



Exploring the Impact of COVID-19 on Physical Health status of Indian Males

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Abstract - The purpose of this study is to explore the Impact of COVID-19 on Physical Health status of Indian males. The investigator collected the data of eight hundred twenty seven (N=827) male subjects from India. The data was collected by using Physical Health questionnaire created by Abreu, et al.(2020) and slightly modified by the investigator. The SPSS version 26.0 was used for all analysis. One-way Analysis of Variance (ANOVA). For further analysis Post-Hoc Test (Scheffe Test) was applied. The level of confidence was set at 0.05. The results of the study represent that the significant impact of COVID-19 on Physical Health status of Indian males.

Key words: Physical Health, COVID-19, lockdown.

I. INTRODUCTION

The COVID-19 pandemic in India is vital for the allover epidemic of Covid ailment 2019 (COVID-19) brought about by severe intense respiratory condition Covid 2 (SARS-CoV-2). The first case of COVID-19 in Quite a while, which started from China, was accounted for on 30 January 2020. India at present has the biggest number of declared cases in Asia, and has the second-most notable number of affirmed cases on the planet after the United States, with more than 9 million announced instances of COVID-19 disease and above 100 thousand passing. Day by day cases crested mid-September in India with higher than 90,000 cases detailed every day and have since come down to under 40,000 in December. On 22 March, India perceived a 14-hour deliberate public time limit at the demand of Prime Minister NarendraModi. It was dragged by required lockdowns in COVID-19 hotspots and every single essential city. In addition to it, on 24 March, the executive organized a cross country lockdown for 21 days, influencing the whole 1.3 billion populace of India. On 14 April, India widened the cross country lockdown till 3 May which was trailed by fourteen-day augmentations beginning 3 and 17 May with significant relaxations. From 1 June, the public authority began "opening" the nation (excepting "control zones") in three open stages. The pandemic has left an extreme effect on the Indian economy, prompting a negative development rate without precedent for many years. By and by, the economy began to jump back after the lockdown was facilitated. Expanded prerequisite for utilization had driven the public authority and private firms to repurpose their processing plants and creation lines for the assembling of extra clinic beds, PPE and ventilators. India arose as the world's second-enormous producer of PPE during the pandemic. The Union Government increased dispatched a significant independence mission to substitute imported items with locally created partners, particularly to supplant products imported from China.

II. METHODOLOGY

The study was conducted on Indian male population only. Total eight hundred twenty seven (N=827) subjects from following categories had voluntarily participated in this survey:

Sr. No.	Category	Number of Male Participants
i.	Students Non-Sports Person	180
ii.	Students Sports Person	52
iii.	Govt. Employees	174
iv.	Private Employees	117
v.	Retired Employees	49
vi.	Businessman	60
vii.	Labour	63
viii.	Farmers	73
ix.	House Makers	46
x.	Other persons	13
Total Subjects		827

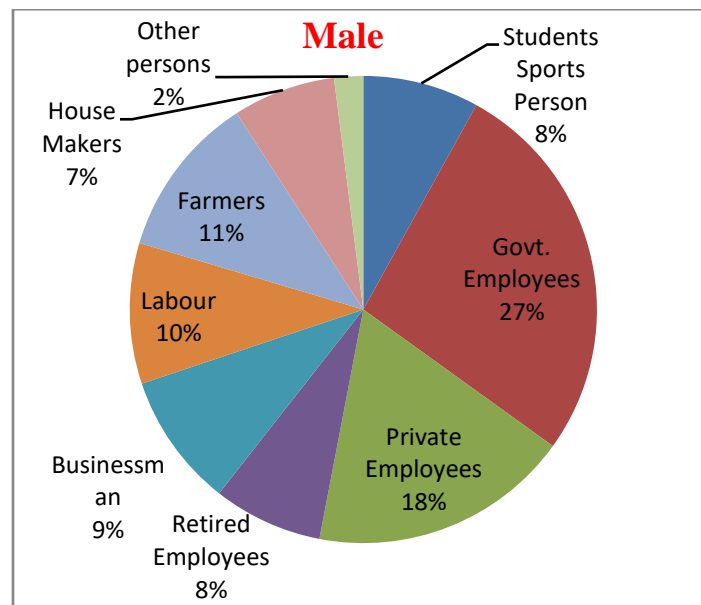


Figure 1. Represents the Percentage of Male Subjects

SELECTION OF VARIABLES

- Physical Health (To know the impact of COVID - 19 among different categories of Males in India)

