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A SURVEY STUDY ON THE PREVELANCE OF DEHA PRAKRITI IN *JANU-ASTHI SANDHIGAT VATA* W.S.R TO KNEE OSTEOARTHRITIS

Dr. Sharma Piyush[1]*, Chauhan Meenakshi[2], Sharma Vishal[3], Singh Manjeet[4] and Singh Bhagirath[5]

[1,2,3,5]Assisstent Professor, Dept. of Roga Nidan Evum Vikriti Vigyana, Dept. of Samhita & Siddhanta, Department of Rachna Sharira, Dept. of Roga Nidan Evum Vikriti Vigyana.
[4]Associate Professor Department of Rachna Sharira, National College of Ayurveda & Hospital, Barwala, Hisar (Haryana).

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***Corresponding Author**
Dr. Sharma Piyush
Assisstent Professor, Dept. of Roga Nidan Evum Vikriti Vigyana, Dept. of Samhita & Siddhanta, Department of Rachna Sharira, Dept. of Roga Nidan Evum Vikriti Vigyana.

ABSTRACT

The *Prakriti* of a person determines their susceptibility to various diseases. *Sandhigat Vata* is a common joint disorder among them, caused by *Dhatukshya*. This condition severely limits daily activities such as walking, dressing, and bathing, and it frequently causes disability. Managing a *Vatavyadhi* like *Sandhigat Vata* in old age is difficult. As a result, evaluating *Prakriti* is critical for determining the prognosis, diagnosis, treatment, and prevention of many complex illnesses, including *Sandhigat Vata*, in both healthy and diseased individuals. Hence this study is aimed at evaluating the relationship between Prakriti and Sandhigat Vata. After the completion of study it was observed that Sandhigat Vata occurs more frequently in patients with Kapha Vataj Prakriti indicating the involvement of primarily Kapha and Vata Dosha.

KEYWORDS: Prakriti, Sandhigat Vata, Kapha Vataj Prakriti.

1. INTRODUCTION

Knee osteoarthritis (OA) is a prevalent musculoskeletal ailment characterized by the gradual deterioration of articular cartilage, accompanied by subchondral bone changes and synovial inflammation.[1] The resulting symptoms of pain, stiffness, and impaired joint function significantly impact the quality of life for affected individuals. In the holistic framework of *Ayurveda*, knee osteoarthritis is classified under *Janu-Asthi Sandhigat Vata*, focusing on the

bones and joints of the knee region. The etiopathogenesis of *Janu-Asthi Sandhigat Vata* involves a multitude of factors, including the individual's inherent constitution, or *Prakriti*.[2,3]

Ayurveda, the ancient Indian system of medicine, places profound emphasis on *Prakriti*, which denotes an individual's inherent psycho-physiological constitution and its role in determining susceptibility to diseases and response to treatments. This constitution is determined by the relative proportions of the three *Doshas—Vata*, *Pitta*, and *Kapha*—present at birth. *Deha Prakriti* specifically refers to the unique constitutional makeup of an individual, exerting a significant influence on their health outcomes.[4,5]

Recognizing the pivotal role of *Deha Prakriti* in the prevalence and manifestation of *Janu-Asthi Sandhigat Vata*, particularly in knee osteoarthritis, holds paramount clinical significance. Identifying individuals with specific *Prakriti* types predisposed to knee osteoarthritis could facilitate early diagnosis, personalized management strategies, and preventive interventions. However, despite its potential importance, there remains a notable gap in the scientific literature exploring the association between *Deha Prakriti* and knee osteoarthritis within the *Ayurvedic* context.[6,7]

Hence, this survey study aims to investigate the prevalence of *Deha Prakriti* among individuals diagnosed with *Janu-Asthi Sandhigat Vata*, with a specific focus on knee osteoarthritis. By delving into the relationship between *Prakriti* and knee osteoarthritis within the *Ayurvedic* paradigm, this research endeavors to deepen our understanding of the pathogenesis, clinical manifestations, and management of this prevalent musculoskeletal condition. The insights gained from this study may pave the way for personalized approaches to the prevention and management of knee osteoarthritis, aligning with the holistic principles of *Ayurveda* and ultimately enhancing the quality of care for affected individuals.

