



# OBSERVATIONAL STUDY OF SHARIR BALA AND MANO BALA IN POST COVID-19 CONDITION WITH SPECIAL REFERENCE TO DEHA PRAKRITI

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**Abstract :-** Global Outbreak of Covid-19 has created problems in many different levels. According to WHO This Pandemic has already crossed more than 3.5 million deaths upto 4 June 2021 all over the world. The Covid 19 virus is of SARS-COV-2 type of virus. WHO has declared Covid 19 as a pandemic on 11th march 2020. Basic symptoms in Covid 19 infection recently was sore Throat, Body Ache, Coughing, Breathlessness, General Weakness. Prakruti of a person defines his natural state of Dosha with specific characteristic in mind and body. Persons with different Prakruti will show different effect on sharir bal and manobal in post covid condition. This study correlate with post covid 19 effect on Strength of body according to Different Prakruti.

## INTRODUCTION

Global Outbreak of Covid-19 has created problems in many different levels. According to WHO This Pandemic has already crossed more than 3.5 million deaths upto 4 June 2021 all over the world. The Covid 19 virus is of SARS-COV-2 type of virus. WHO has declared Covid 19 as a pandemic on 11th march 2020. Basic symptoms in Covid 19 infection recently was sore Throat, Body Ache, Coughing, Breathlessness, General Weakness. Though symptoms are changing frequently due to mutations. Besides Death it also has triggered many Physical, Emotional and Economical problems around the world. As Per CDC (Centre of Disease Control and Prevention, India) People infected with Covid- 19 even asymptomatic can show post covid symptoms like Tiredness, Weakness, Inability to concentrate, Joint and Muscle Pain. Many Stress Factors like Witnessing Death, Death

Of Close Relative, Social Isolation, Economical Loss has seen in this Period. According to research published by Lancet on November 9, 2020; 18% of covid patient developed a mental health issue within 3 months of diagnosis. Patients after Covid-19 Infection are experiencing Fatigue, Weakness, Poor Exercise Tolerance.

Prakriti (Ayurvedic Constitution) is a sum total of the morphological, physiological and psychological basic qualities<sup>1</sup>. It is manifested in the intra uterine life according to the genetic (Beeja) and Dosha (body humors viz. Vata, Pitta and Kapha) influence and is said to be unchangeable throughout life<sup>2</sup>. Ayurveda gives an chief importance to personalized therapy under "Purusham Purusham Vikshya" (an individualized approach) principle. Genetic and intrauterine influences make, every individual a separate entity. Hence, a person has the physiological and pathological distinctions accordingly. Prakriti of each individual determines the response differently when exposed to the same stimuli. The variability in struggle to diseases, different natural course of disease and diverse therapeutic responses needs to be explored from the point of view of Prakriti. Prakriti is a notable basic concept of Ayurvedic epistemology. Fundamentally, it may explain the biological variability that is observed in different persons.<sup>3</sup>

