Shlipada* (Filariasis). *Vamana* is contraindicated in *Bala* (very young children), *Hridroga* (cardiac disorders), *Shranta* (exhausted), *Pipasita* (thirsty), *Kshudhita* (hungry), and *Atikrisha* (emaciated body).

*Garbhodaka Vamana* can be done by administering *Vacha* (*Acorus calomus*) and *Saindhava Churna*. *Kashyapa* has mentioned the use of *Katphala* (*Myrica esculenta*), *Nichula* (*Barringtonia acutangula*) and *Sirisa* (*Albizia lebbek*) decoction, decoction of *Grahaghi* (*Gaur-Sarsapa*), *Kritaveda* and seeds of *Madana Phala* (*Randia spinosa*) for emesis. In *Ksheerada* child, *Vamana Sadhya* diseases, *Vamana* could be done with *Madanaphala* on nipple along with areola i.e. dose of *Madanaphala* should not be more than that. *Vamana* is usually contraindicated below 6yr of age. Mild potency of the drugs are used in smaller quantity. In *Ksheerada* drugs are pasted over the breast of the mother and after it dries up it should be washed and baby is got ready to breast fed which lead to easy *Vamana*. In *Ksheerannada* administer drugs along with breast milk. In *Annada* the decoction of *Madanaphala*, *Vacha* and *Saidhava* or *Katphala* and *Sarsapa* can be used. The dosage of drugs for *Vamana* is depending upon the severity of the disease from 120 mg to 4 gm for *Utakristamatra*, *Mdhyamatra* and *Hina Matra*. *Kashyapa* has also mentioned that the dose of emetics should be one *Vidanga*, which is increased by one *Vidanga* every month till a maximum dose becomes one *Amalaka*.

**Virechana:** It is the process by which vitiated *Doshas* are eliminated through *Adhomarga* (rectum). It is specific for elimination of *Pitta Dosa*.<sup>19</sup> It is proved that *Virechana* is the best for *Pittaja* disorders and imparts the clarity of *Indriyas* (sense organs) and good for ensuring the growth and development of the child. It also enhances the functional capacity of the child by purifying the *Amashaya* and *Paskwashaya* by regularizing the bowel habits. Normally, *Virechana* should not be given to children, but when it's necessary, it can be used as a last option; when all other measure failing to cure the disease. *Virechana* is

better avoided in children except in the emergencies, and is substituted by *Basti*. This procedure should be administered with extreme caution. *Virechana* in case administered, should be given at least fifteen days after the *Vamana* by satisfying all the prerequisites. In *Ksheerada*, *Virechana Aushadha* is given to mother, however in *Ksheeranada* and *Annada* in need one can utilise *Mridu Verechna* with *Trivritta* (*Operculina turpethum*) and *Chaturangula* (*Cassia fistula*). *Teekshna* drugs are not advised. *Virechana* is indicated in *Tamak Shwasa* (Bronchial Asthma), *Pakshaghat* (hemiplegic), *Madhumeha* (diabetes), *Arbuda* (tumour), *Krimi* (worm infestation), *Kamala* (jaundice). *Virechana* is contraindicated in *Navajwara* (acute fevers), *Krisha* (emaciated patients) *Rajayakshma* (tuberculosis), *Garbhini* (pregnant women). The *Vega* of *Virechana* is 2, 3, and 4, in place of 10, 20, and 30 for adult *Hina*, *Madhyama*, and *Uttama* respectively. *Kashyapa* has described the complication on *Virechana*.<sup>20</sup>

**Basti:** It is the procedure where the medicines are administered through rectum or genitourinary tract using *Basti Yantra* (enema can or specific apparatus). Mainly *Basti Karma* is used in *Vata Dosa* elimination; and diseases where there is association of *Vata*. The 3 types of *Basti* are *Asthapana Basti* (*Niruha*), *Anuvasana Basti* (*Sneha*) and *Utara Basti* (Uterine and urinary). *Basti* is effective and safe in children and can also be employed where *Virechana* is contraindicated. In childhood, *Basti* acts just like the *Amrita* (nectar). *Basti* can be administered to one year baby. *Niruha Basti* can cause the *Karshana* in child and thus *Acharya Kashyapa* has mentioned the use of *Anuvasana Basti* or *Basti* in which oil is more than quantity of *Kashaya*. There are great controversies in *Basti Yogya Ayu* between *Acharyas*.<sup>21</sup> *Gargya*, *Mathara*, *Atreya*, *Parashara* and *Bhela* have stated that *Basti* should be started just after birth, after 1 month, after 4 month, after 3 years, and 6<sup>th</sup> year respectively. *Kashyapa* has stated that *Basti* should be started at *Annada* (about 1 years of age).<sup>22</sup> *Basti* is indicated in *Amavata* (juvenile rheumatoid arthritis), *Vata Roga* (hemiplegic, muscular dystrophy), *Rajonasha* (secondary amenorrhea), *Jeerna Jwara* (chronic fever), *Ashmari* (kidney stone, bladder stone) *Niram Atisar* (chronic diarrhoea), cerebral palsy, delayed milestones. *Basti* is contraindicated in *Amatisara* (acute diarrhoea), *Kasa* (Cough), *Shwasa* (asthma), *Chhardi* (vomiting), *Krisha* (emaciated body), *Madhumeha* (diabetes), *Shoona Payu* (inflamed anus), *Kritahara* (immediately after taking food). Different *Acharyas* have mentioned various *Basti* preparations of general type and can be used in patients of all age groups; however *Kashyapa* has mentioned specific *Basti* formulations for children. Various causes and manifestation of under/over dosage of *Basti* given to children is mentioned.

