

# Impact of Covid-19 on Active Lifestyle, Physical Activity Behaviour and Physical Fitness of Adult Male Sportsmen of Delhi

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## ABSTRACT

**Introduction:-** The spread of COVID 19 infection led to nationwide lockdown and posed many difficulties for people to perform physical activities. **Statement of Problem:** The present study focuses on the impact of this COVID virus & precautionary lockdown on the physical activity behavior, active lifestyle and physical fitness of adult male sportsmen of Delhi. **Methodology:** 500 sportsmen from all over Delhi were chosen through convenience sampling technique, who were actively participating in sports & physical activities pre lockdown phase and their responses were recorded through a self-constructed questionnaire that consisted of 14 questions related to active lifestyle, physical activity routine pre & post lockdown, condition of their physical fitness & their views regarding future. **Data Analysis:-** The data collected was analyzed through descriptive statistics. **Results:** The results thus obtained revealed that the subjects emphasized on the active lifestyle, the fitness levels were affected adversely due to lockdown because of various reasons discussed in the paper. The results also revealed that although it was a great learning to perform physical activities through digital platform, but it should not be emphasized over traditional training methodology and the way to proceed in the future is the old way.

**Keywords:** Active lifestyle, Coronavirus disease-2019, Lockdown, Physical activity behavior, Physical fitness, Sportsmen

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## INTRODUCTION

In December 2019, an epidemic of cases of an unknown respiratory infection occurred in Wuhan, the largest metropolitan area of China's Hubei province which was later on February 11, 2020, announced as a pandemic and called severe acute respiratory syndrome (SARS) coronavirus disease-2019 (COVID-19) altogether known as SARS-COV-2 or COVID-19 disease by the World Health Organization (WHO).<sup>[1]</sup>

In the meantime, the infection had already spread across the globe through human vectors from China unknowingly and in India too it had been observed a widespread of cases related to this newly discovered disease. As precautionary measure, the Indian government had to impose an unconditional lockdown alike the various countries in the world on March 23, 2020, when the total cases in the country were recorded at around 360. Following the guidelines of WHO, it was mandatory for the people to stay inside their homes at all times to ensure social distancing, and all the schools, colleges, offices, private institutions, and organizations along with fitness and sports industry were forced to a halt so as to stop the spread of the infection. This meant that no one was allowed to come out of their homes which lead to a strange and unseen scenario where people can't engage in any physical or sport activity.

As we all know the significance of physical activity as well as the trivial results of physical inactivity. Some of them can be psychological distress, premature aging, obesity, cardiovascular vulnerability, decreased aerobic capacity, and many more. Regular physical activity is a key health behavior from a public health perspective, as it has a remarkable impact on health. The importance of an active lifestyle, physical fitness, and sports inculcate an unceasing consequence in the lives of a sportsperson.<sup>[2]</sup>

As in the case of COVID-19 pandemic, the disease had no previous research and the only method to be safe from the disease

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were personal hygiene, social distancing, and strong immune response. From the previous research findings and knowledge in the field, it had been proved and quite understood that immune response can be triggered and uplifted through active lifestyle and physical activity.<sup>[3]</sup> Therefore, it had been advertised by the WHO as physical activity guidelines in view of the COVID-19 pandemic and the key recommendation for the adults was to engage in moderate to high-intensity physical activity for 150–300 min per week.<sup>[4]</sup>

Previous studies on the topic of the impact of COVID on health, mental well-being, sedentary behavior of various demographical and geographical areas have concluded that due to the pandemic the decreased active lifestyle of the common people had a very diverse effect on their physical fitness and mental well-being and due to the increase of their sedentary hours the physical condition had also degraded which had led to many other related problems.<sup>[5]</sup>

Although, in India, there is a lack of research on a certain population called sportsmen and the impact that this uncommon situation had imposed on their livelihoods. Therefore, in reference to a special demographical area of notable significance i.e.; Delhi, the present study focuses on that special population (sports person) whose lives have been changed drastically due to the pandemic and lockdown and to study the changes in their physical activity behavior, active lifestyle and physical fitness. Furthermore, their views regarding the pandemic situation and the difficulties faced as well as the future way to progress have been researched.

