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# An efficacy of different *Taila* used in *Janubasti* in the management of *Janusandhigata Vata* - A Systemic Review

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## ABSTRACT

**Background:** *Janusandhigata Vata*, a pathological condition similar to osteoarthritis of the knee, primarily affects elderly persons due to *Dhatukshaya*, resulting in pain, swelling, and restricted movement, significantly impacting daily activities. Currently, the treatments of knee osteoarthritis are often symptomatic, expensive and have side effects, making *Janubasti* a valuable alternative, especially in developing countries. Numerous studies have explored the clinical efficacy of various *Taila* (medicated oils) used in *Janubasti* for treating *Janusandhigata Vata*. This review aims to analyze the effectiveness of these medicated oils in the management of the condition. **Objective:** To review the articles published on *Janubasti* for the evaluation of the efficacy of various medicated oils utilized in *Janubasti* for the management of *Janusandhigata Vata* and improving the healthcare practice. **Materials and Methods:** The articles are screened from different electronic databases including MEDLINE, Google Scholar, PubMed Central, etc. and clinical trials published till September 30, 2024. using a strategy designed to optimize the open labelled parallel arm randomized clinical trial. The search terms used were *Janusandhigata Vata*, *Janubasti*, *Taila*, arthritis, osteoarthritis. **Results:** For this purpose, 343 articles were searched, 172 were screened after removal of duplication, 131 were excluded, 42 full text articles were assessed for eligibility. Out of 42 articles 5 were included in review. **Conclusion:** *Janubasti* is one of the modalities of treatment commonly adopted in the management of *Janusandhigata Vata*. Research has shown that *Janubasti* with *Taila* gives encouraging results in relieving the signs and symptoms of *Janusandhigata Vata*.

**Key words:** *Sandhigata Vata*, *Snehana* (Oleation), *Medicated oil*, *Knee osteoarthritis*.

## INTRODUCTION

*Sandhigata Vata* is a one of the eighty types of *Vata Vyadhi* described in various Ayurvedic treatises. The foremost description of *Sandhigata Vata* is given in Charaka Samhita. *Vatapurnadritisparsha* (feeling hollowness), *Shotha* (swelling) and *Prasarana Akunchana Vedana* (pain during flexion and extension of the joint) are the clinical features of *Sandhigata Vata*.<sup>[1]</sup> *Sthansamshraya* of vitiated *Vata Dosha* at *Janu*

*Sandhi* (knee joint) results in the development of a disease termed as *Janu Sandhigata Vata*. This condition is closely simulating with knee osteoarthritis. The line of treatment for *Sandhidata Vata* is mainly focused on the alleviation of *Vata Dosha*. *Acharya Charaka* explains that vitiated *Vata Dosha* can be best treated with the use of oil.<sup>[2]</sup> Use of *Snehana* with *Swedana* over the affected part is also advised in the treatment of *Vatavyadhi* which alleviates pain, stiffness and improves flexibility.<sup>[3]</sup>

*Snehana* (Oleation) is one of the best treatments for *Sandhigata Vataja Vyadhi* because of the *Drava*, *Sukshma*, *Sara*, *Snigdha*, *Manda*, *Mridu*, *Guru* and other properties of *Sneha Dravya* which are just opposite to *Vata Dosha* and pacifies *Vata* disorders. This treatment modality harnesses the therapeutic properties of various oils to provide relief from pain, inflammation, restricted mobility in the knee joint and nourish emaciated tissue

*Janu Basti* is a specialized procedure in Ayurveda, especially indicated for *Janusandhigata Vata* in which

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different types of medicated oils are used as external application. Thus, it can be considered as *Bahirparimarjana Chikitsa*.<sup>[4]</sup> Though there is no direct reference and description of *Janu Basti* in classical Ayurvedic texts, it acts as a supportive ayurvedic therapy.

Current medical approaches to osteoarthritis are categorized into non-pharmacological, pharmacological, and surgical interventions, all of which predominantly offer symptomatic relief and are associated with adverse side effects. Additionally, these treatments can be prohibitively expensive or inaccessible, particularly in developing countries. In this context, the application of various medicated oil in *Janubasti* therapy emerges as a viable treatment option. Despite extensive research on osteoarthritis, the search for more effective interventions continues to be pertinent.

Numerous studies have been conducted nationwide to evaluate the clinical efficacy of *Janubasti* preparations in treating *Janusandhigata Vata*. The present review

aims to analyze the effectiveness of various medicated oils utilized in *Janubasti* for this condition, thereby enhancing healthcare practices.