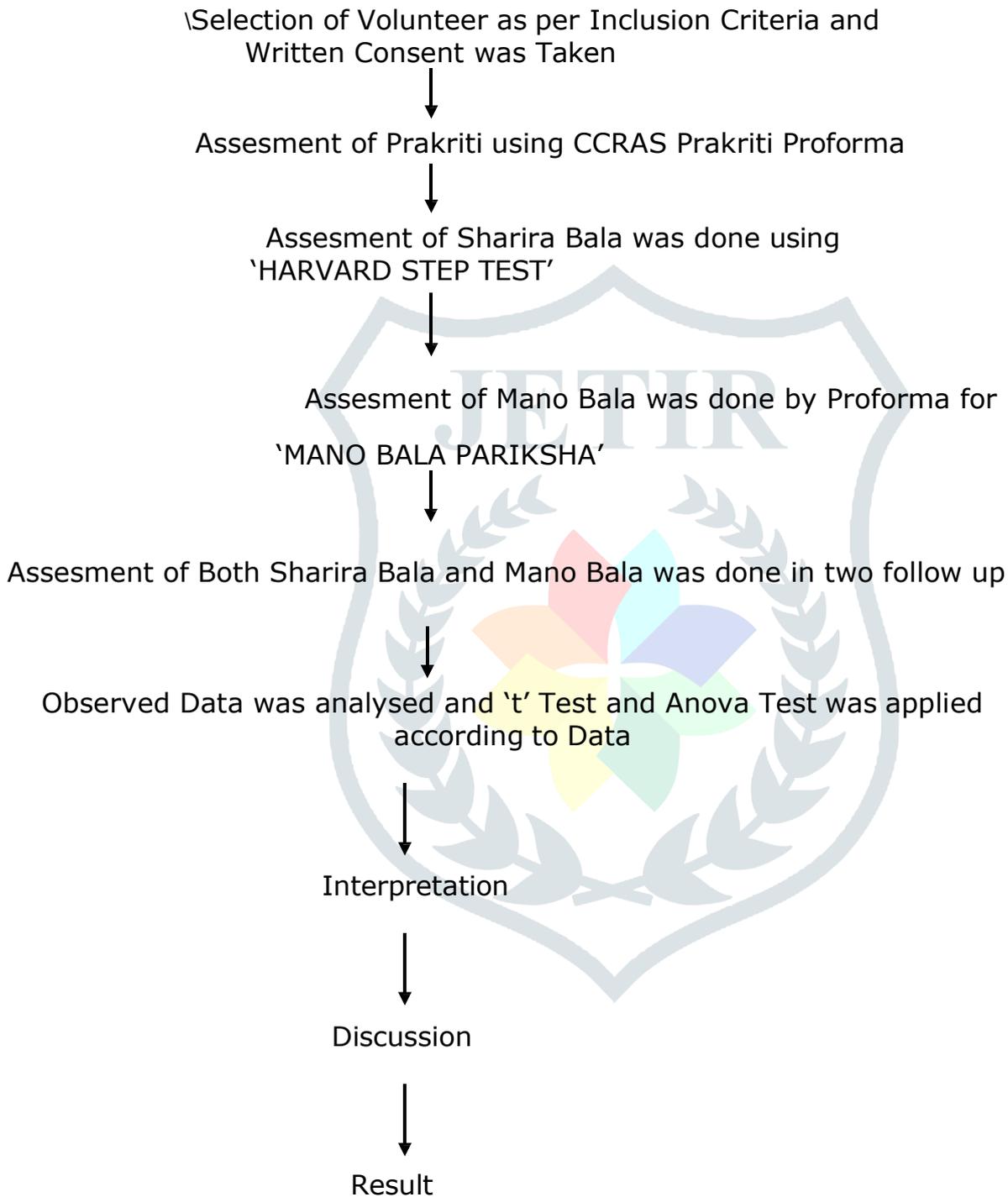
According to review article in Pubmed Fatigue in Covid 19 is due to mitochondrial dysfunction which in turn decrease the energy production. Ayurved is a science in which pathophysiology of every disease explained in simple way. Ayurveda also have glimpses of pandemic given in its ancient texts. Ayurveda states that the person is healthy when tridosha, saptdhatu, trimal and agni works in coordination and a different view of ayurveda says one should have aatma, indriya and Mana in coordination<sup>4</sup>. In post covid 19 conditions it has observed that the person infected is disturbed both on physical and mental level. Ayurveda has stated a special attribute called prakriti. Prakriti of a person defines his natural state of Dosha with specific characteristic in mind and body. Persons with different Prakriti will show different effect on sharir bal and manobal in post covid condition.

## 1. MATERIALS AND METHODS

### STUDY TYPE:

The Present Study is Observational Cross Sectional Study.

### STUDY DESIGN :



**DURATION OF STUDY :-**

18 MONTHS

**STUDY POPULATION :-**

Volunteers who got recovered from Covid-19 Infection in Study area was Selected.

**STUDY SAMPLE :-**

N=90(As per Danial's formula)

**SAMPLING TECHNIQUE :-**

Simple Random Method

**METHOD SELECTION OF STUDY SUBJECTS :-****A) Inclusion Criteria :-**

- Volunteers Hospitalised for 6-10 days for Covid-19 Infection and completed Home Quarantine as per Government Norms.
- Volunteers aged between 18-50 years.
- Volunteers irrespective of Sex and Occupation.

**B) Exclusion Criteria :-**

- Volunteers having any Kind of known comorbidity like DM and HTN.
- Physically Handicapped Volunteers
- Volunteers having any kind of History of Past Psychitric illness.
- Volunteers having Chronic illness.

**C) WITHDRAWAL CRITERIA:-**

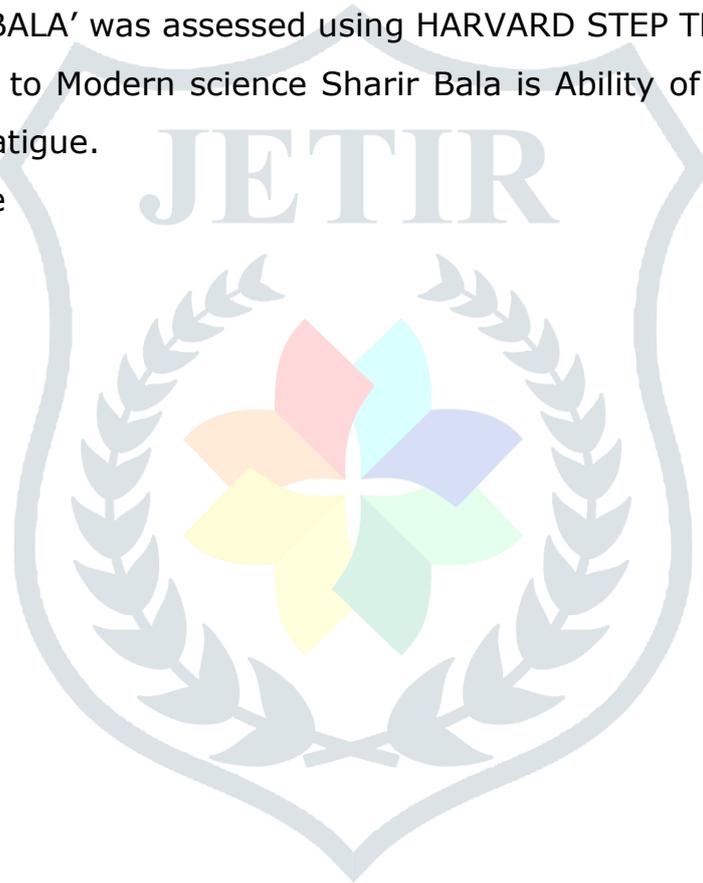
During Study Period Volunteer who gets reinfected by Covid- 19 or any other illness can be withdrawn from study.

