



## A Cross-sectional Study to Identify the Predominance of *Prakriti* in Patients with Covid-19

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**Abstract:** COVID-19 is a viral and fatal disease occurring over a wide geographic range and affecting a high proportion of the population. It has no definite treatment; hence, prevention is the best way. A person's *Prakriti* (body constitution -inherent nature of an individual) is decided to depend on the *Ahara Vihara* of the mother during pregnancy. It does not change throughout life. This *Prakriti* is also responsible for immunity; the onset and maintenance of disease depend on *Prakriti*. Hence, by properly knowing *Prakriti*, we can plan the disease's prevention, care, and management. The prime of this study was to observe the predominance of specific *Prakriti* in patients with covid 19. The main objective of this study was to compare the prevalence of COVID-19 in patients with different *Prakriti* & to raise awareness regarding COVID-19 in Wardha City. The current study was conducted by recruiting 100 patients who recovered from Covid-19. The primary goal of this research was to determine the prevalence of particular *Prakriti* in patients with covid 19. The primary goal of this study was to compare the prevalence of COVID-19 in patients with varied *Prakriti* and to raise awareness about COVID-19 in Wardha. Their complaints were noted, and a *Prakriti* [body constituent] assessment was done. It was found that the prevalence of COVID-19 is high in *Pittaja Prakriti* [Body constituent dominant with hot entity] (44%), followed by *Kaphaja Prakriti* [Body constituent dominant with phlegm] (35%) and *Vata Prakriti* [Body constituent dominant with air entity] (21%). In this present study, most of the affected patients were male. People with *Pitta*-predominant *Prakriti* were affected mainly by COVID-19. Though symptoms of COVID-19 show *Kapha* [Phlegm] predominance as per *Ayurvedic* perspectives, its prevalence is more in *Pitta*-predominant *Prakriti*. *Pitta Dosha* is linked with the body's thermoregulation, metabolism, and immunity. People with *Pitta Prakriti* [Body constituent with hot entity] have hypersensitive *Pitta Dosha* [Hot entity] in their bodies. Infection with COVID-19 disturbs the body's normalcy and is more common in *Pittaja Prakriti* people.

**Keywords** - COVID-19, *Prakriti*, Immunity, Prevention, *Pitta* predominance.

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## I. INTRODUCTION

The COVID-19 pandemic, also known as the coronavirus pandemic, is an ongoing pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)<sup>1</sup>. It was first identified in December 2019 in Wuhan, China. A pandemic is a disease "occurring over a wide geographic area and affecting an exceptionally high proportion of the population. Coronaviruses are a family of viruses that cause respiratory illness or G.I.T. diseases. Respiratory diseases can vary from the common cold to severe fatal conditions.<sup>2</sup> COVID-19's transmission pathways are unknown, although research from other Coronaviruses and respiratory disorders suggests that the disease could be transferred via large respiratory droplets and direct or indirect contact with contaminated secretions<sup>3</sup>. Airborne transmission can occur in busy settings and indoor rooms with poor ventilation, significantly affecting people spending a long time with others, such as shopping malls, restaurants, etc. In addition, while performing medical operations, airborne transmission happens in medical care settings (aerosol-generating procedures). It is more easily transmitted in the "Three C's," i.e., crowded places with many people nearby, close-contact situations, especially where individuals have talked very close together, and confined and enclosed rooms with limited ventilation.<sup>4</sup> Because it is a pandemic with no specific treatment, the best way of avoiding the disease and its complications is to prevent it. Since this disease is lethal and affects a large population, it should be researched. Because everyone is afraid of COVID-19 as having disease mortality and because there is no specific therapy and a significant increase in the number of patients, other medical faculties should cooperate in fighting the pandemic.<sup>5</sup> In addition, *Ayurveda* notions of building immunity, *Prakriti*, and adhering to a routine to avoid disease are critical in combating this pandemic. *Prakriti* is an Ayurvedic concept. An individual's fundamental nature is determined at birth and cannot be altered during their lifetime. It is the total of morphological, physiological, and psychological essential characteristics.<sup>6</sup> The current context of *Prakriti*'s description is about *Deha Prakriti* [Body constitution], which is the body's constitution. *Ayurveda* has a comprehensive and colorful approach to the topic of *Deha Prakriti*. Ancient scholars have identified several elements responsible for an individual's psychological and physical makeup. A person's *Prakriti* is determined by a mixture of these variables and the state of *Doshas* in *Shukra* and *Artava* at the time of conception. *Ayurveda* highly values individualized treatment. It identifies and differentiates each individual as unique. When exposed to an external stimulus, everyone's body reacts differently. As a result, the type of *Prakriti* determines an individual's resistance to diseases, the origin and effect of diseases, and therapeutic responses. Research on the subject of *Ayurveda* is quite essential. Understanding the incidence of COVID-19 in various *Prakriti* may aid in preventing the beginning of COVID-19 and selecting the

appropriate lifestyle and treatment plan to treat it. However, because there has yet to be a single study on the prevalence of COVID-19 in the *Prakriti* in *Ayurveda*, this study will be extremely useful to society and scholars.