DESIGN OF STUDY

To know the effect of novel Corona virus (COVID-19) on Physical Health among different categories of Males in India, a survey type study was design by the investigator.

SELECTION OF TOOLS

To accomplish the purpose of present study, data was collected by using COVID - 19 Survey Questionnaire which was created by Abreu et al. (2020) and slightly modified by the investigator.

ADMINISTRATION OF QUESTIONNAIRE

In this survey type study, the respondents was asked to respond to each of the statements given, in terms of one to four degrees (Likert's Four Point Scale).

Statement no. -1,2,3,4,5,6,7,8,9,10,11 and 14 were consisting scoring as following:

- i. Always - (1)
- ii. Sometimes - (2)
- iii. Rarely - (3)
- iv. Never - (4)

As these items of the Physical Health domain were rated on a 4-point scale, from 1 (Always) to 4 (Never), based on experiences during lockdown period. Elevated scores on a particular item indicate that imposed lockdown during novel Corona virus spread has badly affected physical health of Indian Male population.

Further Statement no. - 12, 13, and 15 were consisting scoring as following:

- i. Always - (4)
- ii. Sometimes - (3)
- iii. Rarely - (2)
- iv. Never - (1)

As these items of the Physical Health domain were rated on a 4-point scale, from 4 (Always) to 1 (Never), based on experiences during lockdown period. Low scores on a particular item indicate that imposed lockdown during novel Corona virus spread has badly affected physical health of Indian Male population.

STATISTICAL ANALYSIS

The differences in the mean of each group for selected variable were tested for the significance of difference by One-way Analysis of Variance (ANOVA). For further analysis Post-Hoc Test (Scheffe Test) was applied. The level of confidence was set at 0.05.

III. RESULTS

Table 1(a). Represents the Mean and Standard deviation results about Physical health among different categories of Indian males.

Group	N	Mean	Std. Deviation
Students Non-Sports Person	180	33.644	4.858
students Sports Person	52	33.788	1.486
Govt Employed	174	32.528	4.081
Private Employed	117	32.837	4.677
Retired	49	33.244	3.891
Businessman	60	35.350	4.066
Labour	63	34.698	4.427
Farmer	73	32.794	4.196
House worker	46	26.456	3.487
Other person	13	34.230	6.697
Total	827	33.019	4.627

Table number-1(a) depicts the Mean and SD values of Physical health of males i.e. Students (Non-Sports Person), Students (Sports Person), Government Employed, Private Employed, Retired, Businesswomen, Labour, Farmer, House worker and Other persons groups were 33.644±4.858, 33.788±1.486, 32.528±4.081, 32.837±4.677, 33.244±3.891, 35.350±4.066, 34.698±4.427, 32.794±4.196, 26.456±3.487, 34.230±6.697 and 33.019±4.627 respectively. The obtained "F" ratio 16.048 (.000) was found statistically significant, (P<.05) .05 level of significance.

Table 1(b). Analysis of Variance (ANOVA) results with regard to Physical health among different categories of Indian male.

Group	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2656.882	9	295.209	16.048	.000
Within Groups	15028.808	817	18.395		
Total	17685.690	826			

*Significant at F 0.05 (1.89)

It is clear from table number 1(b) that the results of Analysis of Variance (ANOVA) among the different groups of male i.e. Students (Non-Sports Person), Students (Sports Person), Government Employed, Private Employed, Retired, Businesswomen, Labour, Farmer, House worker and other persons with regard to the Physical health were found to be statistically significant ($P < 0.05$). Since the obtained "F" ratio 16.048 (.000) was found statistically significant. The graphical representation of responses has been exhibited in figure-2.