### MATERIALS AND METHODS

A systematic search was conducted across various electronic databases, including MEDLINE, Google Scholar, PubMed Central, Cochrane Library and Ayush Research Portal, for indexed research and clinical trials published until September 30, 2024. The search utilized a strategy optimized for open-label parallel-arm randomized clinical trials, employing keywords such as "*Janu Sandhigata Vata*," "*Janubasti*," "*Taila*," "arthritis," and "osteoarthritis."

Out of 343 articles initially identified, 172 were screened following the removal of duplicates, with 131 excluded based on eligibility criteria. A total of 42 full-text articles were assessed for inclusion in which *Janu Basti* and other procedures are used in the management of *Janusandhigata Vata* presented in table no.1.

**Table 1: Showing *Janu Basti* and other procedures used in the management of *Janusandhigata Vata***

SN	Author	Treatment given	Conclusion
1.	Kaushik Raman et al. <sup>[5]</sup>	<i>Janu Basti - Mahanarayana Taila</i> followed by <i>Dashmoola Kwatha Nadi - Swedana</i>	<i>Mahanarayana Taila Janu Basti</i> followed <i>Dashmoola Kwatha Nadi-Swedana</i> is very effective in the management of <i>Janusandhigata Vata</i> .
2.	Dr. Savan Kumar et al. <sup>[6]</sup>	<i>Eranda Taila</i> as <i>Shamana</i> medicines.	Significant improvement for first year and no signs & symptoms of <i>Sandhivata</i> were noticed after use of castor oil for 2 consecutive years.
3.	Asha MR et al. <sup>[7]</sup>	Group A: <i>Janu Basti - Moorchita Tila Taila</i> followed by <i>Patrapinda Sweda</i> . Group B: <i>Janu Basti - Moorchita Tila Taila</i> followed by <i>Atasi Upanaha Sweda</i> .	Group A - highly significant changes in <i>Vatapurna Drithisparsha, Sandhi Shotha</i> and <i>Prasarana Akunchana Vedana</i> and significant improvement in <i>Sandhi Shoola</i> . Group B - <i>Vatapurna Drithisparsha, Sandhi Shotha</i> and <i>Sandhi Shoola</i> showed highly significant changes and <i>Prasarana Akunchana Vedana</i> showed significant changes.
4.	Dr. Manjula Vishal Matekar et al. <sup>[8]</sup>	<i>Janu Basti – Sahachara Taila</i>	Efficacy of <i>Janubasti</i> with <i>Sahachara Taila</i> is statistically significant in the symptoms viz-. <i>Shula, Shotha, Sparshasahatva, Akunchan Prasaranjanya Vedana, Sandhispuṭan</i> and <i>Skashtacalan</i> .

5.	Babul Akhtar et al. <sup>[9]</sup>	Group A: <i>Abhyanga - Bala Taila + Nadi Swedana with Dashamoola Kwatha + Panchatikta Ghrita Guggulu</i> Group B: <i>Abhyanga – Bala Taila + Nadi Swedana with Dashamoola Kwatha</i>	In both the groups (A & B) i.e. 15.38 % & 7.14 % patients achieved complete remission, while 61.54% & 14.28 % patients found in maximum improvement and 23.07 % & 64.28 % were having moderately improvement. No patients found mild improvement in group A whereas 14.28 % mild improvement in group B. No patient found unchanged in both the groups.
6.	Dr. Shilpa Santosh Tonde <sup>[10]</sup>	<i>Janu Basti - Mahanarayana Taila</i> <i>Nadi Swedana - Dashmoola Kwatha</i>	<i>Mahanarayana Taila Janu Basti</i> followed <i>Dashmoola Kwatha Nadi-Swedana</i> is very effective in the management of <i>Janu Sahdhigata Vata</i> .
7.	Ashivini et al. <sup>[11]</sup>	Group A: <i>Janu Basti - Chinchadi Taila, Shunthi Choorna for Amapachana.</i> Group B: <i>Janu Basti - Rasona Taila, Shunthi Choorna for Amapachana</i>	<i>Rasona Taila</i> i.e. group B has provided better relief.
8.	Ritika Khajuria et al. <sup>[12]</sup>	<i>Janu Basti – Tila Taila</i> <i>Abhyanga - Tila Taila</i> <i>Nadi Swedana - Nirgundi Patra Kwatha</i>	Better relief in the signs and symptoms mainly in pain, stiffness, tenderness, swelling, and crepitus.
9.	Reshma A et al. <sup>[13]</sup>	<i>Janu Basti - Sahcharadi Taila</i> <i>Nadi Swedana - Dashmoola Kwatha</i> Tab. Asthiposhaka Cap Shallaki 400mg <i>Panchtikta Ghrita Guggulu</i>	Significant relief in bilateral knee joint pain.
10.	Dr. Priyanka et al. <sup>[14]</sup>	Group A: <i>Anuvasana Basti - Kshirabala Taila</i> Group B: <i>Arohana Anuvasana Basti - Kshirabala Taila</i> Adjuvant therapy a) <i>Sarvaang Abhyanga - Kshirabala Taila.</i> b) <i>Sarvaang Bashpa Swedana - Dashmoola Kwatha.</i>	Group A - no patient shows any marked improvement. Moderate improvement was found in 35% patients and mild improvement in 12% patients. 5% patients remain unchanged. Group B – Marked improvement in 15% of the patients, moderate improvement in 60% patients, mild improvement in 25% and 4% patient remains unchanged.
11.	Deepak Yadav et al. <sup>[15]</sup>	<i>Abhayanga - Murchhita Tila Taila. Nadi sweda</i> <i>Anuvashana Basti - Murchhita Tila Taila Basti - Dhanwantri Taila</i> Tab. <i>Yogaraj Guggulu</i> with lukewarm water	Substantial positive change in signs and symptoms.
12.	Vadeyara Vidya et al. <sup>[16]</sup>	<i>Matra Basti - Mahanarayana Taila 30 ml, Guggulutiktaka Ghrita 30 ml, Gandha Taila 10 ml.</i> <i>Godhuma Upanaha.</i>	Pre - test assessment - 19 subjects (63.4 %) had extreme feeling of knee joint pain, 9 subjects (30%) had moderate pain and 2 subjects (6.7%) had mild pain in. Post- test assessment - 1 subject (3.4%) had severe pain; 5 subjects (16.7%) had moderate pain, 14 subjects