### I.1 The rationale of the Study-

COVID-19 is a burning issue that has resulted in many deaths in the modern period. It's a pandemic. Controlling it has become a necessity in light of its worldwide reach. Because there is no cure, the only method to avoid sickness is to prevent it. It's lethal, wildly spreading, and has changed people's lives. As a result, this global pandemic underlines the need for *Ayurvedic* study again, as there is no definitive therapy for it and many details about this novel COVID-19 to be uncovered. *Ayurveda* is believed to be the world's oldest therapeutic system. *Ayurveda* is a 5000-year-old Indian medical system. *Ayurveda* means "the science of life" in Sanskrit. It primarily thinks the goal is to avoid sickness and cure the condition.<sup>7</sup> Every person has a unique constitution, or *Prakriti*, a combination of physical, mental, and emotional features like everyone has a unique fingerprint.<sup>8</sup> As a result, determining a person's *Prakriti* is crucial. It is essential to select and establish every component a person will interact with from conception to death, such as lifestyle, nutrition planning, and other factors. *Vata* [air entity], *Pitta* [hot entity], *Kapha* [Phlegm], and *Mansika* [Psychological] are in charge of all physiological processes. The healthy status of the *Doshas* can thus be preserved by maintaining the normality of *Prakriti*.<sup>9</sup> The danger of sickness rises when *Prakriti* is out of balance during the end stage of the disease. Understanding *Prakriti* can determine a person's ability to fight diseases, as a person with *Prakriti* equilibrium is thought to have the best immunity and strength.<sup>10</sup> As a result, by understanding *Prakriti* and *Dosha* [Three body entities], we can determine the likelihood of disease occurrence, prevention, and cure. *Doshas* have an impact on a person's *Prakriti*. A person's everyday lifestyle causes increases or decreases in *Doshas*. Every *Prakriti* has some dos and don'ts that must be obeyed, or sick conditions will result. As a result, *Prakriti* significantly impacts the onset of diseases and the maintenance of immunity. Knowledge of the incidence of COVID-19 in a specific *Prakriti* can be highly beneficial in terms of prevention, management, and cure. However, because no such study exists, it may present a novel technique that could be beneficial. As a result, this research is planned.

### I.2 Research Gap Analysis

In COVID-19, the greatest method to avoid the sickness and its effects in this pandemic with no known cure is to prevent it. Research should be done on this disease because it is deadly and affects a huge number of people. Other medical faculties should work together to combat the pandemic because everyone is afraid of a terrible disease, there is no

specific treatment, and there has been a significant increase in the number of patients. For the s-specific treatment, the Prakriti analysis is important to decide on the specific line of treatment as per Ayurveda's basic principles. Hence, this study aimed to observe the predominance of specific *Prakriti* in patients with covid-19. The main objective of this study was to compare the prevalence of COVID-19 in patients with different *Prakriti* and to raise awareness regarding covid19 in Wardha City.

## 2 MATERIALS AND METHODS

It is an Observational study comprising on a Cross-sectional study design. Based on the personal interview of the person matching the Study's eligibility requirements, this study was conducted utilizing a survey approach in the form of a questionnaire. The study was conducted at the Acharya Vinoba Bhave Rural Hospital in Sawangi (Meghe) and the Mahatma Gandhi Ayurved College, Hospital, and Research Centre in Salod (H), Wardha, Maharashtra. The total duration of the Study was six months. Among them, data collection was done within five months, and data analysis was made within two months. One hundred patients with signs and symptoms of COVID-19 were detected based on the R.T.P.C.R. test<sup>12</sup>. Specific inclusion and exclusion criteria used for the analysis are as follows:

### 2.1 Source of data collection

The research was carried out in two hospitals: The Mahatma Gandhi Ayurved College, Hospital, and Research Centre in Salod (H), the Acharya Vinoba Bhave Rural Hospital in Sawangi (Meghe), and Wardha. The cross-sectional survey was carried out for six months with consent from the institutional ethical committee. Personal interviews were used to acquire data. The Prakriti questionnaire was used to conduct personal interviews with all individuals. Participants' informed consent was obtained before the interview.