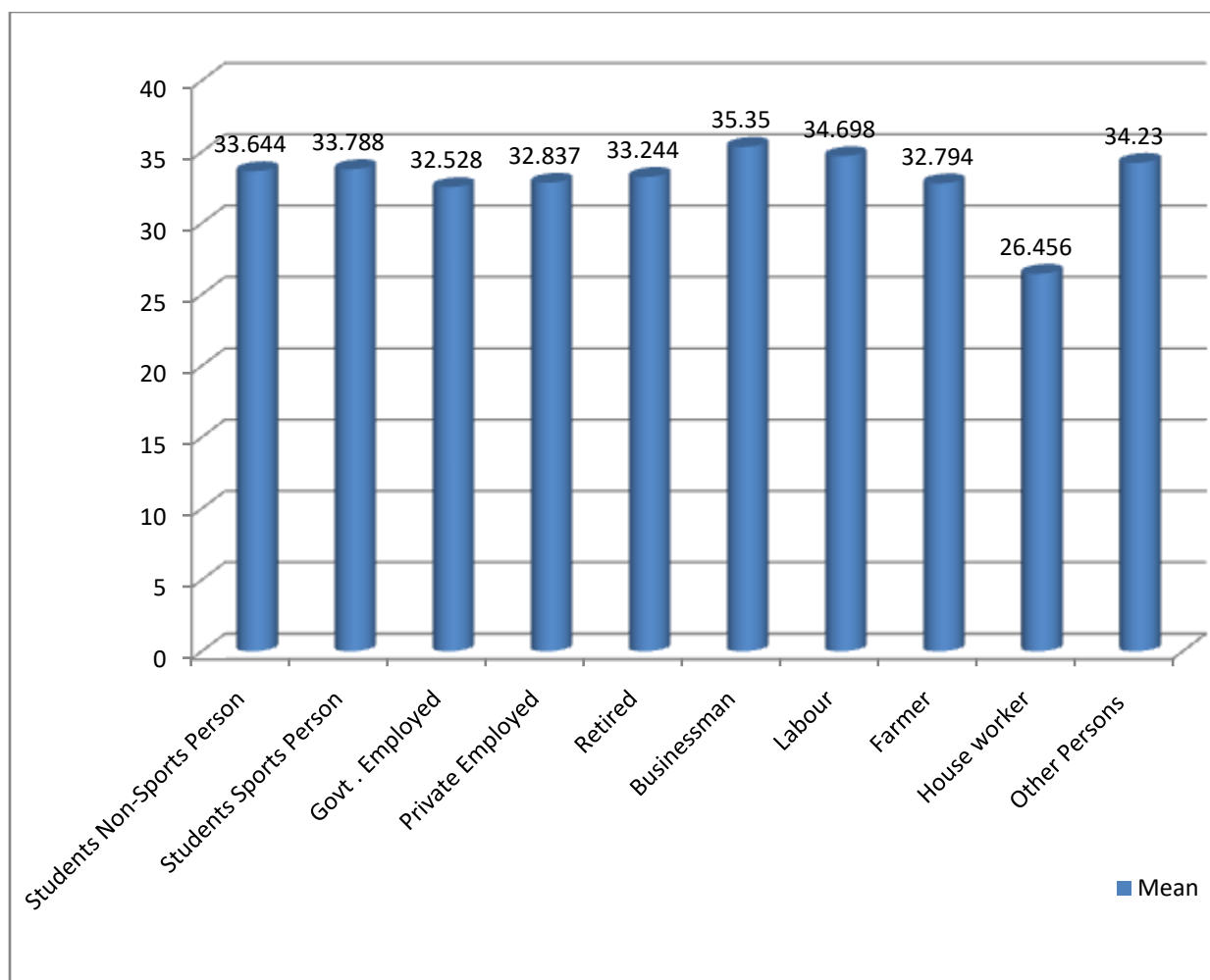


Figure Number 2 Graphical Representation of mean scores with regard to Physical health among different categories of Indian males.