**METHODS OF MEASUREMENT :-****a) SUBJECTIVE PARAMETER:**

- 'MANO BALA' was assessed by proforma for Mano Bala Pariksha which will be validated and standardized by college committee.
- 'DEHA PRAKRITI' of a patient was assessed using CCRAS standardized proforma

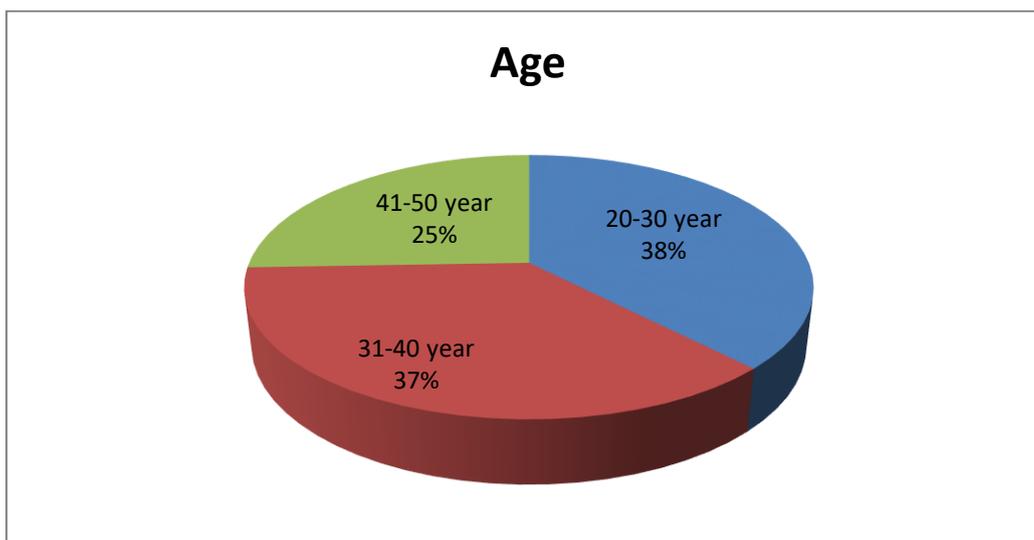
**b) OBJECTIVE PARAMETER :-**

- 'SHARIR BALA' was assessed using HARVARD STEP TEST.
- According to Modern science Sharir Bala is Ability of Person to do activity without Fatigue.
- Pulse Rate