### 2.2 Participants

The patient was suffering from COVID-19 between the age group 25-60 years, irrespective of gender, and was willing to enroll in the study. The patient was selected by reviewing the RTPCR test. RTPCR test-positive patients were recruited for the study.

### 2.3 Inclusion & Exclusion Criteria

#### Inclusion Criteria

- Typical clinical presentation of acute onset febrile illness with cough and RT\_PCR-based laboratory confirmation test for COVID-19

- Patients of either sex of any age group
- Patient willing to participate

#### Exclusion criteria

Patients are not willing to participate.

### 2.4. Sample Size

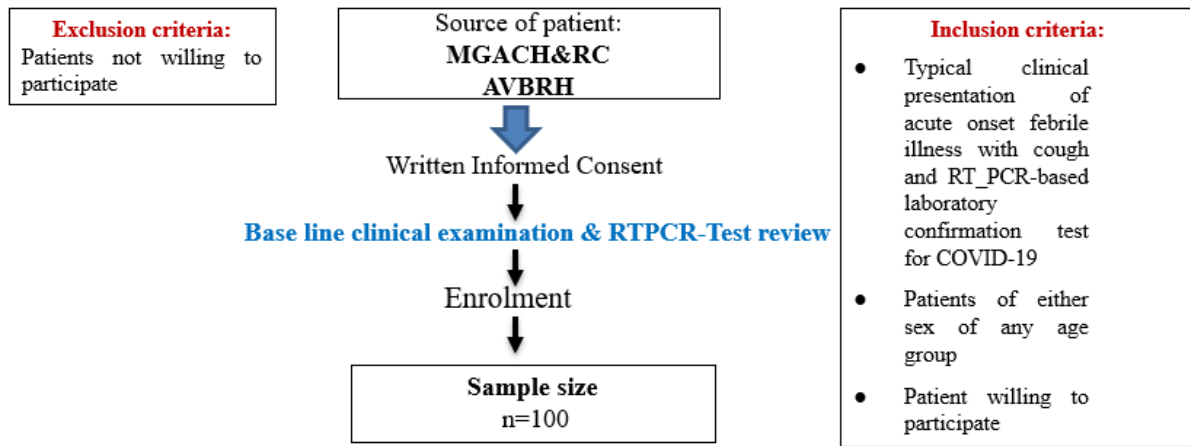
A sample size of 100 participants from Wardha city, with complete questionnaires, was required. A 5% incomplete questionnaire was expected to be a technical error.

### 2.5. Ethics & Dissemination

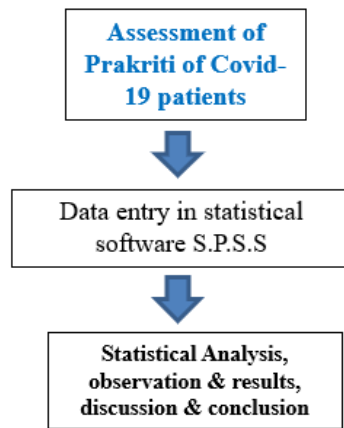
The cross-sectional study will be conducted over six months. The approval has been taken from the Institutional Ethical Committee of Mahatma Gandhi Ayurveda College, Hospital & Research Centre, Salod (Hi), Wardha. Its letter number is MGACHRC/IEC/JUNE-2021/253 dated on 21<sup>st</sup> June 2021. A subject expert prepared and verified the Prakriti questionnaire. Inclusion and exclusion criteria were modified as per suggestions given by I.E.C.

### 2.6. Recruitment, Data Collection, extraction, and management

All eligible participants were informed in advance about the nature of the study and the required time to complete the questionnaire. Proper informed consent was taken from each patient in their known language (Marathi / Hindi /English). The patient's participation was voluntary, and no financial assistance was given to anyone. All the essential information, like name, address, affiliation, phone number, and email address, will be recorded for further assistance if required. If the participants had any questions regarding the research or study, they were answered by the investigating researcher. Data were collected by personal interviews based on the *Prakriti* questionnaire case sheet. Literature searches and reviews regarding *Prakriti* analysis were carried out to develop the *Prakriti* survey questionnaire, and depending upon that information, the questionnaire was prepared. The answers were recorded in the questionnaire by marking the appropriate responses. The assessment of questions regarding covid-19 was recorded in a particular structured case proforma. After completion of the survey procedure, the participants' *Prakriti* were analysed. An Excel sheet was prepared from the marked answers in the *Prakriti* questionnaire case sheet. All the data were analyzed with the help of statistical experts using the Chi-square test to assess the predominance of *Prakriti* in patients with Covid -19. In Windows, S.P.S.S. software was used for all statistical analysis.