		<i>Lakshadi Guggulu</i> with Luke warm water.	(46.7%) had mild pain and 10 subjects (33.4%) had been completely relived from pain.
13.	Girde Samir et al. <sup>[17]</sup>	<i>Snehana</i> and <i>Swedana</i> . <i>Hapushadi Yapana Basti</i> .	Significant (P<0.05) result was found in all cardinal symptoms of <i>Sandhi Shoola</i> , <i>Sandhi Shotha</i> , <i>Vatapurna Druti Sparsha</i> , <i>Graha</i> (Restricted movement).
14.	Hemant Shridhar Paradkar et al. <sup>[18]</sup>	Gel capsules of <i>Shatapaki Balashwagandhadi Taila</i> .	62.92 % reduction in <i>Sandhi Shoola</i> , 55.17 % in <i>Sandhi Shotha</i> , 56.82% in <i>Akunchana Prasarana Vedana</i> , 60 % relief in <i>Sandhi Sphutana</i> and 67.57 % in <i>Sandhi Graha</i> on the 30 <sup>th</sup> day of treatment.  30% achieving excellent, 40% good, 26.67% moderate relief and 3.33% No result.
15.	Hema Dipak Hire et al. <sup>[19]</sup>	<i>Gandha Taila</i> Cap 300 with warm water.	<i>Janusadhishool</i> - Relief of 80%. <i>Janushotha</i> - Moderate, Pitting disappears rapidly. Crepitus – absent. <i>Prasarana Akunchana Sanvedana</i> – pain present.
16.	Dr. Ajit Shivaji Bagade et al. <sup>[20]</sup>	Group A – <i>Panchatikta Ghrita Guggulu Vati</i> (PTGG) Group B – <i>Gandha Taila</i> – 10 drops.	Group A had better result than group B. Moreover, the phytochemical analysis has zoomed that the PTGG is chemically more effective as it has flavonoids which is proved for analgesic & anti-inflammatory action
17.	Dr. Suresh Govind Dahiphale et al. <sup>[21]</sup>	<i>Snehapana</i> - <i>Brihat Vishnu Taila</i> in <i>Shaman Matra</i> . <i>Anupana</i> – <i>Mudgayusha</i>	Pain (VAS scale), Crepitus, <i>Akunchana Prasarana Pravritti</i> , <i>Vedana</i> before treatment was 7, 2, 2 and after treatment it was 2, 1, 0 respectively.
18.	Dr. Pankaj Kumar Katara et al. <sup>[22]</sup>	Group A: <i>Snehapana</i> – <i>Ksheera bala Taila</i> Group B: <i>Matra Basti</i> - <i>Ksheerbala Taila</i> after local <i>Abhyanga</i> and <i>Nadi Swedana</i> .	Group A is better than group B.
19.	Neetha Abraham et al. <sup>[23]</sup>	<i>Pana</i> (internal administration) - <i>Prabhanjana Vimardana Taila</i> <i>Anupana</i> - <i>Mudga Yusha</i> . <i>Janu Pichu</i> - <i>Prabhanjana Vimardana Taila</i> .	<i>Prabhanjana Vimardana Taila</i> was found effective in reducing pain, swelling, tenderness and crepitus of knee joint, changes in joint measurements and range of movements of knee joint. Also, patient felt noticeable change in morning stiffness.
20.	Sarvesh Kumar Singh et al. <sup>[24]</sup>	Group A: <i>Janu Basti</i> - <i>Sahachara Taila</i> . Group B: <i>Matra Basti</i> - <i>Sahachara Taila</i> . Oral administration in both group - <i>Adityapaka Guggulu</i>	Group B has provided better relief than group A.
21.	Shikha Desai et al. <sup>[25]</sup>	<i>Abhyanga</i> - at <i>Nabhi</i> , <i>Parshva</i> , <i>Prastha</i> , <i>Ubhayapada</i> with <i>Murchhita Tila Taila</i> and <i>Nadi Sweda</i> . <i>Anuvashana Basti</i> :	No pain, swelling, crepitations present during follow-up. <i>Panchakarma</i> together with oral medication is effective in management of <i>Janu Sandhigata Vata</i> . <i>Murchhita Tila Taila Anuvashana Basti</i> and <i>Navaprasrutik Basti</i> has been found to be a powerful <i>Pachaka</i> .