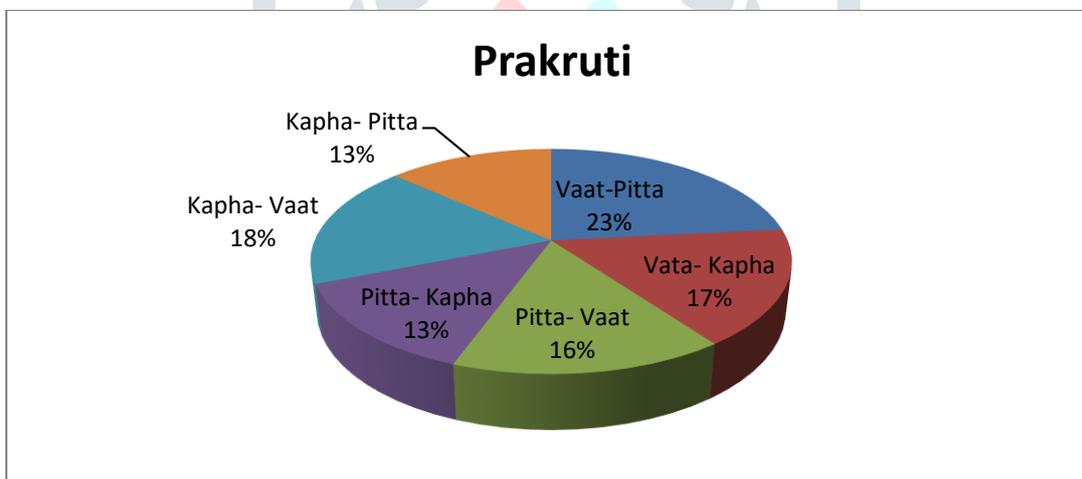


## OBSERVATIONS AND RESULTS

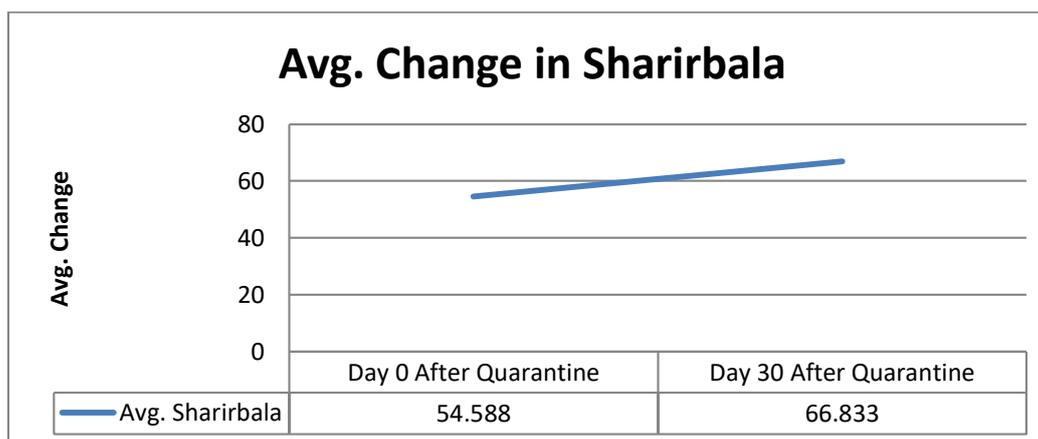
- **Age wise distribution**