**Interview with questionnaires**



**Fig.1. Recruitment, Data Collection, extraction, and management**

**2.7. Anticipated Outcome**

The anticipated outcome of this study was to observe the predominance of specific *Prakriti* in patients with covid 19. The main objective of this study was to compare the prevalence of COVID-19 in patients with different *Prakriti* and to raise awareness regarding covid19 in Wardha City.

**3. Assessment & Data Analysis**

The demographic distribution of patients in this study is tabulated in Table No. 1.

<b>Table No. 1: Demographic Distribution</b>				
<b>S.N.</b>	<b>Parameters</b>	<b>Divisions</b>	<b>No. of patients</b>	<b>%</b>
1	Age	Below 20	7	7%
		20-30	55	55%
		31-40	16	16%
		41-50	9	9%
		Above 50	13	13%
2	Sex	Male	58	58%
		Female	42	42%
3	Religion	Hindu	78	78%
		Muslim	4	4%
		Buddhist	13	13%
		Others	5	5%
4	Occupation	Student	45	45%
		Sitting	13	13%
		Fieldwork	19	19%
		Others	23	23%
5	Socio economic status	Upper	7	7%
		Middle	91	91%
		Lower	2	2%

6	Education	Educated	97	97%
		Uneducated	3	3%
7	Marital status	Married	73	73%
		Unmarried	27	27%

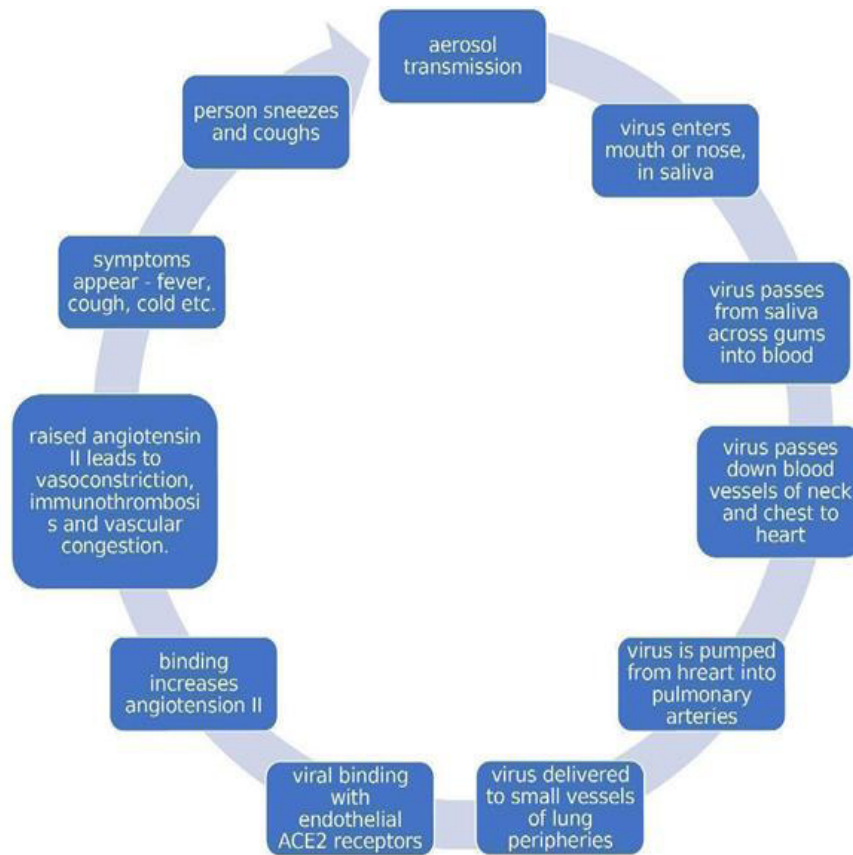
Table no 1 The above data is a demographic representation of patients taken for the observation study. One hundred patients were selected, and their *Prakriti Parikshana* was done and analysed to get the results. This data shows that most patients were between 20 and 30 years old, followed by those aged 31 and 40. 58% male and 42% female patients were taken for Study. Most patients (73.33%) belonged to

the 20 – 50 age group. Based on religion, most were of *Hindu* religion (78%). The data shows that 45 were students. As shown in the above data, ninety-one cases were from the middle class. 73% of the patients were unmarried, as most belonged to the young age group, and the rest were married. Observations obtained based on the *Prakriti* Questionnaire are provided in Table No. 2.