		<i>Murchhita Tila Taila</i> – 120 ml. <i>Navaprasrutika Basti</i> - 864 ml. <i>Shamana Chikitsa</i> - Tab. <i>Yogaraj Guggulu</i> .	
22.	Savita Mordi et al. <sup>[26]</sup>	<i>Janu Basti</i> – <i>Devadarubaladi Taila</i> .	Out of 30 patients,12 patients (40 %) had got good response, 17 patients (56.66 %) had moderate response and 1 patient (3.33%) had mild response.
23.	Dr. Santosh Chavan <sup>[27]</sup>	Group A: <i>Janu Basti</i> - <i>Tila Taila</i> and ultrasound therapy Group B: Only <i>Janu Basti</i> with <i>Tila Taila</i>	Group A demonstrated significant improvements in pain reduction, increased joint mobility, and enhanced physical function compared to <i>Janubasti</i> alone.
24.	Dr. Rakesh <sup>[28]</sup>	Group A: <i>Janu Basti</i> – <i>Maha vishagarbha Taila</i> and Tab. Glucosamine sulfate 500 mg 1 TID. Group B: <i>Janu Basti</i> - <i>Mahavishagarba Taila</i> and Cap. <i>Asthishrinkhala</i> 500 mg 1 TID.	Group A shows better result compared to Group B.
25.	Gyan Prakash Sharma et al. <sup>[29]</sup>	Group A: <i>Patra Pottali Sweda</i> - <i>Nirgundi Patra</i> . Group B: <i>Janu Basti</i> - <i>Dashamoola Bala Taila</i> Group C: Combined therapy ( <i>Patra Pottali Sweda</i> & <i>Janu Basti</i> )	Group C was more beneficial seen rather than group A and B. Symptomatically pain was reduced 75% and range of motion was positive 75% in Group C. In Group A and B result of walking distance and tenderness was also beneficial. So, in present trial Group A & Group B are mild beneficial, statistically significant & Group C is moderate beneficial, statistically highly significant.
26.	Dr. Abhishek Sharma <sup>[30]</sup>	Group A: <i>Ekanadhara</i> - <i>Sahacharadi Taila</i> Group B: <i>Janubasti</i> - <i>Sahachradi Taila</i>	Group B is better than group A.
27.	Dr. Manjula Vishal Matekar <sup>[31]</sup>	Group A: <i>Janu Basti</i> - <i>Sahachara Taila</i> Group B: <i>Agnikarma</i> – <i>Tamrashalaka</i>	Both groups showed an equal effect.
28.	Khushali D Zalavadiya et al. <sup>[32]</sup>	<i>Balaashwagandha Taila</i> for Local <i>Abhyanga</i> followed by <i>Swedana</i> . <i>Rasnadi Kwatha</i> - 10gm BD <i>Lashunadi Vati</i> - 2 BD <i>Ashwagandha Churna</i> - 2 gm <i>Rasayana Churna</i> - 1 gm <i>Godanti Bhasma</i> - 500 mg <i>Yogaraja Guggulu</i> 2 TDS	75% improvement within 3 months.
29.	Ritesh Roy et al. <sup>[33]</sup>	<i>Janu Pizhichil</i> (oil bath for knee joint), <i>Panchtikta Ksheer Basti</i> . <i>Panchatikta Ghrita Guggulu</i> .	After 1 month, the patient got significant relief clinically, and a significant improvement was observed in the radiological findings, especially in terms of maintenance of good joint space and absence of overlapping.