Table 1(c). Analysis of Scheffe Post Hoc test with regard to Physical health among different categories of Indian males.

Variable 1	Variable 2	Mean Difference (1-2)	Std. Error	Sig.
Students Non-Sports Person	Students Sports Person	-.144	.67524	1.000
	Govt Employed	1.115	.45598	.741
	Private Employed	.806	.50933	.980
	Retired	.399	.69109	1.000
	Businessman	-1.705	.63936	.625
	Labour	-1.053	.62784	.971
	Farmer	.849	.59513	.991
	House worker	7.187*	.70858	.000
	Other person	-.586	1.23175	1.000
Students Sports Person	Govt Employed	1.259	.67784	.943
	Private Employed	.950	.71483	.995
	Retired	.543	.85391	1.000
	Businessman	-1.561	.81261	.930
	Labour	-.909	.80358	.998
	Farmer	.993	.77829	.996
	House worker	7.331*	.86813	.000
	Other person	-.442	1.32995	1.000
Govt Employed	Private Employed	-.308	.51278	1.000
	Retired	-.716	.69364	.999
	Businessman	-2.821*	.64211	.024
	Labour	-2.169	.63064	.225
	Farmer	-.265	.59809	1.000
	House worker	6.072*	.71106	.000
	Other person	-1.702	1.23318	.993
Private Employed	Retired	-.407	.72982	1.000
	Businessman	-2.512	.68103	.139
	Labour	-1.860	.67023	.564
	Farmer	.043	.63970	1.000
	House worker	6.381*	.74640	.000
	Other person	-1.393	1.25389	.999
Retired	Businessman	-2.105	.82583	.689
	Labour	-1.453	.81694	.957
	Farmer	.450	.79208	1.000
	House worker	6.788*	.88051	.000
	Other person	-.985	1.33807	1.000
Businessman	Labour	.651	.77367	1.000
	Farmer	2.555	.74738	.233
	House worker	8.893*	.84052	.000
	Other person	1.119	1.31210	1.000
Labour	Farmer	1.903	.73755	.672
	House worker	8.241*	.83179	.000
	Other person	.467	1.30652	1.000
Farmer	House worker	6.338*	.80739	.000
	Other person	-1.436	1.29112	.999
House worker	Other person	-7.774*	1.34718	.000

*Significant at $F_{0.05} (1.89)$

A glance at Table 1(c) showed that the mean values of Students Non-Sports Person were 33.644, whereas Students Sports Person had mean value as 33.788, and the mean difference between both the groups was