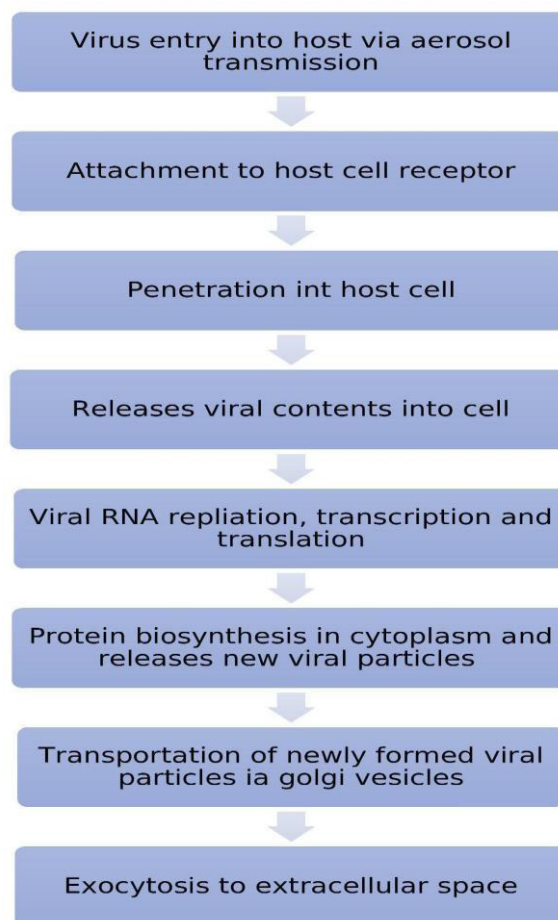
Table No.2: Observations obtained based on the <i>Prakriti</i> Questionnaire			
S. N.	Head	Subhead	% Of patients
1	<i>Prakriti</i>	<i>Vata</i>	21
		<i>Pitta</i>	44
		<i>Kapha</i>	35
2	Body frame	Lean and thin	27
		Medium height and fit	55
		Short and obsessed	18
3	Speech	Fast and talkative	29
		Slow and reserved	11
		Moderate speed, an impressive speaker	60
4	Eyes	Black	50
		Brown	48
		Blue or grey	2
5	Skin	Brown complexion	32
		Yellowish, oily	46
		Fair and pinkish	22
6	Appetite	Regular	75
		Low	6
		Profound hunger or irregular	19
7	Memory and concentration	Strong	22
		Moderate	55
		Low	23

Table no 2- The prevalence of COVID-19 was most seen in *Pittaja Prakriti* (44%), followed by *Kaphaja Prakriti* (35%) and *Vata Prakriti* (21%). Of 100 patients, 45% had mild, 41% had moderate, and 14% had severe status disease. The following results are derived based on observations drawn from the collected information. The characteristics of *Pitta Dosha* are light, hot, intense, acidic, sharp, and pungent<sup>13</sup>. The individual with *Pitta Prakriti* exhibits characteristics like wonderful intellect, strong memory, appetite, digestive power, and high

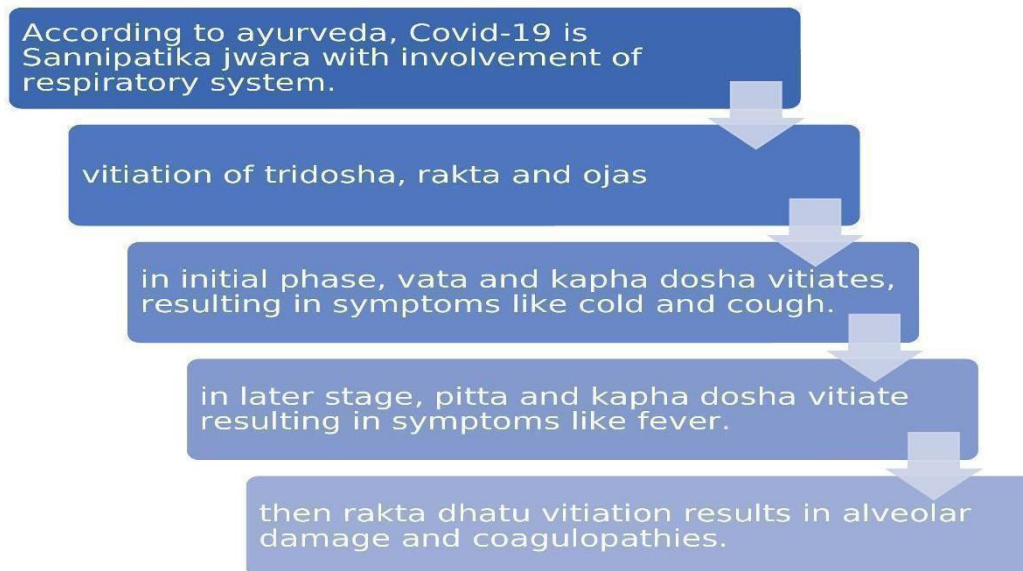
body temperature. When this *Pitta Dosha* gets out of balance, it causes skin rashes, too much temperature or fever, peptic ulcers, heart burns, and a burning sensation<sup>14</sup>. In COVID-19 infections, people with *Pitta Prakriti* indulge in an unhealthy diet and regimen and have high chances of suffering from fever, skin rashes, and other complications. Such individuals are also *Sukumar* (tender) and hence show fast progression in organ failure<sup>15</sup>. Hence, special care and precautions should be followed by people with *Pittaja Prakriti*.