30.	Kure Varsha Nivruttirao <i>et. al.</i> <sup>[34]</sup>	<i>Atasi Pinda Swedana</i>	Statistically highly significant effect in reducing the symptoms of <i>Janu Sandhigata Vata</i>
31.	Borkar S. <i>et. al.</i> <sup>[35]</sup>	<i>Abhyanga – Tila Taila</i> <i>Swedana – Mashadi Upanaha</i>	<i>Mashadi Upanaha Sweda</i> is very effective in the management of <i>Niramavastha</i> of <i>Janu Sandhigata Vata</i> .
32.	Anil Mungarwadi <sup>[36]</sup>	Group A- <i>Sthanika Abhyanga</i> with <i>Ksheerabala Taila</i> . <i>Kukkutanda Sweda</i> with its <i>Twak</i> by <i>Pottali</i> method.  Group B- <i>Sthanika Abhyanga</i> with <i>Ksheerabala Taila</i> .  <i>Kukkutanda Sweda</i> with its <i>Twak</i> by <i>Bandhana</i> method	Group B ( <i>Bandhana</i> method) is better than Group A ( <i>Pottali</i> method) in <i>Janu Sandhigata Vata</i> in the factor like <i>Janu Shopha</i> , there is no difference in <i>Lakshanas</i> like <i>Janu Shola</i> , <i>Atopa</i> , tenderness, ROM in between the groups statistically.
33.	Alka Mishra <i>et al.</i> <sup>[37]</sup>	<i>Janu Basti - Ksheerbala Taila</i> . <i>Nadi Sweda – Dashamoola Kwatha</i>  <i>Marma</i> Therapy- stimulation of four <i>Marma</i> points of the leg, i.e.  <i>Kshipra, Gulpha, Indravasti</i> and <i>Janu</i> .	<i>Marma</i> Therapy with <i>Janu Basti</i> showed encouraging result.
34.	Sayujya. P. S. <sup>[38]</sup>	<i>Pana - Palashatwagadi Kashaya</i> with <i>Saindava Lavana</i>  <i>Janu Veshtana - Nirgundi Taila</i>	<i>Palashatwagadi Kashaya</i> and <i>Nirgundi Taila</i> was found effective in reducing pain, tenderness and crepitus of knee joint. Also, patient felt noticeable change in morning stiffness.
35.	Yamini Sabharwal <i>et. al.</i> <sup>[39]</sup>	Group A: <i>Abhyanga, Baspa Swedana. Matra Basti - Kshira Bala Taila</i>  Group B: <i>Abhyanga, Baspa Swedana. Matra Basti - Ketakadya Taila</i>	Statistically significant effects were seen in both the groups in symptoms including <i>Sandhi Shoola</i> , <i>Akunchan Prasaranajanya Vedana</i> , <i>Sparsha Asahatva</i> , <i>Sandhi Sphootana</i> , and ROM.
36.	Prasanth D <sup>[40]</sup>	Group A: <i>Janu Basti - Murivenna</i>  Group B: <i>Janu Pichu – Murivenna</i>	<i>Janu Basti</i> significant amount of relief in the signs & symptoms of <i>Janu Sandhigata Vata</i> in comparison with <i>Janu Pichu</i> .
37.	Om Virbhadr Chitte <i>et al.</i> <sup>[41]</sup>	Group A: <i>Yoga Basti – (Niruha Basti – Navaprasrutika Basti, Anuvasana Basti - Murcchita Tila Taila)</i> and <i>Janu Basti - Sahacharadi Taila</i>  Group B:  Only <i>Yoga Basti</i>	On statistical comparison, group A showed better results than group B.
38.	Dr. Manohara. B. Havinal <sup>[42]</sup>	Group A:  <i>Janu Basti – Trisatiprasarani Taila</i>  Group B:	Group A is better than group B.