found -.144. The p-value sig 1.00 showed that the Non-Sports Person had better status of Status of Physical health as their counterpart's Students Sports Person insignificantly. The mean values of Students Non-Sports Person were 33.644, whereas Govt. Employer's had mean value as 32.528. The mean difference between Non-Sports Person and Govt. Employer's was found 1.115. The p-value sig .741 showed that the Govt. Employer's had better Status of Physical health level as their counterpart's Non-Sports Person insignificantly. The mean values of Students Non-Sports Person were 33.644, whereas Private Employer's had mean value as 32.837. The mean difference between Non-Sports Person and Private Employer's was found .806. The p-value sig .980 shows that the Private Employer's had demonstrated insignificantly better on Physical health status than their counterpart's Non-Sports Person. The mean values of Students Non-Sports Person were 33.644, whereas Retired persons had mean value as 33.244. The mean difference between Non-Sports Person and Retired persons was found .399. The p-value sig 1.000 shows that the retired persons had demonstrated insignificantly better Status of Physical health level as their counterpart's Non-Sports Person. The mean values of Students Non-Sports Person were 33.644 whereas Businessman's had mean value as 35.350. The mean difference between Non-Sports Person and Businessman's was found -1.705. The p-value sig .625 shows that the Non-Sports Person had demonstrated insignificantly better Status of Physical health level as their counterpart's Businessman's. The mean values of Students Non-Sports Person were 33.644 whereas Labours had mean value as 34.698. The mean difference between Non-Sports Person and Labours was found -1.053. The p-value sig .971 shows that the Students Non-Sports Persons had demonstrated insignificantly better Status of Physical health level as their counterpart's Labours. The mean values of Students Non-Sports Person were 33.644, whereas Farmer had mean value as 32.794. The mean difference between Non-Sports Person and Farmer was found .849. The p-value sig .991 shows that the Farmers had demonstrated insignificantly better on Physical health status as compare their counterpart's Non-Sports Persons. The mean values of Students Non-Sports Person were 33.644, whereas House workers had mean value as 26.456. The mean difference between Non-Sports Person and House workers was found -7.187. The p-value sig .000 shows that the House workers had demonstrated significantly better on Physical health status than their counterpart's Students Non-Sports. The mean values of Students Non-Sports Person were 33.644, whereas other persons had mean value as 34.230. The mean difference between Non-Sports Person and other persons was found -.586. The p-value sig 1.00 shows that the Non-Sports Persons had demonstrated insignificantly better on Physical health status than their counterpart's other persons.

The table represent the mean values of Students Sports Person were 33.788, whereas Govt. Employer's had mean value as 32.528. The mean difference between Sports Person and Govt. Employers was found 1.259. The p-value sig .943 showed that the Govt. Employers had demonstrated better on Physical health status than their counterpart's Students Sports Persons significantly. The mean values of Students Sports Person were 33.788, whereas Private Employers had mean value as 32.837. The mean difference between Sports Person and Private Employers was found .950. The p-value sig .995 shows that the Private Employers had demonstrated insignificantly better on Physical health status than their counterpart's Sports Persons. The mean values of Students Sports Person were 33.788, whereas Retired persons had mean value as 33.244. The mean difference between Sports Person and Retired persons was found .543. The p-value sig 1.00 shows that the retired persons had demonstrated insignificantly better on Physical health status than their counterpart's Sports Persons. The mean values of Students Sports Person were 33.788, whereas Businessman's had mean value as 35.350. The mean difference between Sports Person and Businessman's was found -1.561. The p-value sig .930 shows that the Sports Persons had demonstrated insignificantly better on Physical health status than their counterpart's Businessman's. The mean values of Students Sports Person were 33.788, whereas Labours had mean value as 34.698. The mean difference between Sports Person and Labours was found -.909. The p-value sig .998 shows that the Sports Persons had demonstrated insignificantly better on Physical health status than their counterpart's Labour's. The mean values of Students Sports Person were 33.788, whereas Farmer had mean value as 32.794. The mean difference between Sports Persons and Farmers was found .993. The p-value sig .996 shows that the Farmers had demonstrated insignificantly better on Physical health status than their counterpart's Sports Persons. The mean values of Students Sports Persons were 33.788, whereas House workers had mean value as 26.456. The mean difference between Sports Persons and House workers was found 7.331. The p-value sig .000 shows that the Sports Persons had demonstrated insignificantly better on Physical health status than their counterpart's House workers. The mean values of Students Sports Persons were 33.788, whereas other persons had mean value as 34.230. The mean difference between Sports Persons and other persons was found -.442. The p-value sig 1.00 shows that

the Sports Persons had demonstrated significantly better on Physical health status than their counterpart's other persons.