**Fig.2: Pathology of Covid-19 as per Modern Science**



**Fig.3: Pathology of Covid-19 as per Modern Science**



**Fig.4: Pathology of Covid-19 as per Ayurveda**

#### 4. DISCUSSION

Considering the nature of the pathology of Covid 19 as per conventional science and Ayurveda, as mentioned in images no, 1,2, and 3, *Prakriti* plays a crucial role in its clinical presentation and prevention. In *Ayurveda*, the *Acharyas* did not expressly name COVID-19, but they did discuss *Janopadhwamsa* [demolition or destruction of people or community]<sup>16</sup>, a disease that spreads globally and kills many people.<sup>17</sup> In persons with strong immune systems, this disease is usually moderate or non-fatal<sup>18</sup>. Along with our genetic immunity, our immunity is influenced by our lifestyle, food, and day-to-day behaviour<sup>19</sup>. There is currently no effective treatment for this condition. In this instance, prevention is the best option and should be prioritized<sup>20,21</sup>. A person's *Prakriti* can indicate physiological strengths and weaknesses<sup>22</sup>, mental dispositions<sup>23</sup>, and susceptibility to specific ailments.<sup>24</sup> The resistance to sickness, the level of damage to the body, and the frequency with which it occurs are all determined by a person's *Prakriti*<sup>25</sup>. It also impacts one's ability to fight diseases<sup>26</sup>, as our immune system plays a role. As a result, we evaluate a person's *Prakriti* and immunity<sup>27-30</sup>. One can boost immunity, prevent disease, and combat it by altering lifestyle and nutrition. Adaptive or acquired immunity develops the ability to identify pathogens. It is controlled by the body's cells and organs, including the lymph nodes, spleen, thymus, and bone marrow. When a foreign substance enters the body, these cells and organs produce antibodies, which trigger the growth of immune cells (such as various types of white blood cells) that are specific to the dangerous substance and attack and eliminate it. After that, the immune system adjusts by keeping track of the foreign substance so that, if it re-enters, these antibodies and cells will be even more effective and swiftly eradicate it.<sup>31</sup> The disease of COVID-19 often manifests by susceptibility that depends upon the *Prakriti* of individuals. COVID-19 is a new disease, and the susceptibility of its victim in terms of *Prakriti* is unknown. Only a few dominant *Prakriti* characteristics' CD markers likely reveal discernible variances. In clinical *Ayurveda*, strong immunity in Kapha *prakriti*, a pronounced tendency to produce brilliant red hypersensitivity rashes in pitta *prakriti*, and low immunity in

*Vata* relative to *Kapha* are evident and conclusive *prakriti* traits. Identifying *prakriti*-specific indicators of certain diseases through the discovery and cataloging of *prakriti*-specific genes in physiologically stable states may serve as a reference to aid in genetic sub-grouping of human populations<sup>32</sup>. However, the current study gives an orientation toward COVID-19 disease, which was most prominently observed in *Pitta*-dominant *Prakriti*. So, one should avoid consuming diet and activities that aggravat *Pitta* and its related factors.