## METHODOLOGY

### Design

The present study is a brisk, decisive and a comparative survey recognized through Google forms web survey platform and in person interview. Survey was done through self-made questionnaire to realize the objectives of the study. Before participating in the survey, the full consent of the participants and their voluntary participation was taken. The aim and objectives were thoroughly discussed with the participants. It is also assured that their identity will always be confidential and the results will be sent to the participants on their personnel e-mail id's which they had already mentioned in the questionnaire.

### Participants

A total sample size of 500 participants spread throughout Delhi were selected for the study using non-probability convenience sampling as the study is related to a specified population. Adult male sportsmen aged between 18 and 28 who had participated at district level or above had been selected from all over Delhi. To minimize the impact of delusions, a cleaning process was adopted in order to diminish ineligible and incomplete responses and the final size of the sample was 410.

### Questionnaire

The online questionnaire administered to the participants through the link (<https://docs.google.com/forms/d/1rwX9jSSKfODn3cQGdT5nu3l66tCjmxxfMJVtvyVruE/edit>) consisted of 14 questions with 04 options which can be opted more than once for a same question that reflected the physical activity culture and the behavior of the subjects regarding physical activities as well as the lifestyle they followed pre-lockdown, during lockdown and post lockdown. The questions also reflected and inquired about the fitness levels of the subjects and also their views regarding the mental status of the subjects during the lockdown and the effect of this change of lifestyle on their mental health. Their views regarding this new situation were also administered as well as their perception about the state of affairs was also brought into light.

### Administration of Questionnaire

The online survey was communicated through WhatsApp, Instagram, Gmail, LinkedIn, and Facebook. Other social media platforms, as well as official channels of telegram, were also used. As the survey population was large and decisive, in-person interviews of various subjects were also done.

## Statistical Analysis

The type of statistical technique used was descriptive statistics to bring out conclusion for the collected data.

## RESULTS

Importance of active lifestyle & regular physical activity was utmost importance understood by most athletes. The main aim for the athletes was to maintain their previous state of fitness but most of them failed to do so due to lack of resources and instruction. The intensity, volume and load were also decreased significantly due to which their performance decreased and musculoskeletal weakness occurred along with deconditioning. Other results are discussed further in the discussion and conclusion section

## DISCUSSION

The nationwide spread of SARS-COV-2 virus forced the Indian government to take defensive measures and impose a nationwide lockdown. Whole population was advised to maintain social distancing and remain in self-isolation to contain the spread of the infection. This restraint also shut down sporting activities, gyms, fitness centers, community parks etc. and the people were advised to workout at home.

The present study targets a very specific and limited population for whom workout and sports is an essential activity but were not able to do so and had to remain indoors during the lockdown and studies the impact of this lockdown on their active lifestyle, physical activity routine and PF.

Previous studies related to the topic have more dominantly focused on a very larger area and a more general population. Our study sample is very limited as compared to other studies of the relevant topic although the target population was different such as the work by Jin and co-authors which included more than 10000 individuals.<sup>[6]</sup> Therefore, literature on the current topic was scarce and hence the need to study this specific population was a must.

A total of 500 participants from all parts of Delhi were selected who had at least played competitive sports at district level or above and those who were actively engaged in sporting activities before lockdown. Moreover, only adult males were studied as past studies have shown that females are more inclined to exercise in home settings practicing aerobics, yoga etc. through online means. Therefore, their lifestyle would have been less affected than men.

Firstly, we investigated the importance of active lifestyle for the subjects and it was found that they emphasized on regular physical activity (5 days a week) as more than 65% of them resumed training in <15 days of lockdown. Secondly, we tried to find out the change in behavior in terms of physical activity before, during and post lockdown. It came out that the main aim for them to work out during lockdown was to improve or at least maintain their present state of PF which more than 75% had failed to achieve because the workout volume decreased significantly due to lack of resources in home settings. Evidently, more than 75% of subjects used to work out for more than 2 h before lockdown was imposed which changed drastically as after lockdown 70% were working out for <2 h. Also, it was investigated whether they had adequate knowledge regarding their workout and what they need to do and how to structure their workout. The results