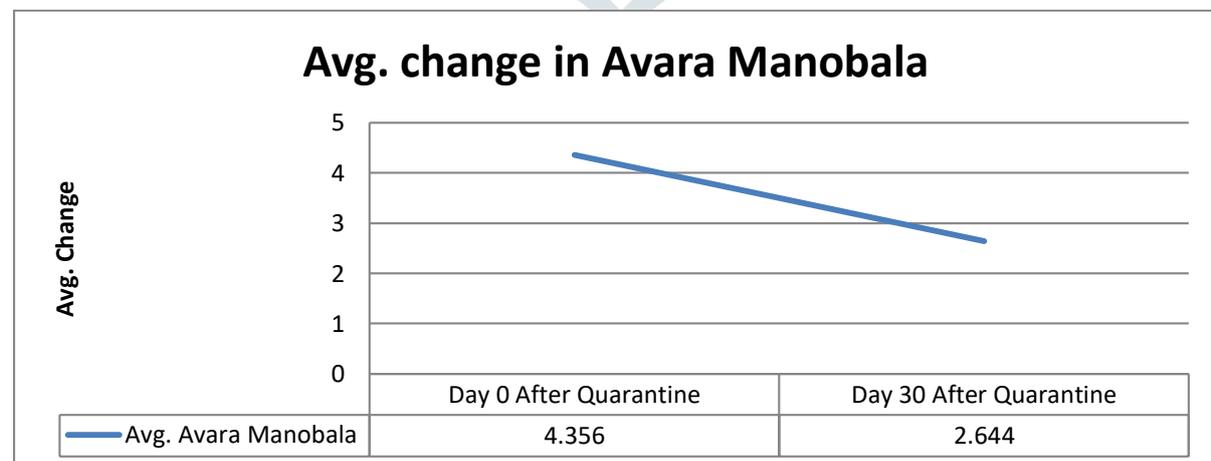
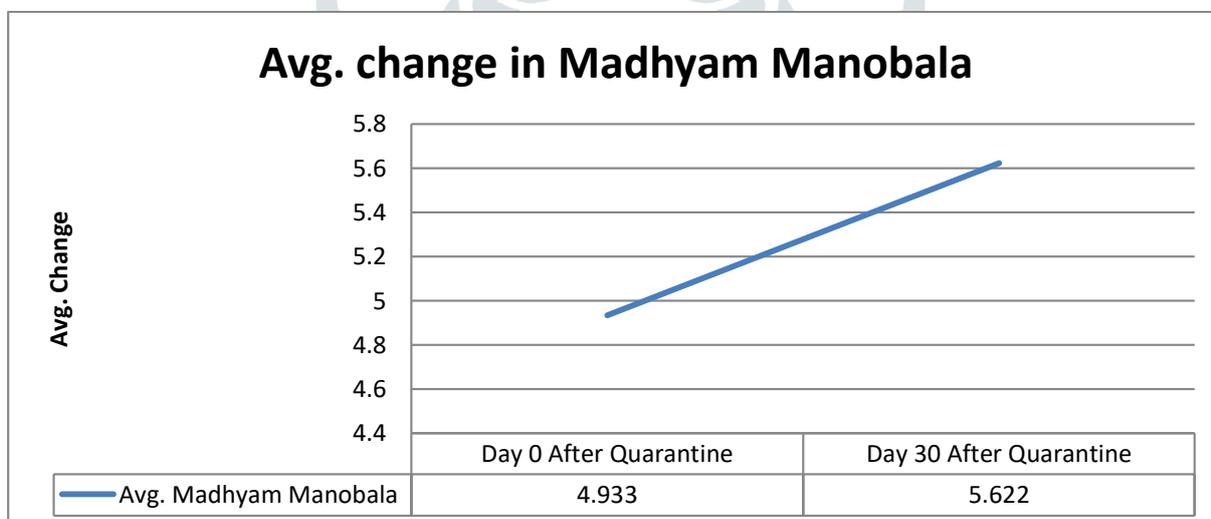
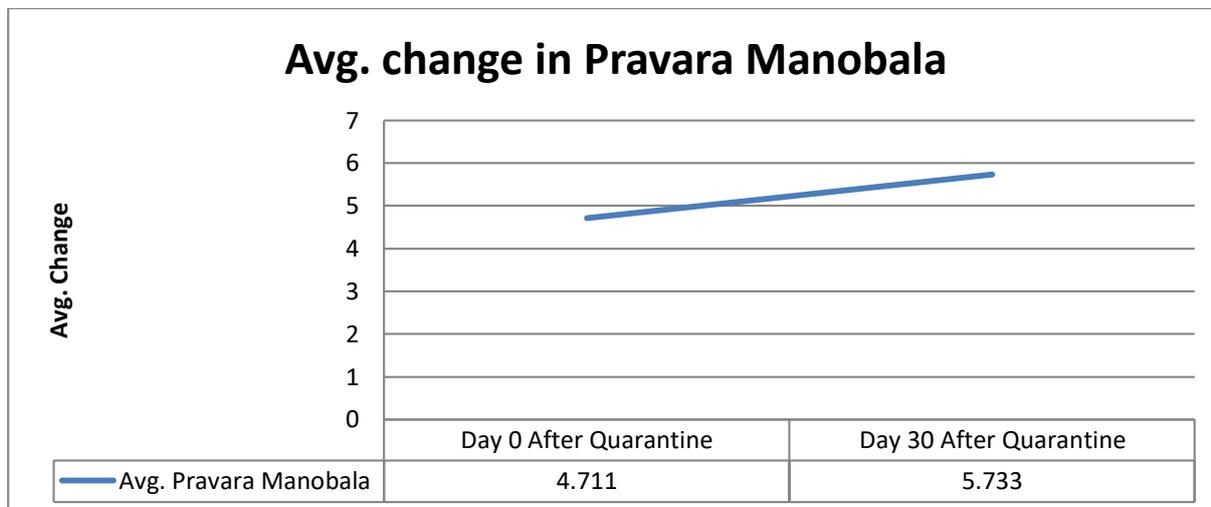
- **Prakruti Wise Distribution**



