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COVID-19 lockdown and physical activity status of Dr. B.R. Ambedkar University's college teachers

Dr. Sheeldhar Dubey

Abstract

Governments of various countries applied Lockdown for preventing COVID-19 transmission. This long term lockdown impacted on life of peoples including students and teachers. Generally most teachers work outdoor and indoor in normal days, but during COVID -19 pandemic Lockdown they performed very limited physical activity so it impacted on their mental and physical health. This study will enable us to observe COVID-19 lockdown effect on Physical activities status of Degree College teachers of Dr. B.R. Ambedkar University, Agra. The present study was conducted on 729 Teacher, Staffs Students of Universities and Colleges. For the "fitness status survey" questionnaire was developed by researcher was used that one having Physical Status, Physical Activity and diet related 30 questions. Out of them 08 questions were used to analyses physical activity status. The online survey was conducted through google form published from 11-05-2020 at 10:00 Am to 12-05-2020 upto 23:59. Analysis revealed that as per the recommendations of world health organization most of degree college teachers followed guidelines of WHO.

Keywords: Physical fitness, pulse rate, non-sportsmen, Sirsa

Introduction

The World Health Organization (WHO) has declared the coronavirus disease 2019 (COVID-19) a pandemic. A global coordinated effort is needed to stop the further spread of the virus. A pandemic is defined as "occurring over a wide geographic area and affecting an exceptionally high proportion of the population." The last pandemic reported in the world was the H1N1 flu pandemic in 2009.

Coronaviruses are a family of viruses that cause illness such as respiratory diseases or gastrointestinal diseases. Respiratory diseases can range from the common cold to more severe diseases. Coronaviruses got their name from the way that they look under a microscope. The virus consists of a core of genetic material surrounded by an envelope with protein spikes. This gives it the appearance of a crown. The word Corona means "crown" in Latin.

Although the virus can infect people of all ages, evidence suggests that older people (those of 60 years old) have an increased risk of developing a severe form of the disease. This may be due to: 1-Ageing is associated with a decline in immune function. 2-Higher risk of co-morbidities (Diabetes, Heart Disease, Lung Conditions, Cancer). 3-Residence/Location - Many older people live in care homes or nursing facilities, where the disease can spread more rapidly.

The WHO suggests the following basic preventative measures to protect against the new coronavirus: Stay up to date with the latest information on the COVID-19 outbreak through WHO updates or your local and national public health authority. Perform hand hygiene frequently with an alcohol-based hand rub if your hands are not visibly dirty or with soap and water if hands are dirty. Avoid touching your eyes, nose and mouth. Practice respiratory hygiene by coughing or sneezing into a bent elbow or tissue and then immediately disposing of the tissue. Wear a medical mask if you have respiratory symptoms and performing hand hygiene after disposing of the mask. Maintain social distancing (approximately 2 meters) from individuals with respiratory symptoms. If you have a fever, cough and difficulty breathing seek medical care.

The COVID-19 pandemic is an unprecedented time all across the world. Worldwide, extensive social distancing policies are put into place,

restricting people's daily activities and worldwide pleas from governments asking people to stay safe and stay at home. This of course means that most people will spend much of their time (if not all) at home.

These social distancing measures mean that people have far fewer opportunities to be physically active, especially if activities such as walking or cycling as transportation, or taking part in a leisurely activity (e.g. jogging, walking the dog, going to the gym) are being restricted. Furthermore, these drastic measures also make it so much easier to be sedentary at home for long periods of time. The impact of this physical inactivity may very likely be seen in many areas such as health and social care and the mental well-being of people all across the globe. Physical Activity (PA) is defined as any bodily movement produced by skeletal muscles that require energy expenditure.

During the COVID-19 pandemic it is even more important for all people to be physically active. Even if it is only a short break from sitting at your desk and doing some walking or stretching. Doing something as simple as this will: ease muscle strain, relief mental tension, improve blood circulation, improve muscle activity, create some routine to your day in these unprecedented times. Regular exercise is essential for everyone under normal circumstances. However, here are a few reasons why exercise is especially crucial during the COVID-19 pandemic:

- **Exercise boosts the immune system:** Research shows that regular, moderate-intensity exercise has immune-boosting benefits that may help your body fight off infections, including COVID-19.
- **Exercise may prevent weight gain:** Exercise can help you burn extra calories caused by dietary changes and offset the effects of sedentary activities.
- **Exercise reduces stress and anxiety:** Exercise is a proven mood-booster and can help adults reduce stress levels and build emotional resilience.
- **Exercise improves sleep:** There is evidence that suggests regular exercise helps you fall asleep faster and improves sleep quality — and getting a good night's sleep has also been found to boost your immune system.