		<i>Janu Seka – Trisatiprasarani Taila</i>	
39.	Prashish Pipare et al. <sup>[43]</sup>	<i>Abhyanga - Dashamoola Taila.</i> <i>Nadi Swedana - Dashamoola and Nirgundi Kwatha.</i> <i>Janu Dhara - Dashmoola Taila.</i> <i>Lepa - Haridra +Sunthi + Saindhav.</i> <i>Hingwashtakchurna, Yogaraja Guggulu, Avipattikara Churna.</i>	Pain, swelling, crepitus, walking speed, Tenderness before treatment was 3,1,3,3,2 and after treatment is was 0,0,3,0,0 respectively.
40.	Md Tanzil Ansari et al. <sup>[44]</sup>	<i>Matra Basti - Mahanarayana Taila Janu Basti - Mahanarayana Taila</i> <i>Rasnasaptaka Kwatha, Mahayogaraja Guggulu.</i>	Signs & symptoms: Before treatment <i>Sandhi Shoola, Sandhi Shotha, Sandhi Stambha, Prasarana Akunchanayoh pravrittishcha Savedana, Sandhi Atopa</i> was 3,2,2,3,2 and after treatment it was 1,0,0,1,1 respectively.
41.	Asif Mohammed et al. <sup>[45]</sup>	Group A: <i>Abhyanga - Svadanstra Taila</i> Group B: <i>Snehapana - Svadanstra Taila</i>	Group B is better than group A.
42.	Archana Meena et al. <sup>[46]</sup>	Group A: <i>Shatavari Guggulu</i> Group B: <i>Shatavari Guggulu</i> <i>Janu Basti - Sahachara Taila.</i>	Group B is more effective than group A.

**Inclusion Criteria**

1. Any clinical trial which has study type of open-label parallel-arm randomized clinical trials.
2. Any clinical trial evaluating medicated oil only for external use.
3. Article published from 2007 to 30<sup>th</sup> September 2024.
4. No restriction regarding country, patient age, race, gender and language.

**Exclusion Criteria**

1. Articles having management of *Janusandhigata Vata* with *Janubasti* along with other procedures.
2. Any clinical trial of *Janusandhigata Vata* with internal medication and other *Panchakarma* procedures.
3. Articles without full text available.
4. Articles having single case study, case reports, case series, and systematic review studies.

Based upon these inclusion criteria, only 5 research works met with the criteria as presented in table no.2.

**Table 2: Showing details of the research works on Janu Basti used in the management of Janusandhigata Vata**

S N	Author	Case	Treatment given	Conclusion
1.	Asha MR et al. <sup>[47]</sup>	Sample size – 20 (10 patients of either group) Age: 30 to 70 years.	Group A: <i>Janubasti - Moorchita Tila Taila</i> followed by <i>Patrapinda Sweda</i> for 20 min. Group B: <i>Janubasti - Moorchita Tila Taila</i> followed by <i>Atasi Upanaha</i>	Group A - highly significant changes in <i>Vatapurna Drithisparsha, Sandhi Shotha and Prasarana Akunchana Vedana</i> , and significant improvement in <i>Sandhi Shoola.</i>



			Sweda for 12 hours Duration: - 7 days	Group B - <i>Vatapurna</i> <i>Drithisparsha</i> , <i>Sandhi</i> <i>Shotha</i> , and <i>Sandhi Shoola</i> showed highly significant changes and <i>Prasarana Akunchana Vedana</i> showed significant changes.
2.	Dr. Manjula Vishal Matekar et al. <sup>[48]</sup>	Sample size – 20 (10 patients of either group)	<i>Janubasti – Sahachara taila</i> 120 ml for each <i>Janusandhi</i> Time: - After Breakfast Duration: - 30 minute for 7 days. Follow Up: - 15 <sup>th</sup> & 30 <sup>th</sup> Day from the 1st day of <i>Janubasti</i>	Efficacy of <i>Janubasti</i> with <i>Sahachara taila</i> in <i>Janusandhigata Vata</i> is statistically significant as P<0.0001 in the symptoms viz-. <i>Shula</i> , <i>Shotha</i> , <i>Sparshasahat va</i> , <i>Akunchana</i> , <i>Prasaranjanya Vedana</i> , <i>Sandhisputan</i> and <i>Skashtacalana</i> .
3.	Ashivini et al. <sup>[49]</sup>	Sample size – 60 Two groups – 30 in each group Age: 40-80 years both the sex A Randomized Comparati	Group A: <i>Janubasti - Chinchadi Taila</i> <i>Shunthi Choorna</i> for <i>Amapachana</i> Group B: <i>Janubasti - Rasona Taila</i> <i>Shunthi Choorna</i> for <i>Amapachana</i>	Marked relief (above 75%) A - 16.66%, B - 93.33% Moderate relief (50% - 75%) A - 56.66%, B - 6.66% Mild relief (25% - 50%) A - 26.66%, B - 0