The table 1(c) also depicts the mean values of Govt. Employer's were 32.528, whereas Private Employer's had mean value as 32.837. The mean difference between Govt. Employer's and Private Employer's found -.308. The p-value sig 1.000 shows that the Private Employer's had demonstrated insignificantly better on Physical health status than their counterpart's Govt. Employer's. The mean values of Govt. Employer's were 32.528, whereas Retired persons had mean value as 33.244. The mean difference between Govt. Employer's and Retired persons Employer's was found at -.716. The p-value sig .999 shows that the Government Employer's had demonstrated insignificantly better on Physical health status than their counterpart's Retired persons. The mean values of Govt. Employer's were 32.528, whereas Businessman's had mean value as 35.350. The mean difference between Govt. Employer's and Businessman's was found -2.821. The p-value sig .024 shows that the Government Employer's had demonstrated significantly better on Physical health status than their counterpart's Businessman's. The mean values of Govt. Employer's were 32.528, whereas Labour's had mean value as 34.698. The mean difference between Govt. Employer's and Labours was found -2.169. The p-value sig .225 shows that the Govt. Employer's had demonstrated insignificantly better on Physical health status than their counterpart's Labour's. The mean values of Govt. Employer's were 32.528, whereas Farmers had mean value as 32.794. The mean difference between Govt. Employer's and Farmers was found -.265. The p-value sig 1.000 shows that the Govt. Employer's had demonstrated insignificantly better on Physical health status than their counterpart's Farmers. The mean values of Govt. Employer's were 32.528, whereas House workers had mean value as 26.456. The mean difference between Govt. Employer's and House workers was found 6.072. The p-value sig .000 shows that the House workers had demonstrated significantly better on Status of Physical health level than their counterpart's Govt. Employer's. The mean values of Govt. Employer's were 32.528, whereas other persons had mean value as 34.230. The mean difference between Govt. Employer's and other persons was found -1.702. The p-value sig .993 shows that the Govt. Employer's had demonstrated insignificantly better on Status of Physical health level than their counterpart's other persons.

The mean values of Private Employer's were 32.837, whereas Retired persons had mean value as 33.244. The mean difference between Private Employer's and Retired persons was found -.407. The p-value sig 1.000 shows that the Private Employer's had demonstrated insignificantly better on Status of Physical health level than their counterpart's Retired persons. The mean values of Private Employer's were 32.837, whereas Businessman's had mean value as 35.350. The mean difference between Private Employer's and Businessman's was found -2.512. The p-value sig .139 shows that the Private Employer's had demonstrated insignificantly better on Status of Physical health level than their counterpart's Businessman's. The mean values of Private Employer's were 32.837, whereas Labours had a mean value as 34.698. The mean difference between Private Employer's and Labours was found -1.860. The p-value sig .564 shows that the Private Employer's had demonstrated insignificantly better on Status of Physical health level than their counterpart's Labours. The mean values of Private Employer's were 32.837, whereas Farmers had mean value as 32.794. The mean difference between Private Employer's and Farmers was found .043. The p-value sig 1.000 shows that the Private Employer's had demonstrated insignificantly better on Status of Physical health level than their counterpart's Farmers. The mean values of Private Employer's were 32.837, whereas House workers had mean value as 26.456. The mean difference between Private Employer's and House workers was found 6.381. The p-value sig .000 shows that the House workers had demonstrated significantly better on Physical health status than their counterpart's Private Employer's. The mean values of Private Employer's were 32.837, whereas other persons had mean value as 34.230. The mean difference between Private Employer's and other persons was found -1.393. The p-value sig .999 that the Private Employer's had demonstrated insignificantly better on Status of Physical health level than their counterpart's other persons.