2. MATERIALS AND METHODS

2.1 Inclusion criteria

i. Patient above 40 years of age, irrespective of sex and socioeconomic status.
ii. Patients having signs and symptoms *Janu-Asthi Sandhigat Vata* (Knee osteoarthritis)**.**

2.2 Exclusion criteria

i. Patients suffering from paralysis.

ii. Patients below 40 years of age.

iii. Patients suffering from gouty arthritis & rheumatoid arthritis.

After fulfilling the criteria for selection, 50 volunteer patients suffering from knee osteoarthritis between the age group of 40-80 years were registered for the study from the OPD/IPD of the Department of *Shalya Tantra*, Department of *Panchkarma* R.G.G.P.G. Ayurvedic Hospital Paprola, District Kangra (H.P.).

Following patient registration Each patient's *Deha Prakriti* was evaluated using a *Prakriti* Assessment Chart that was modified from the TNMC PRAKRITI 2004 Questionnaire and the Self-Assessment Questionnaire to Assess *Prakriti* [Originally created by Rashmi Sharma and Kishore Patwardhan and modified by Piyush Kumar Tripathi, Kishore Patwardhan, and Girish Singh, Institute of Medical Sciences, Banaras Hindu University, Varanasi].

Table 1: Questionnaire for assessment of *Deha Prakriti.*

Total points				
No.	**Character**	***Vata***	***Pitta***	***Kapha***
1.	Body frame	Lean long	Medium	Large, plump, fleshy, fatty
2.	Body Mass Index	< 19	19-25	> 25
	Speech			
3.	Speed	Fast	Fast	Slow
4.	Clarity	Diffuse words	Clear	Clear
5.	Character	Easily deviates from the topic, more talkative	Impressive speaker	Less talkative, likes to be reserved
	Eyes			
6.	Color- Sclera	Blackish	Reddish, brown	Milky white Edges- reddish
	Lips			
7.	Character	Cracked, shapeless	Smooth, soft, thin	Smooth, glossy, Proportionate
8.	Color	Blackish	Reddish	Pinkish
	Nails			
9.	Character	Small, Cracking, breaking, rough, easily break	Small, smooth &flat	Big, smooth, glossy
10.	Color	Blackish	Reddish	Pinkish
	Hair			
11.	Texture	Rough & Dry	Soft & Delicate	Soft & Shiny
12.	Color	Black	Gray/ Brown	Black
13.	Thickness	Less	Medium	More
	Skin			

14.	Character	Cracking, rough	Soft, oily, with moles, pimples, freckles	Smooth, glossy
15.	Color	Blackish tinge	Yellowish tinge	Fair, pinkish
16.	Temperature	Cold		Cold
17.	Body odor	Absent	Present	Absent
	Appetite			
18.	Frequency of eating	More	More	Less
19.	Quantity at meal	Less	More	More
20.	Habit	Irregular	Profound	Not much
21.	If meal is skipped/ meal timings are changed/ style of food is changed	Constipation	Headache/vomiting	Nothing special
22.	Thirst	Irregular	More	Less
	Stool			
23.	Habit	Irregular	Regular	Regular
24.	Consistency	Hard	Semi-solid	Well-formed
25.	Color	Blackish	Yellowish	Yellowish
	Sleep			
26.	Character	Interrupted, less	Uninterrupted, less	Sound, profound
27.	Duration	6 hours	6-8 hours	8 hours or more than 8 hours
28.	Excitement	Quickly, cools down quickly	Quickly, does not cool down quickly	Rarely
29.	Working style	Quickly	Medium	Slowly
30.	Other movements	Fast, unnecessary	Fast, precise	Slow steady
31.	Strength	Less, feel exhausted after doing some work	Medium, moderately gets tired	Good, do not feel tired
32.	Style of tackling problem	Worrying continuously without expressing	Losing self control, becoming angry/ irritated	With cool and stable mind
33.	Control on desires	Hardly, doesn't work hard for the same	Cannot, work hard, achieve it	Can control easily
34.	Concentration on work	Lack of concentration	Can concentrate on thing of interest	Can easily concentrate
35.	Cognition	Quick, poor	Quick, good	Delayed
36.	Process	Poor	Average	Good
37.	Grasping Store Memory	Less	Average	Good