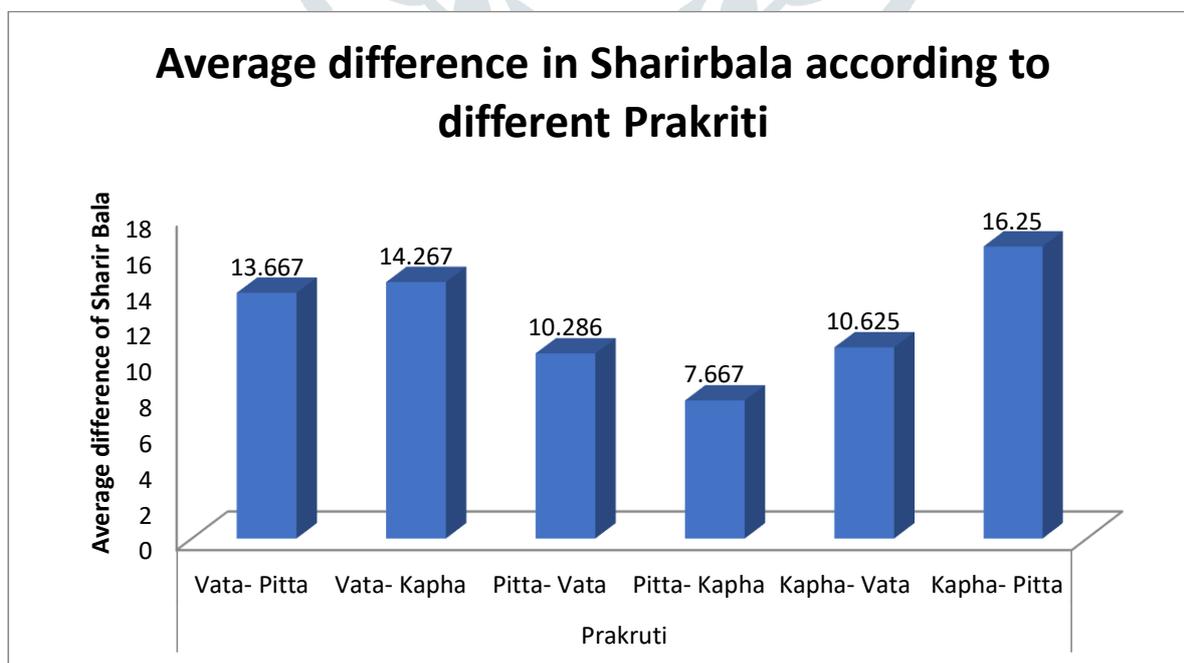
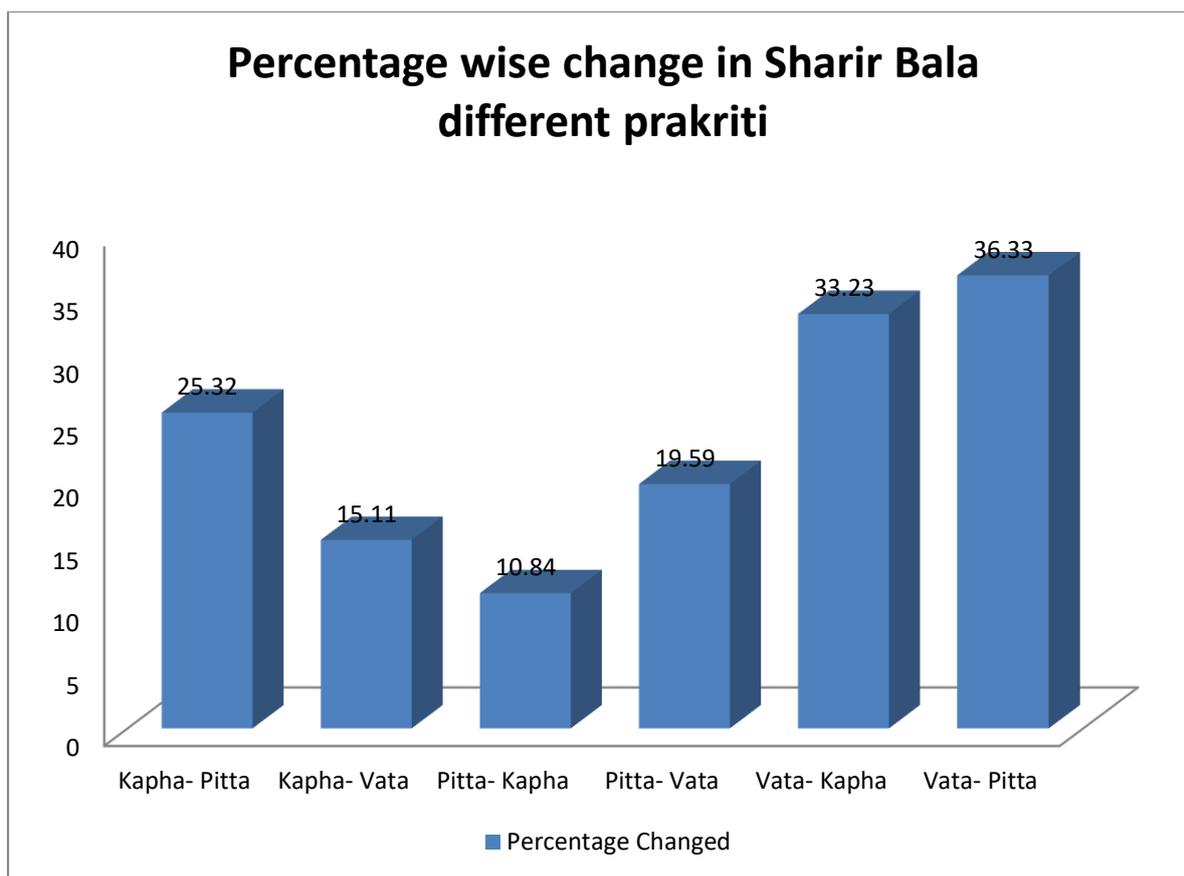
- **Changes in Sharirbala (Day 0 / Day 30) After Quarantine**



- **Change in Pravara, Madhyam, Avara Manobala (Day 0 / Day 30) After Quarantine**



Percentage wise change in Sharir Bala different prakriti : in (Day 0 / Day 30) After Quarantine