There are many benefits of physical activity. These include: Strengthening and maintaining your immune system strength - being less susceptible to infections; Reduces high blood pressure, Weight management, Reduces the risk of heart disease, Reduces the risk of diabetes, Reduces the risk of stroke, Reduces the risk of certain cancers, Improves bone and muscle strength, Improves balance, Improves flexibility, Improves fitness, Improves mental health, Reduces the risk of depression, Reduces the risk of cognitive decline, Delays the onset of dementia, Improves overall feeling of well-being, In children physical activity may: support healthy growth and development, reduce the risk of disease in later life, help in development of fundamental movement skills.

The new WHO 2020 Guidelines stress that any amount of physical activity is better than none, even when the recommended thresholds are not met (this is a very positive message for much of the population who currently fall well short of the desirable minimum). Young people aged 5-17 years: Children and adolescents should do at least an average of 60 min/day of moderate-to-vigorous intensity, mostly aerobic, physical activity, across the week. Vigorous intensity aerobic activities (e.g. running), as well as activities that strengthen muscle and bone (e.g. jumping, lifting weights), should be incorporated at least 3 days a week. Children and

adolescents should limit the amount of time spent being sedentary, particularly the amount of recreational screen time such as social media and video gaming.

Adults and older adults, including people living with chronic conditions and disabilities: For substantial health benefits, adults should engage in 150-300 minutes of moderate-intensity aerobic physical activity (e.g. brisk walking), or 75-150 minutes of vigorous activity (e.g. running) throughout the week, or equivalent combinations of both where 1 minute of vigorous activity is roughly equivalent to 2 minutes of moderate activity. Examples of aerobic activities include brisk walking, stair climbing, cycling, swimming, or running.

Provided that there are no contraindications resulting from certain severe chronic conditions, additional health benefits can be gained by taking part in more activity than the recommended amounts of 300 min, or 150 min of vigorous-intensity aerobic physical activity per week, or an equivalent combination of moderate-intensity and vigorous-intensity activity throughout the week. In addition to aerobic physical activity, adults should also do muscle strengthening activities that involve large muscle groups on at least two days per week. Such activities may involve lifting weights or own bodyweight exercises (e.g. push ups, chin ups, sit ups) and can be done at home, in the gym, or in the community, such as public green spaces.

Older adults, defined as those aged 65 years and older, are also encouraged to engage in "multicomponent" on three or more days a week. Examples of multicomponent activities include dancing, which improves aerobic capacity and balance; or standing on one foot while doing bicep curls to concurrently improve balance and upper body muscle strength.

In light of the current situation worldwide, certain benefits of physical activity may be specifically pertinent to the COVID-19 Pandemic. Physical activity enhances immune function and reduces inflammation therefore it could reduce the severity of infections. Physical activity improves common chronic conditions that increase the risk for severe COVID-19 (i.e. Cardiovascular Disease, Diabetes). Physical activity is a great stress management tool by reducing symptoms of anxiety and depression. Physical activity helps bring cortisol levels in balance. Stress and distress (such as during a pandemic) creates an imbalance in cortisol levels and this negatively influences immune function and inflammation.

As already iterated, we are living in unprecedented times and we are learning as we go about the effects and impact of this pandemic. With regards to physical activity and periods of lockdown or restricted and regulated movement, there is some evidence emerging but it is still in the early stages of this pandemic and we won't fully understand the impact of "lock down" for many months.

From the various data sets, it is clear that people are finding ways to exercise, but that is not a true reflection of their accrued physical activity over a 24 hour period. Many people also engage in no moderate or strenuous physical activity during lockdown measures; the implications of this will only be evident later on.

Objectives of the study

Governments of various countries applied Lockdown for preventing COVID-19 transmission. This long term lockdown impacted on life of peoples including students and teachers. Generally most teachers work outdoor and indoor in normal days, but during COVID -19 pandemic Lockdown they performed very limited physical activity so it impacted on

their mental and physical health. This study will enable us to observe COVID-19 lockdown effect on Physical activities status of Degree College teachers of Dr. B.R. Ambedkar University, Agra.