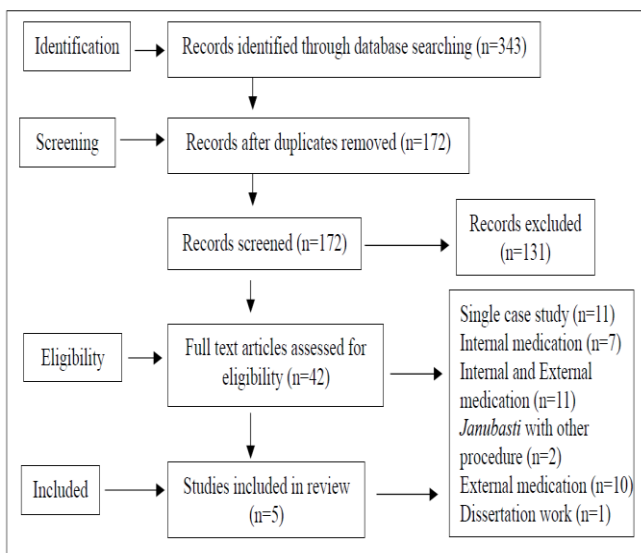
		ve Clinical study.	Duration of therapy - 7 days	No relief (below 25%) A – 0, B - 0 The data shows that <i>Rasona Taila</i> i.e. group B has provided better relief in the disease <i>Sandhigata Vata</i> .
4.	Prasanth D <sup>[50]</sup>	Sample – 30 (15 patients in each group) Age: 30-70 years	Group A - <i>Janubasti</i> - with <i>Murivenna</i> for 45 minutes, Group B - <i>Janu Pichu - Murivenna</i> for 45 minutes for Duration - 7 consecutive days	<i>Janu Basti</i> gives significant amount of relief in the signs & symptoms of <i>Janu Sandhigata Vata</i> in comparison with <i>Janu Pichu</i> .
5.	Dr. Manohar a. B. Havinal <sup>[51]</sup>	Sample – 30 (15 patients each.)	Group A: <i>Janubasti-Trisatiprasarani Taila</i> Group B: <i>Januseka – Trisatiprasarani Taila</i>	Group A - shows more net mean effect and long-lasting effect even in follow-up period. Group B - shows less variations.

**RESULTS AND DISCUSSION**

A search in PubMed revealed 10 articles on *Janusandhigata Vata*, while Google Scholar identified 179 articles related to *Sandhigata Vata*. The Cochrane Library contained 11 articles on *Sandhigata Vata*; however, none were accessible. CAMQuest yielded 17 articles on arthritis, but none specifically addressed *Janusandhigata Vata* or *Janubasti*. The DHARA portal

found 94 articles related to osteoarthritis. No research was identified in the Ayush Research Portal or ClinicalTrials.gov. In contrast, the Clinical Trials Registry India (CTRI) listed 11 registered clinical trials concerning *Sandhigata Vata*. The screening process of articles according to the Prisma guidelines for systemic review on the role of *Janu Basti* in the management of *Janusandhigata Vata* is presented in figure no

**Figure 1: PRISMA flow diagram (study selection and inclusion process)**



Out of the 343 articles retrieved, 41 full text articles and 1 dissertation work were assessed of which the summary is given in table no. 1. Five articles met the eligibility criteria for assessment and were included in the study. Detailed descriptions of these research studies are presented in table no. 2.

After reviewing these articles, a variety of *Taila* (medicated oils) like *Mahanarayana Taila*, *Eranda Taila*, *Moorchita Tila Taila*, *Sahachara Taila*, *Bala Taila*, *Chinchadi Taila*, *Rasona Taila*, *Sahacharadi Taila*, *Ksheerabala Taila*, *Dhanvantari Taila*, *Mahanarayana Taila*, *Gandha Taila*, *Shatapaki Bala Ashvagandhadi Taila*, *Brihat Vishnu Taila*, *Prabhanjana Vimardana Taila*, *Devadaru Baladi Taila*, *Tila Taila*, *Mahavishagarbha Taila*, *Dashamula Bala Taila*, *Bala Ashwagandhadi Taila*, *Nirgundi Taila*, *Ketakadya Taila*, *Murivenna Taila*, *Trishatiprasarani Taila*, *Dashamula Taila* and *Svadamshtra Taila* are utilized for therapeutic procedures such as *Janu Basti*, *Abhyanga*,

*Pana*, *Janu Seka*, *Janu Pichu*, *Basti*, *Matra Basti* and *Yapana Basti*. These oils, infused with medicinal herbs, are specifically chosen to address pain, inflammation and joint stiffness associated with *Vata* imbalances.

Among them, *Mahanarayana Taila*, *Moorchita Tila Taila*, *Sahachara Taila*, *Chinchadi Taila*, *Rasona Taila*, *Sahacharadi Taila*, *Ksheerabala Taila*, *Mahanarayana Taila*, *Devadaru Baladi Taila*, *Tila Taila*, *Mahavishagarbha Taila*, *Dashamula Bala Taila*, *Murivenna Taila* and *Trishatiprasarani Taila* have been specially indicated for *Janu Basti*.