The mean values of Retired persons were 33.244, whereas Businessman's had mean value as 35.350. The mean difference between Retired persons and Businessman's was found -2.105. The p-value sig .689 shows that the retired persons had demonstrated insignificantly better Physical health status than their counterpart's Businessman's. The mean values of Retired persons were 33.244 whereas Labour's had mean value as 34.698. The mean difference between Retired persons and Labour's was found -1.453. The p-value sig .957 shows that the retired persons had demonstrated insignificantly better Physical health status as their counterpart's Labour's. The mean values of Retired persons were 33.244, whereas Farmers had mean value as 32.794. The mean difference between Retired persons and Farmers was found .450. The p-value sig 1.000 shows that the Farmers had demonstrated insignificantly better Physical health status as their counterpart's retired persons. The mean values of Retired persons were 33.244, whereas House workers had mean value as

26.456. The mean difference between the Retired persons and House workers was found 6.788. The p-value sig .000 shows that the House workers had demonstrated significantly better Physical health status as their counterpart's retired persons. The mean values of Retired persons were 33.244 whereas other persons had mean value as 34.230. The mean difference between Retired persons and other persons was found -.985. The p-value sig 1.000 shows that the retired persons had demonstrated insignificantly better Physical health status as their counterpart's other persons.

The mean values of Businessman's were 35.350, whereas Labour's had mean value as 34.698. The mean difference between Businessman's and Labour's was found .651. The p-value sig 1.000 shows that the Labour's had demonstrated insignificantly better on Physical health status as their counterpart's Businessman's. The mean values of Businessman's were 35.350, whereas Farmers had mean value as 32.794. The mean difference between Businessman's and Farmers was found 2.555. The p-value sig .233 shows that the Farmer had demonstrated insignificantly better on Physical health status as their counterpart's Businessman's. The mean values of Businessman's were 35.350, whereas House workers had mean value as 26.456. The mean difference between Businessman's and House workers was found 8.893. The p-value sig .000 shows that the House workers had demonstrated significantly better on Physical health status as their counterpart's Businessman's. The mean values of Businessman's were 35.350, whereas other persons had mean value as 34.230. The mean difference between Businessman's and other persons was found 1.119. The p-value sig 1.000 shows that the other persons had demonstrated insignificantly better on Physical health status as their counterpart's Businessman's.

The mean values of Labours were 34.698, whereas Farmer had mean value as 32.794. The mean difference between Labours and Farmers was found 1.903. The p-value sig .672 shows that the Farmers had demonstrated insignificantly better on Physical health status than their counterpart's Labours. The mean values of Labours were 34.698, whereas House workers had mean value as 26.456. The mean difference between the Labours and House workers was found 8.241. The p-value sig .000 shows that the House workers had demonstrated significantly better on Physical health status as their counterpart's Labours. The mean values of Labour were 34.698 whereas other persons had mean value as 34.230. The mean difference between Labour and other persons was found .467. The p-value sig 1.000 shows that the other persons had demonstrated insignificantly better on Physical health status than their counterpart's Labours.

The mean values of Farmers were 32.794, whereas House workers had mean value as 26.456. The mean difference between Farmers and House workers was found 6.338. The p-value sig .000 shows that the House workers had demonstrated significantly better on Status of Physical health level than their counterpart's Farmers. The mean values of Farmer were 32.794, whereas other Persons had mean value as 34.230. The mean difference between Farmers and other persons was found -1.436. The p-value sig.999 shows that the Farmers had demonstrated insignificantly better on Status of Physical health level than their counterpart's other persons.

The mean values of House workers were 26.456 whereas other Persons had mean value as 34.230. The mean difference between House workers and other persons was found -7.774. The p-value sig .000 shows that the House workers had demonstrated significantly better on Status of Physical health level than their counterpart's other Persons.

IV. DISCUSSION OF THE FINDING

In present study from all over India 827 males of nine different categories namely Students Non-Sports Person, Students Sports Person, Govt. Employees, Private Employees, Retired Employees, Businessman, Labour, Farmers, House Makers were studied during a period of two months of the Covid-19 lockdown. Among the all nine categories of males of India, all males were feeling good by practicing exercise during the period of lockdown. They all have mentioned that, their mood got improved whenever they had exercised during the period of social isolation. Further males of all nine categories have described that they were feeling less anxious while practicing exercise during the period of social isolation. Further the males of all these categories have stated that they were feeling sad and unmotivated whenever they do not practice exercise during lockdown.

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