Selection of Subjects

The present study was conducted on 729 Teacher, Staffs Students of Universities and Colleges. For the “fitness status survey” questionnaire was developed by researcher was used that one having Physical Status, Physical Activity and diet related 30 questions. Out of them 08 questions were used to analyses physical activity status. The online survey was conducted through google form published from 11-05-2020 at 10:00 Am to 12-05-2020 upto 23:59

Design of The Survey

This is a status survey, which did not require the investigator basically to manipulate any of the variables included in it. Rather the collection of data became instrumental in providing correct insight into the physical fitness status, It was not intended to study the interaction among various variables.

Result of the Study

Seven hundred twenty nine (N=729) subjects were participated in *ONLINE FITNESS STATUS SURVEY* those were belong to more 100 institutes. Out of them 507 (69.5%) were male where as 222 (30.5%) were female. Question wise report was analyses and presented here.

Table 1: Do you feels pain or muscle stiffness in your body parts?

Do you feels pain or muscle stiffness in your body parts?	Yes	No
Response in %	21%	79%

Table 1 shows that 79% teachers of Dr. B. R. Ambedkar University were not feeling pain muscle stiffness in your body parts during COVID-19 lockdown whereas 21% Teachers were feeling muscle stiffness in their body parts during COVID – 19 lockdown.

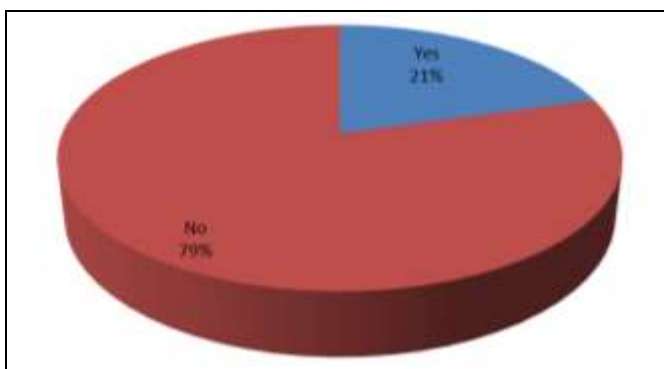


Fig 1: Qus: Do you feels pain or muscle stiffness in your body parts?

Table 2: Can you touch your feet with your hands in standing position?

Can you touch your feet with your hands in standing position?	Yes	No
Response in %	92%	8%

Table 2 shows that 92% teachers of Dr. B. R. Ambedkar University can touch their feet with their hands in standing position during COVID-19 lockdown whereas 8% Teachers were not able to touch their feet with their hands in standing position during COVID – 19 lockdown.

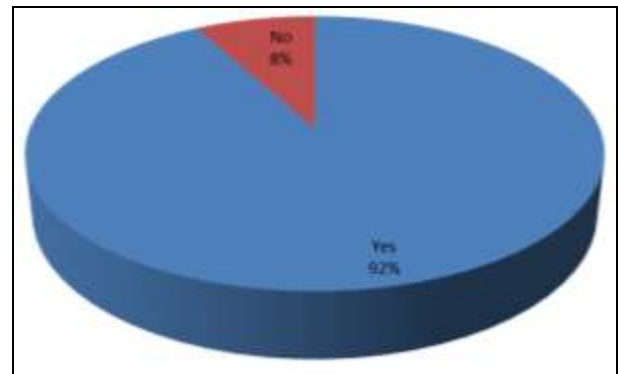


Fig 2: Qus: Can you touch your feet with your hands in standing position

Table 3: Can you touch your feet with your hands in sitting position?

Can you touch your feet with your hands in sitting position?	Yes	No
Response in %	89%	11%

Table 3 shows that 89% teachers of Dr. B. R. Ambedkar University can touch their feet with their hands in sitting position during COVID-19 lockdown whereas 11% Teachers were not able to touch their feet with their hands in sitting position during COVID – 19 lockdown.

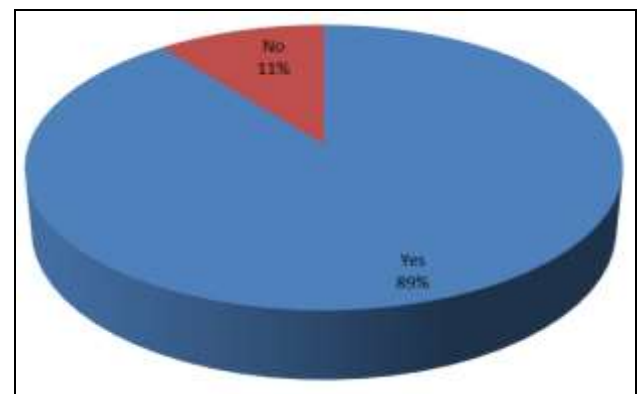


Fig 3: Qus: Can you touch your toe with your hand while sitting position?