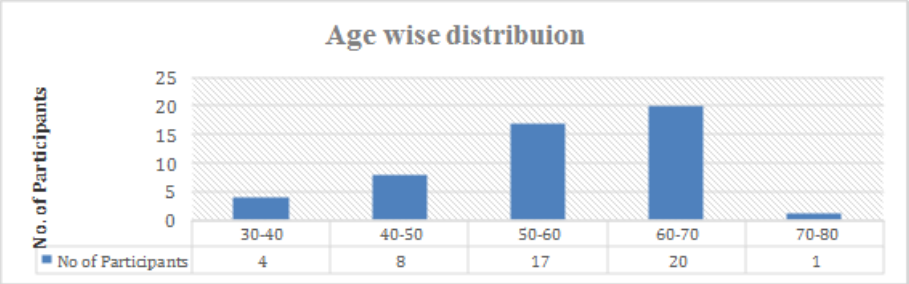
3. RESULTS AND DISCUSSION

3.1 RESULTS

4.1.1 Age profile

Table No. 2: Age Profile.

Age (in Years)	No. of Patients (%)	Percentage
30-40	04	08%
40-50	08	16%
50-60	17	34%
60-70	20	40%
70-80	01	02%



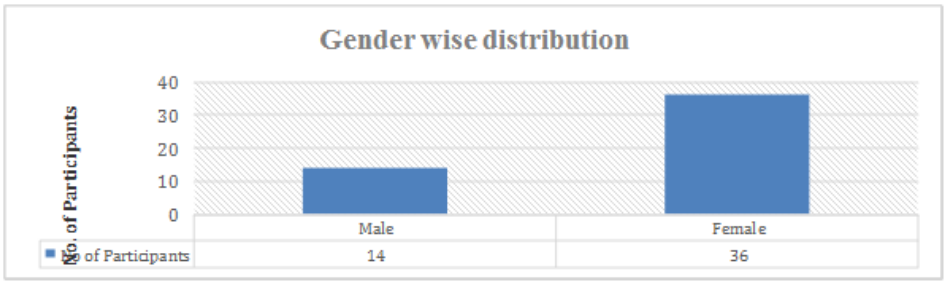
Bar Diagram No. 1.

In present study maximum patients i.e. 40% and 34% were in age group of 60-70 years and 50-60 years respectively. (Table no.2, Bar Diagram no.1)

4.1.2 Gender profile

Table No. 3: Gender profile.

Sex	No. of patients	Percentage
Male	14	28%
Female	36	72%



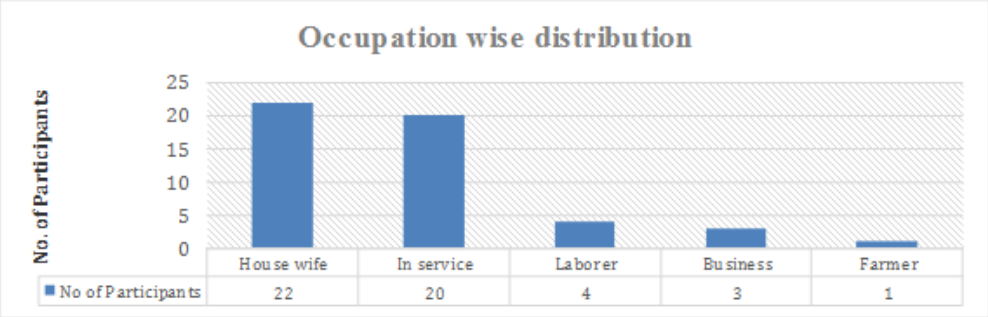
Bar Diagram No. 2.