## Statistical Analysis: Prakriti Wise Mano Bala (Day 0 / Day 30) After Quarantine

### A. Pravara Manobala

Prakriti	(Day 0 / Day 30) After Quarantine	N	Mean	SD	Mean Diff	Percentage Changed
Kapha- Pitta	Day 0 After Quarantine	12	5.916	1.44	-2.167	-36.619
	Day 30 After Quarantine	12	8.08	0.900		
Kapha- Vata	Day 0 After Quarantine	16	6.125	1.543	-1.5	-24.489
	Day 30 After Quarantine	16	7.625	1.586		
Pitta- Kapha	Day 0 After Quarantine	12	5.583	1.564	-0.583	-10.447
	Day 30 After Quarantine	12	6.167	1.466		
Pitta- Vata	Day 0 After Quarantine	14	3.857	0.534	-0.714	-18.518
	Day 30 After Quarantine	14	4.571	1.016		
Vata- Kapha	Day 0 After Quarantine	15	4.067	1.099	-0.867	-21.311
	Day 30 After Quarantine	15	4.933	1.387		
Vata- Pitta	Day 0 After Quarantine	21	3.476	1.077	-0.571	-16.438
	Day 30 After Quarantine	21	4.047	1.203		

### B. Madhyama Manobala

Prakriti	(Day 0 / Day 30)	N	Mean	SD	Mean Diff	Percentage
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	After Quarantine					Changed
<b>Kapha- Pitta</b>	<b>Day 0 After Quarantine</b>	<b>12</b>	4.583	1.443	0.167	3.636
	<b>Day 30 After Quarantine</b>	<b>12</b>	4.416	1.24		
<b>Kapha- Vata</b>	<b>Day 0 After Quarantine</b>	<b>16</b>	4.25	1.571	-0.125	-2.941
	<b>Day 30 After Quarantine</b>	<b>16</b>	4.375	0.957		
<b>Pitta- Kapha</b>	<b>Day 0 After Quarantine</b>	<b>12</b>	5	1.477	-1.167	-23.33
	<b>Day 30 After Quarantine</b>	<b>12</b>	6.167	0.717		
<b>Pitta- Vata</b>	<b>Day 0 After Quarantine</b>	<b>14</b>	5.143	1.292	-1.214	-23.611
	<b>Day 30 After Quarantine</b>	<b>14</b>	6.357	1.001		
<b>Vata- Kapha</b>	<b>Day 0 After Quarantine</b>	<b>15</b>	5.33	1.838	-0.8	-15
	<b>Day 30 After Quarantine</b>	<b>15</b>	6.133	1.457		
<b>Vata- Pitta</b>	<b>Day 0 After Quarantine</b>	<b>21</b>	5.190	1.401	-0.904	-17.431
	<b>Day 30 After Quarantine</b>	<b>21</b>	6.095	1.135		

### C. Avara Manobala

Prakriti	(Day 0 / Day 30) After Quarantine	N	Mean	SD	Mean Diff	Percentage Changed
<b>Kapha- Pitta</b>	<b>Day 0 After Quarantine</b>	<b>12</b>	3.5	1.567	2	57.14
	<b>Day 30 After Quarantine</b>	<b>12</b>	1.5	0.797		
<b>Kapha- Vata</b>	<b>Day 0 After Quarantine</b>	<b>16</b>	3.625	1.821	1.625	44.83
	<b>Day 30 After Quarantine</b>	<b>16</b>	2	1.461		
<b>Pitta- Kapha</b>	<b>Day 0 After Quarantine</b>	<b>12</b>	3.42	1.31	1.75	51.22
	<b>Day 30 After</b>	<b>12</b>	1.67	1.07		

	<b>Quarantine</b>					
<b>Pitta- Vata</b>	<b>Day 0 After Quarantine</b>	<b>14</b>	5	1.41	1.93	38.57
	<b>Day 30 After Quarantine</b>	<b>14</b>	3.07	1.14		
<b>Vata- Kapha</b>	<b>Day 0 After Quarantine</b>	<b>15</b>	4.6	1.88	1.67	36.23
	<b>Day 30 After Quarantine</b>	<b>15</b>	2.93	1.87		
<b>Vata- Pitta</b>	<b>Day 0 After Quarantine</b>	<b>21</b>	5.33	1.56	1.48	27.68
	<b>Day 30 After Quarantine</b>	<b>21</b>	3.86	1.39		

## DISCUSSION

### Age wise distribution

In the present study, maximum no. of patients i.e. 34 were from the age group 20-30 yrs. Followed by 33 in 31-40 yrs, 23 in 41-50 yrs.

In this study, maximum number of patients found are from Young age. This is the active age group where public contact during covid outbreak was more. This age group is prone to daily outdoor activity and getting a infection. This stat also denotes that this age group has also got impacted more by Post Covid Complications. This age group is less prone to fatality and serious complications.

### Prakruti wise distribution

On the observation it was found that, maximum no. of patients i.e.21 were having vata pitta prakruti, followed by 16 having kapha vata, 15 having vata kapha,14 having pitta vata, 12 having pitta kapha and 12 having kapha pitta prakruti.