#### 5. LIMITATIONS, STRENGTHS, AND FURTHER RESEARCH

*Prakriti* assessment was conducted on a population that was not evenly distributed across genders and age groups, which is one of the study's shortcomings. Current study findings led to the conclusion that its strength is that *Pitta* and *Pitta*-dominant *Kapha* *Prakriti* had increased COVID-19 prevalence. So, further cohort studies need to identify the persons and conduct observational studies for *Pitta* and *Kapha*-provoking diet diseases concerning respiratory disorders and behaviours and practices.

#### 6. RELEVANCE TO PRAKRITI

Since COVID-19 is a novel virus, the victim's sensitivity to *Prakriti* is unknown. Only a few CD markers for dominant *Prakriti* traits are expected to show significant differences. There is no doubt about the *Prakriti* qualities that are visible and definitive in clinical *Ayurveda*: robust immunity in *Kapha* *Prakriti*, a prominent tendency to create brilliant red hypersensitive rashes in pitta *prakriti*, and low immunity in *Vata* relative to *Kapha*. *Prakriti*-specific illness indicators may be identified by identifying and cataloging *prakriti*-specific genes in physiologically stable states, which might be used as a reference for genetic sub-grouping of human populations.

#### 7. CONCLUSION

The conclusion was drawn based on observations and results in the current study. A higher prevalence of COVID-19 was

observed in *Pitta Prakriti* and *Pitta dominant Kapha Prakriti*. Diet and behavioral regimes provoking *Pitta* and *Kapha* should be avoided, and extra measures to maintain hygiene are better for these people. They should adopt a healthy diet and lifestyle during this pandemic. A healthy diet and lifestyle and proper care are advised to maintain good health and prevent COVID-19.

## 8. SOURCE OF FUNDING

Datta Meghe Institute of Higher Education & Research (Deemed to be University), Wardha, Maharashtra, India.

## 11. REFERENCES

1. Acter T, Uddin N, Das J, Akhter A, Choudhury TR, Kim S. Evolution of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) as coronavirus disease 2019 (COVID-19) pandemic: A global health emergency. *Science of the Total Environment*. 2020 Aug 15;730:138996.
2. World Health Organization. Novel Coronavirus (2019-nCoV): situation report, 18.
3. Shao L, Ge S, Jones T, Santosh M, Silva LF, Cao Y, Oliveira ML, Zhang M, BeruBe K. The role of airborne particles and environmental considerations in the transmission of SARS-CoV-2. *Geoscience Frontiers*. 2021 Sep 1;12(5):101189.
4. Sawarkar P, Sawarkar G. Integrative approach in Ayurveda for COVID-19-a review. *Int. J. Res. Pharm. Sci.* 2020;262-75.
5. Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, Zhang L, Fan G, Xu J, Gu X, Cheng Z. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The lancet*. 2020 Feb 15;395(10223):497-506.
6. [https://kayakalpampur.in/life\\_at\\_kayakalp/the-concept-of-prakruti/](https://kayakalpampur.in/life_at_kayakalp/the-concept-of-prakruti/)
7. Grover JK, Vats V. Shifting paradigm: from conventional to alternative medicines—an introduction on traditional Indian medicines. *Asia-Pacific Biotech News*. 2001 Jan 8;5(01):28-32.
8. Gadre G. Classification of Humans into Ayurvedic Prakriti Types Using Computer Vision.
9. Sharma R, Dharua RK, Srivastava AK. A REVIEW ON THE ROLE OF DEHA PRAKRITI IN PREVENTING DISEASES.
10. Fadanavis MV, Sawarkar P. Concept of airborne infectious disease in ayurveda. *International Journal of Research in Pharmaceutical Sciences*. 2020;4847-56.
11. Frawley D. *Ayurvedic healing: a comprehensive guide*. Lotus Press; 2000.
12. Tahamtan A, Ardebili A. Real-time RT-PCR in COVID-19 detection: issues affecting the results. *Expert review of molecular diagnostics*. 2020 May 3;20(5):453-4.
13. Lad V. *Ayurveda: The science of self-healing: A practical guide*. Lotus press; 1984.
14. [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8221020/#:~:text=Pitta%20Prakriti%20individuals%20are%20Sukumar%20\(%E2%88%bctender\)%2C%20they%20may%20show%20fast%20progression%20in%20organ%20failure.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8221020/#:~:text=Pitta%20Prakriti%20individuals%20are%20Sukumar%20(%E2%88%bctender)%2C%20they%20may%20show%20fast%20progression%20in%20organ%20failure.)
15. Balkrishna A, Bhatt AB, Singh P, Haldar S, Varshney A. Comparative retrospective open-label study of

## 9. AUTHORS' CONTRIBUTION STATEMENT

Dr. Punam Sawarkar conceptualized the study protocol. Dr. Neha Yadav Collected the Data and prepared the primary manuscript. Dr. Gaurav Sawarkar made the data analysis. All authors discussed the methodology of the study. Dr. Punam Sawarkar finalized the manuscript.