From research study no. 1 and 2, it can be asserted that *Sahachara Taila* is highly effective in *Janubasti* for the management of *Janusandhigata Vata*. In study no. 3, the data indicates that *Rasona Taila*, utilized in Group B, resulted in significantly greater relief from *Sandhigata Vata* compared to *Chinchadi Taila* in Group A. The study findings suggest that *Rasona Taila* is more effective in managing the symptoms associated with *Sandhigata Vata*. In study no. 4, the findings indicate that *Janu Basti* with *Murivenna* for 45 minutes over 7 consecutive days resulted in a significant reduction in the signs and symptoms of *Janusandhigata Vata* compared to *Janu Pichu* with *Murivenna* administered under the same conditions. These results suggest that *Janu Basti* may be a more effective therapeutic intervention for managing *Janusandhigata Vata*. In study no. 5, group A, which received *Janubasti* with *Trishatiprasarani Taila*, demonstrated a greater net mean effect and sustained benefits during the follow-up period compared to Group B, which underwent *Januseka* with the same oil. Although Group B exhibited less variability in responses, the results suggest that *Janubasti* may provide more effective and lasting relief for the management of the condition studied.

Other than articles which were included in study, one dissertation work was found by Dr. Abhishek Sharma (2016). In which, Group A received *Ekangdhara* with *Sahcaradi Taila* while Group B underwent *Janubasti* with *Sahcaradi Taila*. Comparative analysis revealed that Group B (*Janubasti*) was more effective in reducing the clinical features of the disease. Statistical

evaluation that the improvement observed in Group B was significant.

Dr. Santosh Chavan et al.<sup>[52]</sup> A randomized controlled trial was conducted. Group A received *Janubasti* with *Tila Taila* followed by ultrasound therapy, while Group B received only *Janubasti* with *Tila Taila*. The findings revealed that the combination of *Janubasti* followed by ultrasound therapy resulted in significant improvements in pain reduction, joint mobility, and overall physical function compared to treatment with *Janubasti* alone.

Dr. Manjula Vishal Matekar<sup>[53]</sup> were given *Sahachara Taila Janu Basti* group A & *Agnikarma* with *Tamrashalaka* on maximum tenderness on anterior part of Knee joint in group B. In group A, marked improvement was seen after 7 days of treatment. There was no relapse of symptoms till second follow up. *Agnikarma* was found highly effective in *Shula*, *Shotha* and *Sparshasahatva*. *Janubasti* and *Agnikarma* were found equal effect in relieving the signs and symptoms of *Janu Sandhigata Vata*.

#### Probable Mode of Action of Janu Basti (Local Oil Dipping at Knee Joint) On Janu Sandhigata Vata

When the procedure starts, medicated oil crosses the cell membrane through the skin, and the functions of phospholipids will increase and act as a carrier for various cellular elements or impurities which are responsible for the formation of diseases.

The lukewarm oil will increase the temperature to more than 2 to 3 in the localized area, by which vasodilatation will happen and the blood circulation will increase and necessary oxygen and nutrition materials are supplied and the free radicals which are responsible for the disease will be removed.

This therapy produces a sedative effect because of the pharmacological action of the used medicine like anti-inflammatory action. Analgesic action, muscle relaxant, etc and acts as a counter-irritant which is the thermal stimulus and may affect the pain sensation. It also induces muscles relaxation and increases the efficiency of muscle activity as the increased blood supply ensures the optimum condition for muscle

contraction; it nourishes the muscle, bone and nerve, cartilage and lubricates the joint, and stops the degeneration of the knee joint because of its therapeutic action of the medicine and procedure.<sup>[54]</sup>

*Taila* serves as a fundamental component of *Janubasti* therapy, providing multiple benefits that contribute to the alleviation of symptoms associated with *Janusandhigata Vata*. Through its warming, lubricating, and therapeutic properties, *Taila* not only enhances local blood circulation and joint function but also plays a critical role in balancing *Vata Dosha*, making it an essential element in the management of knee osteoarthritis in Ayurveda.

#### CONCLUSION

The comparative analysis of various medicated oils used in *Janubasti* reveals significant variations in therapeutic efficacy. These findings underscore that *Janubasti* represents an effective therapeutic modality for managing *Janu Sandhigata Vata*, with appropriate medicated oils demonstrating promising results in alleviating the symptoms associated with this condition. *Janubasti* with specific oils, particularly *Rasona Taila*, yields substantial improvements in clinical outcomes. Also, Among the various *Taila* utilized, *Sahachara Taila* and *Sahacharadi Taila* is employed more frequently for *Janu Basti*. Its repeated use in various therapeutic procedures underscores its effectiveness in addressing the underlying pathophysiology of joint disorders. Continued research is essential to further validate these interventions and optimize treatment protocols for patients suffering from this debilitating condition.

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