### Effect of Post Covid 19 Condition on Sharir Bala according to Prakriti :-

Prakriti wise changes in sharir bala are very significant clinically.

- Patients having Vata-Pitta Prakriti has shown maximum change in Sharir bala in 30 days which is 36.33%. This Shows that Vata Pitta prakriti impacted more in Covid

19. It can be deducted that Covid 19 was more impacting for Vata and Pitta Dosh. As symptoms of Covid 19 like Jwar, Pratishyay, Agnimandya, Arasadnyata etc. are more of Pitta and Vata Dominant which helps in fact that patients of this prakriti has impacted more. This does not necessarily means it is more prone to infection, it means this patients will be impacted more physically by Covid 19.

- Patients having Pitta Kapha prakriti has minimum change in sharir Bala after 30 days of recovery which is 7.67%. This means patients having Pitta Kapha dominancy are impacted less in Covid 19.
- Patients having prakriti Vata-Kapha, Kapha-Pitta, Kapha-Vata and Pitta-Vata, Sharir bala changes 33.23%, 25.32%, 15.11%, 19.59% respectively.
- This results shows that Patients having Vatapradhan Pittaanubandhi Prakriti has more impact of Covid 19 whereas Pittapradhan Kaphanubandhi prakriti got impacted minimum due to Covid 19.
- This result also shows that Kapha- Pitta prakriti patients can recover easily after infection.
- Patients having Vata Pradhan Pittanubandhi prakriti has shown minimum Sharir Bala immediately after Covid 19 infection and has also shown minimum improvement after 30 days of recovery.

### **Effect of Post Covid 19 Condition on Mano Bala according to Prakriti :-**

#### **A. Pravara Manobala**

Prakriti wise changes in Mano bala are very significant clinically.

- Patients having Kapha-Pitta Prakriti has shown maximum change in Pravara Mano bala in 30 days which is 36.61%. This Shows that Kapha Pitta prakriti impacted more in Covid 19. This does not necessarily means it is more prone to infection, it means this patients will be impacted more by Covid 19.
- Patients having Pitta Kapha prakriti has minimum change in Pravara Mano Bala after 30 days of recovery which is 10.44%. This means patients having Pitta Kapha dominancy are impacted less in Covid 19.
- Patients having prakriti Vata-Kapha, Vata-Pitta, Kapha-Vata and Pitta-Vata, Pravara Mano bala changes 21.31%, 16.43%, 24.48%, 18.51% respectively.

- Patients having Vata Pradhan Pittanubandhi prakriti has shown minimum Pravara Mano Bala immediately after Covid 19 infection and has also shown minimum improvement after 30 days of recovery.

### **B. Madhyama Mano Bala :-**

- Statistical Analysis of Madhyama Mano Bala was not significant and Conclusive for analysis.

### **C. Avara Manobala :-**

- Patients having Kapha-Pitta Prakriti has shown maximum change in Avara Mano bala in 30 days which is 57.14%. This Shows that Kapha Pitta prakriti has shown more positive improvement in Avara mano bala after 30 days recovery.
- Patients having Vatapradhan Pittanubandhi prakriti has minimum change in Avara Mano Bala after 30 days of recovery which is 27.68%.
- Patients having Vata Pradhan Pittanubandhi prakriti has shown minimum improvement in Avara Mano Bala after Covid 19 infection and it also had maximum avara manobala immediately after Covid 19 infection.

**Interpretation-**As value of p is less than 0.05, significant difference was observed between mean of Day 0 score of Bala and Day 30 score of Bala in Post Covid-19 Condition. Hence there is effect of Covid-19 infection on Sharir bala and Mano Bala.

### **Conclusion**

The Study aim to find out **relation between Sharir Bala and Mano Bala and Post Covid 19 condition according to Prakriti** was taken for Study. Following Conclusions are drawn after the observations :-

- Outbreak of Covid 19 has affected greatly on both Sharir Bala and Mano Bala. Bala has seen decreased after Covid 19 infection.
- Impact of Bala was seen varied according to Different Prakriti. Importantly in patient with all different prakriti, bala has seen decreased irrespective of Age or Prakriti.

### **References**

1. Kaviraj Atridev Gupt edited Ashtang Samgraha(Hindi translation)sharirsthan, adhyay8,verse08, N.S.Publication;Mumbai;1951, p.320

2. vd.yadavji trikamji acharya edited Charak Samhita sutrasthan,adhyaya7,verse 40,chaukhamba Publication, Varanasi;2013;p.52
3. Dr.Ambikadatta shastri edited shushrut Samhita (Hindi translation)sharirsthana,adhyaya 4,verse78-79, chaukhamba Sanskrit sansthana,Varanasi:216:84,p.35
4. Dr.Ambikadatta shastri edited shushrut Samhita (Hindi translation)sutrasthana,adhyaya15,verse48, chaukhamba Sanskrit sansthana,Varanasi:216:84,p.6