## 10. CONFLICT OF INTEREST

Conflict of interest declared none.

- ayurvedic medicines and their combination with allopathic drugs on asymptomatic and mildly-symptomatic COVID-19 patients. *Journal of Herbal Medicine*. 2021 Oct 1;29:100472.
16. Bhaturo D, Sawarkar P, Sawarkar G. Indian lifestyle with ayurveda perspective during COVID-19 pandemic. *International Journal of Research in Pharmaceutical Sciences*. 2020;1396-9.
17. Nikolova A, Patel JK. Induction Therapy and Therapeutic Antibodies. In *Pharmacology of Immunosuppression* 2022 Apr 27 (pp. 85-116). Cham: Springer International Publishing.
18. Chopra D, Tanzi RE. *The healing self: A revolutionary new plan to supercharge your immunity and stay well for life*. Harmony; 2020 Jun 16.
19. Stolbach AI, Mazer-Amirshahi M, Marino R, Nelson LS, Sugarman J. ACMT position statement: off-label prescribing during COVID-19 pandemic. *Journal of Medical Toxicology*. 2020 Jul;16:342-5.
20. Beaglehole R, Epping-Jordan J, Patel V, Chopra M, Ebrahim S, Kidd M, Haines A. Improving the prevention and management of chronic disease in low-income and middle-income countries: a priority for primary health care. *The Lancet*. 2008 Sep 13;372(9642):940-9.
21. Dey S, Pahwa P. Prakriti and its associations with metabolism, chronic diseases, and genotypes: Possibilities of new born screening and a lifetime of personalized prevention. *Journal of Ayurveda and integrative medicine*. 2014 Jan;5(1):15.
22. Hankey A. The scientific value of Ayurveda. *Journal of Alternative & Complementary Medicine*. 2005 Apr 1;11(2):221-5.
23. Tripathi JS, Singh RH. Concept of deha prakriti vis-à-vis human constitution in Ayurveda. *Ancient science of life*. 1994 Jan 1;13(3 & 4):314-25.
24. Navghare S, Bajaj P. Detection of Prakriti of Person using Arterial Pulse Detection System with Linear Vector Quantization Method. *International Journal of Computer Science and Information Security*. 2016 Oct 1;14(10):636.
25. Sourav S, Indapurkar KV. Study Of Manas Prakriti With Special Reference To Rajas And Tamas And Effect Of Meditation On It.
26. Nair PP, Nair PG, Shankar KP. An Ayurvedic personalized prophylactic protocol in COVID-19. *Journal of Ayurveda and integrative medicine*. 2022 Jan 1;13(1):100351.
27. Soga M, Evans MJ, Cox DT, Gaston KJ. Impacts of the COVID-19 pandemic on human–nature interactions:



- Pathways, evidence and implications. *People and nature*. 2021 Jun;3(3):518-27.
28. Maor M, Sulitzeanu-Kenan R, Chinitz D. When COVID-19, constitutional crisis, and political deadlock meet: the Israeli case from a disproportionate policy perspective. *Policy and Society*. 2020 Jul 2;39(3):442-57.
29. Rajan S, Munjal Y, Shamkuwar M, Nimabalkar K, Sharma A, Jindal N, Idris M, Manchanda RK, Tanwar AK, Arazzum S, Verma J. Prakriti Analysis of COVID 19 Patients: An Observational Study. *Alternative Therapies in Health & Medicine*. 2021 Nov 2;27.
30. Bhat V, Borse S, Chavan-Gautam P, Joshi K. Exploring AyuGenomics approach for understanding COVID-19 predisposition and progression. *Journal of Ayurveda and Integrative Medicine*. 2022 Jan 1;13(1):100463.
31. Nair PP, Nair PG, Shankar KP. An Ayurvedic personalized prophylactic protocol in COVID-19. *Journal of Ayurveda and integrative medicine*. 2022 Jan 1;13(1):100351.
32. Rotti H, Guruprasad KP, Nayak J, Kabekkodu SP, Kukreja H, Mallya S, Nayak J, Bhradwaj RC, Gangadharan GG, Prasanna BV, Raval R. Immunophenotyping of normal individuals classified on the basis of human dosha prakriti. *Journal of Ayurveda and integrative Medicine*. 2014 Jan;5(1):43.