Question number	Questions	Option A (%)	Option B (%)	Option C (%)	Option D (%)
1	After lockdown, when did you realize, you should start working out at home?	Immediately 27.31	<15 days 40.73	Between 15–30 days 19.02	More than a month 12.92
2	For how much time do you work out before COVID 19 lockdown in a day (including sports training hours)?	0–2 h 20.48	2–3 h 48.04	3–4 h 18.53	>4 h 12.92
3	After lockdown, what was the duration of the work out?	<1 h 24.14	1–2 h 50.24	2–3 h 16.82	>3 h 08.78
4	Did you work out daily or occasionally?	On daily basis 29.51	On weekends 04.63	Rest on weekends 43.41	Alternate days 22.43
5	What was the core of your workout schedule?	Endurance 22.85	Strength 16.58	Flexibility 14.15	Mixed up 43.41
6	Which is the most preferred activity you have done during the lockdown?	Running 43.33	Yoga 18.89	Rope skipping 24.22	Aerobics/zumba 13.56
7	Did you gain any weight during the COVID-19 lockdown?	Yes, but <5 kg 51.46	No 10.24	Lost weight 04.39	More than 5 kg 33.90
8	During lockdown, did you feel any mental or emotional changes?	Yes, stressed about PF 28.73	No, it was okay 11.26	Felt better to spend time with family 43.45	Emotional ups and downs were frequent but not regular 16.39
9	Did you perform activities for your concerned sport or for general PF?	Yes, sports specific exercises 09.09	Just to maintain present state of PF 27.69	To improve fitness standards 37.20	Mixed up 26.05
10	Did you divide your workout as per major muscle groups on specific days?	Yes 28.08	No, just overall workout routine 47.07	Emphasis on reducing weight 19.26	According to mood 5.06
11	After lockdown was lifted, what was your main place of workout?	Home or outdoors 16.58	Gym/fitness centers 32.19	Sports clubs 44.14	Recreation 07.08
12	Did you felt any changes in your physical conditions from the time when you left proper training?	Yes, performance decreased 42.30	No change 6.83	Yes, better from before lockdown 11.97	Easily fatigued and muscles weakened 38.89
13	What was the main source from where you took your workout regimes?	Via internet sources 49.58	From experts 20.50	Via previous schedule 10.25	Made your own schedule 19.67
14	Do you feel this COVID situation had an impact on your overall lifestyle and physical fitness?	Yes, it was tough but quite manageable 18.16	No 9.68	Happy to learn the new way of doing things 24.04	Digital training could never replace physical training 48.09

were promising as most of them knew their requirements and divided their workout according to specific body parts and fitness components. Most of them knew what they were doing and this reflects that these sportsmen have knowledge regarding active lifestyle and physical fitness.

Thirdly, in previous studies it had been proved that lack of physical activity may induce some psychological changes and on the basis of those proven facts, it was enquired what was their reaction and our results showed that the subjects were emotionally very stable and confident about future prospects and understood that this is only a temporary situation and took it as an opportunity to engage more with family and household chores and were quite happy to learn the new way of doing things as they knew that things will only get better with time. The final reaction after lockdown was also examined. As soon as the lockdown was lifted, more than 80% preferred to go out and continue with their

previous plans and joined their sports clubs and hit the gyms. The performance evidently decreased as musculoskeletal weakness and deconditioning occurred.

Finally, it was investigated what was the main source from where the subjects seek guidance to choose their workout regimes and whether it was an option to continue in future? The results had shown a significant outcome as well as a unanimous opinion that most people tried online platforms to structure their workout but this type of digital platform for instructing physical training should not be emphasized over actual physical training in future and the digital training could never replace the traditional physical training.

## CONCLUSION

The results of the study concluded that even in the abnormal and unforeseen COVID conditions, the subjects were keen to

continue their training at home but due to the restrictions faced they weren't able to do so. When the results of pre lockdown and during lockdown were compared the volume and intensity of their workout reduced due to which they gained considerable amount of weight along with declined performance and musculoskeletal deconditioning even when most of them followed the WHO guidelines regarding physical activity hours and intensity<sup>[6]</sup> which were not enough for them as they are a special population concerned with sports and the guidelines were for normal population and to maintain healthy immunity but if you want to improve your physical condition, extra effort is required. Also, the results reflected that in order to maintain or improve their physical condition, the subjects dominantly chose endurance activities and combined them with other components of physical fitness so as to make an overall workout routine. Finally, the main conclusion was about future as it was very difficult for everyone to follow instructions through digital platform and this type of method to train should not be emphasized in future and as soon as the

conditions allow, the traditional method of training i.e., group training, face to face instructions and feedback with physical presence of the trainer or coach should be resumed.

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