Table 4: Are you performing rope skipping/Cycling more than 15 minutes?

Are you performing rope skipping/ Cycling more than 15 minutes?	Yes	No
Response in %	83%	17%

Table 4 shows that 83% teachers of Dr. B. R. Ambedkar University are performing rope skipping / cycling more than 15 minutes during COVID-19 lockdown whereas 17% Teachers were not performing rope skipping / cycling more than 15 minutes during COVID – 19 lockdown.

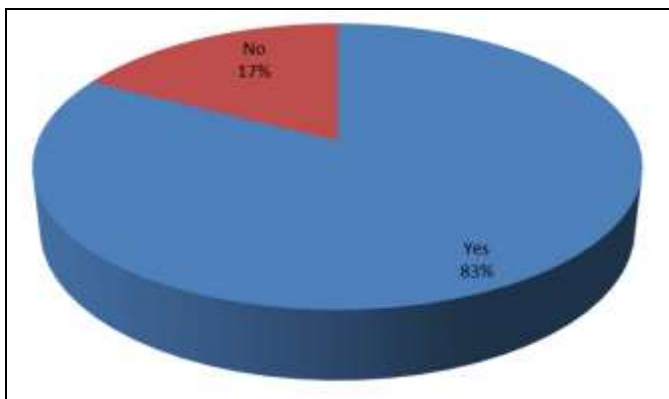


Fig 4: Qus: Are you performing rope skipping/cycling more than 15 minutes?

Table 5: Do you performs any kinds of meditation up to 30 minutes?

Do you performs any kinds of meditation up to 30 minutes?	Yes	No
Response in %	76%	24%

Table 6 shows that 76% teachers of Dr. B. R. Ambedkar University were performing any kinds of meditation up to 30 minutes during COVID-19 lockdown. Whereas 24% teachers were performing any kinds of meditation up to 30 minutes during COVID – 19 lockdown.

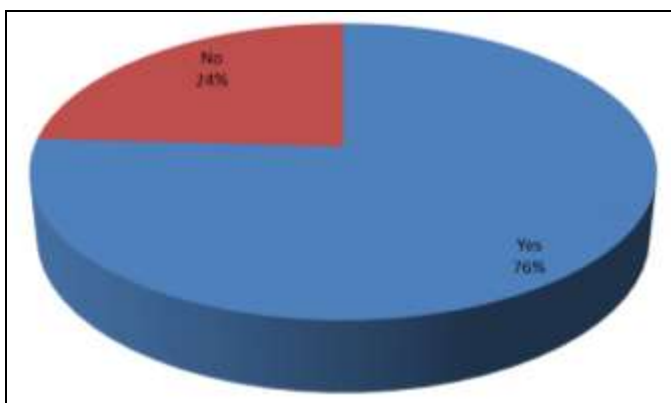


Fig 5: Qus: Do you performs any kinds of meditation up to 30 minutes?

Table 6: Can you perform 25 push-ups in a time per day

Can you perform 25 push-ups in a per day	Yes	No
Response in %	78%	22%

Table 6 shows that 78% teachers of Dr. B. R. Ambedkar University can perform 25 push-ups in a time per day during COVID-19 lockdown. Whereas 22% teachers were not performing 25 push-ups in a time per day during COVID – 19 lockdown.

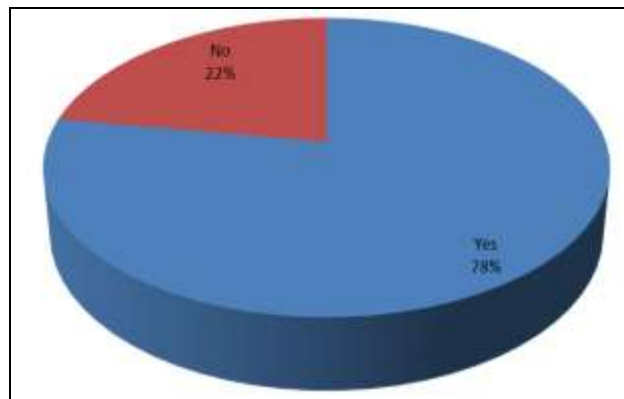


Fig 6: Qus: Can you perform 25 push-ups in a time per day?