**Nasya:** It is the process of administration of medicines through nostrils.<sup>23</sup> It is indicated mainly in aggravated and accumulated *Doshas* (disease causing factor) of head and



neck. The aggravated *Kapha Dosha*, which usually blocks the upper respiratory tract, is eliminated with the help of nasal instillation of herbal juices, oils, or powders. *Charaka* has described five types of *Nasya* in which *Pratimarsha* is mildest one and can be administered in children.<sup>24</sup> *Kashyapa* has described various types of *Nasya*, dosage schedule and mode of administration in children. Two types of *Nasya* are *Brimhana Nasya* (nourishing) and *Karshana Shodhana Nasya* (cleansing). *Nasya* is not recommended in child below 7yrs of age by *Susruta* and *Vagbhatt*.<sup>25</sup> *Kashyapa* has mentioned that it can be prescribed even in breast feed babies.<sup>26</sup> *Nasya* cures certain childhood disorders like *Trishna*, *Shiroroga*, *Pippasa*. During *Nasya* the patient should sit or lie down in a comfortable posture, then applied gentle massage over the head, forehead and face followed by mild *Swedana*.

**Raktamokshana:** It is the process of taking out blood from the body to manage diseases caused by *Rakta* and *Pitta*.<sup>27</sup> The methods of *Raktamokshana* are *Shringa*, *Jalauka*, *Alabu* and *Shira Vyadha*. Children have *Aparipakwa Dhatu* so in first step this procedure not indicated. If disease is not cured by *Shamana* and other method then *Rakta Mokshana* is indicated as in *Kukunaka*, *Ahiputana*, *Gudakutta*, *Ajagallika*, *Mukhapaka*, *Charmadala*. The *Jalauka* is the mildest of all the methods therefore *Jalauka* is the only mean for *Raktavasechana* in pediatrics cases.

## DISCUSSION

Though children have *Doshas*, *Dushyas*, diseases everything similar to that of adults, it is very essential to consider the respective conditions, age, dosage, drugs, mode of administration, time, frequency and procedure while managing Pediatric conditions. The difference of Child from an adult lies in the physical conditions of a child being *Soukumaryata* (having soft and tender body structure), *Alpakayata* (under developed organ systems), *Vividha Anna Anupasevanata* (GIT not fit to receive all types of food) *Aparipakwa Dhathu* (transformation and development under progression), *Ajata Vyanjanam* (incomplete secondary sexual characters), *Aklesha Sahatva* (cannot tolerate stress of any kind) *Asampoorna Balam* (poor strength) *Slesma Dhathu Prayam* (drastic growth and development). This is reason the fixation of dose and duration of therapy/ procedures which should be smaller/ shorter in pediatric group. Quality of medicines in children should be *Mridu* (low potency), *Madhura* and *Surabhi* (sweet and good odour for better palatability), *Laghu* (easy to absorb and assimilate). The approach of management in *Bala-Roga* is mainly limited to medicines. Detailed description of different *Panchakarma* procedure in children in different condition is described in different classical texts. Previous research studies have concluded on the significance of *Panchakarma* in *Bala-Roga*.

Tripathi N and Tiwari<sup>28</sup> published review article entitled

*Panchakarma* in Pediatrics of Current Scenario. The review concluded *Panchakarma* as part of *Ayurvedic* management and can't be ignored in pediatric cases. In *Ayurvedic* literature full description of *Panchakarma* in pediatrics is available but not practiced due lack of practical exposure along with improper understanding of principles of *Panchakarma* in pediatrics.

Navane K and Devane Y<sup>29</sup> published review article entitled Fundamentals of *Panchakarma* in child health care. They concluded that *Panchakarma* is the unique therapy of *Ayurveda* System of Medicine which is equally beneficial in the prevention and cure of the disorders thereby improves the lifespan of the individual. In pediatric practice also these therapies are helpful provided administered with due consideration in the stage of the diseases, the dosage of medicines, proper method, *Vaya* and *Bala* of the children.