In the present study 72% were female patients, whereas 28% were males. (Table no.3, Bar Diagram no.2)

4.1.3 Occupation profile

Table No. 4: Occupation profile.

Occupation	No. of patients	Percentage
House wife	22	44%
In service	20	40%
Laborer	04	08%
Business	03	06%
Farmer	01	02%



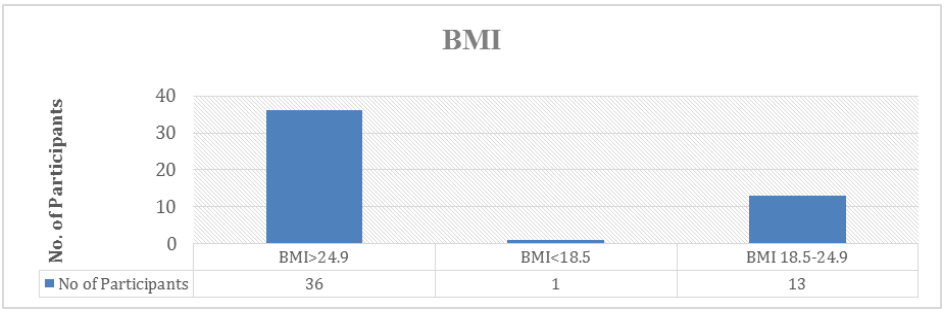
Bar Diagram No. 3.

In the present study 44% patients were house wives, 40% patients were doing service either in Govt. or private sector, 8% patients were involved in labor related works, 6% patients were doing business and 2% patients were farmers. (Table no.4, Bar Diagram no.3)

4.1.4 BMI

Table No. 5.

BMI (Kg/m^2)	No. of patients	Percentage
BMI >24.9	36	72%
BMI<18.5	01	02%
BMI 18.5-24.9	13	26%



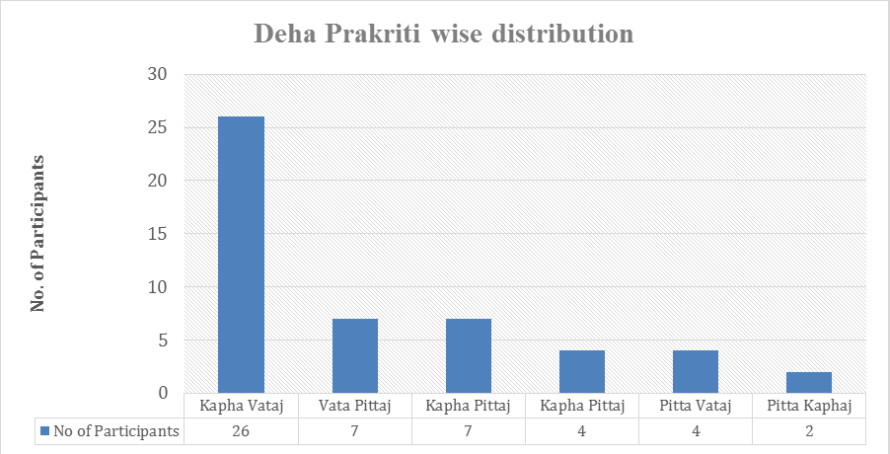
Bar Diagram 4

In 72% of the patients, BMI >24.9 or overweight was identified as the underlying cause of *Sandhigat Vata* (Knee osteoarthritis). (Table no. 5, Bar diagram no.4)

4.1.5. Distribution of the patients on the bases of *Deha Prakriti*

Table No. 6: *Deha Prakriti* profile.