Rajkumar Harinkhede et al<sup>30</sup> published Specific Therapeutic *Panchakarma* Procedure in Pediatric Patients: A Classical Review. The review concluded that *Panchakarma* is highly individualized based on the *Doshic* imbalance (imbalance of bio-elements), age, digestive strength, immune status and other factors. In paediatric patients, *Panchakarma* procedure are equally effective as they in adult but must be given due consideration. When doing *Panchakarma* procedure in paediatric patient measures should be taken in the prevention of complications.

Jagdish P Patil. et al<sup>31</sup> published Advancement Of *Panchakarma* For Different Age Group: A Review. This review concluded that various research investigations proved efficacy of *Panchakarma* in different diseases. It is also believed that *Panchakarma* therapy not restricted to the particular age group but it is established as valuable therapy for all age groups. Article suggested that *Panchakarma* may be utilized for various age groups but precautionary considerations are essential for use of *Panchakarma* in pediatric.

Kalpana Ladvikar<sup>32</sup> published A Review on *Panchakarma* and Its Application in Pediatrics Practice. This review concluded *Panchakarma* therapy is an integral part of *Ayurveda*. *Panchakarma* therapy can be beneficial in children as a comprehensive cure for many diseases because it made the equilibrium of *Dosha* when it is used with precaution and scientific rationale.

Vanita T et al<sup>33</sup> published Administration of *Panchakarma* in Paediatric Age Group – A Classical Review. This review concluded that these *Panchakarma* therapies are also helpful in pediatric practice if administered with due consideration in stage of the diseases, dosage of medicines, proper method, *Vaya* and *Bala* of the children.

Mulla Aayeesha<sup>34</sup> published review article entitled *Panchakarma* in *Balaroga*. The article concluded that all the five *Panchakarmas* are systematically explained in classics with special interest of the child. Disease status of

the child, physical and mental strength of child and extent of independency which forms administration criteria for *Panchakarma* procedure in child rather than age.

**Nainav et al.**<sup>35</sup> published a review article Entitled Role of Rasayan and Panchakarma in Balrog. The article emphasized management of *Bal-Rog* using various ancient approaches of *Ayurveda* science. This article also mentioned importances of careful practice of *Rasayana* and *Panchakarma* in the management of some *Bal-Rog*.

**Chandran S et al**<sup>36</sup> published review article entitled Unique Contributions of *Keraleeya Ayurveda* In Pediatric Health Care. The review concluded that therapies like *Shashtikapindasweda*, *Thalapothichil (Sirolepa)* etc. are an inevitable part of *Balacikitsa*. The present article addresses, theoretical concepts and unique practices of *Balacikitsa* and traditional knowledge waned away from the Mainstream *Ayurveda*.

**Bhinde SM et al**<sup>37</sup> published article entitled Management of spastic cerebral palsy through multiple *Ayurveda* treatment modalities. In this clinical study *Udvartana*, *Abhyanga*, *Sarvanga Swedana* and *Yoga Basti* were performed and the study concluded on significance of Multisystem approach to improve the condition of the patient. *Panchakarma* along with internal medication have given improvements in all the facets of spastic CP.

Most of the published works have emphasized on the importance of *Panchakarma* in children. But Very few clinical studies have been published in the procedural efficacy of *Panchkarma* procedure in children. Many *Panchakarma* procedures due to their drastic nature are not readily advisable in children. Hence the medication mentioned for the adults can be made use of in children but in a smaller dosage to reduce its *Teekshnata* to compensate the delicacy, small size of the body and modified dietetic habits. These factors make it necessary to bring about modifications in procedures in children. *Panchakarma* measures done with precautions are similarly effective in a children as they are done in adults. Only very few *Ayurveda* Hospitals have been practicing *Panchkarma* Procedural approach in management of Pediatric conditions. *Panchakarma* should not be grossly overlooked by generalizing childhood as a contraindication for carrying out *Panchakarma*. Lack of co-ordination, limited resources and practical expertise may be the only cause for lacking of practice and research in *Panchakarma* in Pediatric conditions. Despite of difficulty encountered in understanding disease and feasibility, practice of *Panchakarma* could bring wonders in the management of *Bala-Roga*

## CONCLUSION

*Panchakarma* practice can be safely and effectively practiced in children following the classical references and updating with recent updates and modifications. The knowledge and experience in *Panchakarma* and pediatric conditions

is the key to successful administration of *Panchakarma* in children. Increasing and mainstreaming *Panchakarma* procedure in children in *Ayurveda* hospitals will definitely provide a new hope in management of child disorders.

**ACKNOWLEDGEMENTS:** Not Applicable

**ABBREVIATIONS:** Not Applicable

**CONFLICT OF INTEREST:** Author declares that there is no conflict of interest.

**SOURCE OF SUPPORT:** None

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#### How to cite this article:

Prasad SM, Sah MP, Bhusal N, Role of Panchakarma in Bala-Roga- A Review, Journal of Ayurveda Campus, 2020;1(1):1-9.