Deha Prakriti	No. of Patients	Percentage
Kapha Vataj	26	52%
Vata Pittaj	07	08%
Kapha Pittaj	07	14%
Pitta Vataj	04	14%
Vata Kaphaj	04	08%
Pitta Kaphaj	02	04%



Bar Diagram No.5

In the present study highest prevalence of *Janu-asthi Sandhigat Vata* was reported in patients with *Kapha Vataj Prakriti* i.e. 52%, followed by *Vata Pittaj Prakriti* i.e. 14% and *Kapha Pittaj Prakriti* i.e. 14%. Minimum cases were found in patients with *Pitta Kaphaj Prakriti* i.e. 04 %. (Table no.6, Bar Diagram no.5)

Association of *Janu-asthi Sandhigat Vata* and *Deha Pakriti*

In *Janu-asthi Sandhigat Vata*, maximum number of patients i.e. 52% or 26 out of 50 of were of *Kapha Vataj Prakriti*.

3.2 DISCUSSION

3.2.1 It was observed that in the present study maximum patients i.e. 40% were in the age group of 60-70 years followed by 34% in the age group of 50-60 years, 16% in the age group of 40-50 years followed by 08% in the age group of 30-40 years, and lastly 02% in the age group of 70- 80 years. (Table no.2, Bar diagram no.1) This indicates that with advancing age, the degeneration of articular cartilage becomes more pronounced.

3.2.2 Gender profile of the registered patients revealed that 72% patients were female subjects and 28% were male. The prevalence of knee osteoarthritis was higher among females. (Table no.3, Bar diagram no.2) It may be due to the complicated female physiology, hormonal changes, daily household activities, stress etc.

3.2.3 Occupation wise distribution showed that 44% patients were house wives, followed by 40% in service(either private or Govt.) and retired, 8% patients were involved in labor related works, 6% patients were doing business and 2% patients were farmers. Women are more affected than men, as indicated in the gender profile, and due to household tasks that they carry out on a daily basis also contribute in putting extra strain on joints, particularly the knee joint, which causes knee osteoarthritis. Secondly the service sectors who were most affected, in survey it was observed that they were working as security guards, police or army personnel, peons. It was observed that the mode of job of these patients was very strainious that leads to the degenerative changes in *Sandhigat Vata* (Knee osteoarthritis). (Table no.4, Bar diagram no.3)

3.2.4 In 72% of the patients, BMI >24.9 or overweight was identified as the underlying cause of knee osteoarthritis. By studying this cause, it became evident that obesity is currently the main contributing factor to knee osteoarthritis because it places more strain on the weight bearing joints especially knee joint. (Table no.5, Bar diagram no.4)

3.2.5 In the present study highest prevalence of *Janu-asthi sandhigat Vata* was reported in patients with *Kapha Vataj Prakriti* i.e. 52%, followed by *Vata Pittaj Prakriti* i.e. 14% and *Kapha Pittaj Prakriti* i.e. 14%. Minimum cases were found in patients with *Pitta Kaphaj Prakriti* i.e. 04 %. (Table no.6, Bar Diagram no.5) It shows that the persons with ***Kapha Vataj Prakriti*** are most commonly be affected by knee osteoarthritis, and it is important to educate them about their lifestyle and daily routines in order to prevent them from the disease.

4. CONCLUSION

In the present study highest prevalence of *Janu-asthi sandhigat Vata* was reported in patients with *Kapha Vataj Prakriti* i.e. 52%, followed by *Vata Pittaj Prakriti* i.e. 14% and *Kapha Pittaj Prakriti* i.e. 14%. Minimum cases were found in patients with *Pitta Kaphaj Prakriti* i.e. 04 %. So our study shows that people with ***Kapha Vataj Prakriti*** are more likely to have knee osteoarthritis. This means we should focus on personalized prevention methods for them.

Teaching them about lifestyle changes is the key to preventing the disease. Knowing a person's *Prakriti* will help us create better ways to improve bone and joint health.

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