Table 7: Can you perform 25 bent knee sit-ups per day

Can you perform 25 bent knee sit-ups per day	Yes	No
Response in %	87%	13%

Table 7 shows that 87% teachers of Dr. B. R. Ambedkar University can perform 25 bent knee sit-ups per day during COVID-19 lockdown. Whereas 13% teachers were not performing 25 bent knee sit-ups per day during COVID – 19 lockdown.

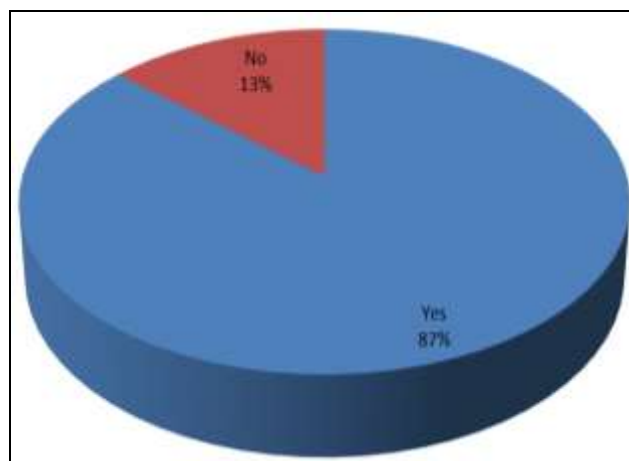


Fig 7: Qus: Can you perform 25 bent knee sit-ups per day?

Table 8: Can you hold half squat position up to 30 seconds or more

Can you holding half squat position up to 30 seconds or more	Yes	No
Response in %	95%	5%

Table 8 shows that 95% teachers of Dr. B. R. Ambedkar University can holding half squat position up to 30 seconds or more during COVID-19 lockdown. Whereas 05% teachers can not holding half squat position up to 30 seconds or more during COVID – 19 lockdown.

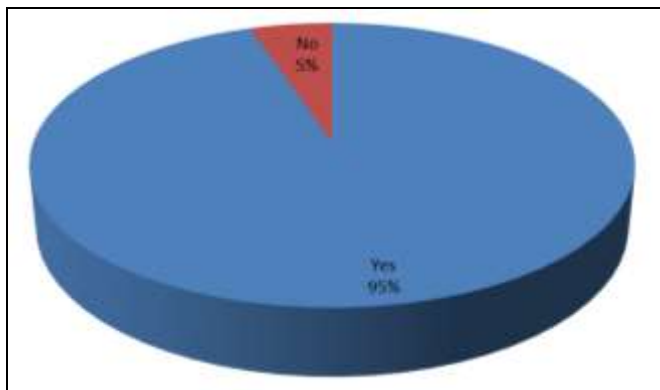


Fig 8: Qus: Can you holding half squat position up to 30 seconds or more

Discussion of Results

Analysis of study shows that 79% teachers of Dr. B. R. Ambedkar University were not feeling pain muscle stiffness in your body parts during COVID-19 lockdown whereas 21% Teachers were feeling muscle stiffness in their body parts during COVID-19 lockdown. Yoga and Exercise for Primary Prevention of COVID-19 should be more than 30 minutes or more (AYUSH 2020)

Analysis of study shows that 92% teachers of Dr. B. R. Ambedkar University can touch their feet with their hands in standing position during COVID-19 lockdown whereas 8% Teachers were not able to touch their feet with their hands in standing position during COVID-19 lockdown.

Analysis of study shows that 89% teachers of Dr. B. R. Ambedkar University can touch their feet with their hands in sitting position during COVID-19 lockdown whereas 11% Teachers were not able to touch their feet with their hands in sitting position during COVID-19 lockdown.

Analysis of study shows that 83% teachers of Dr. B. R. Ambedkar University are performing rope skipping / cycling more than 15 minutes during COVID-19 lockdown whereas 17% Teachers were not performing rope skipping / cycling more than 15 minutes during COVID-19 lockdown. Regular physical activity can help give our days a routine and be a way to stay in contact with family and friends. It's also good for our mental health - reducing the risk of depression, cognitive decline and delay the onset of dementia - and improve overall feelings. This should include activities that strengthen muscle and bone, at least 3 days per week. Doing more than 60 minutes of physical activity daily will provide additional health benefits (WHO, 2020).

Analysis of study shows that 78% teachers of Dr. B. R. Ambedkar University can perform 25 push-ups in a time per day during COVID-19 lockdown. whereas 22% teachers were not performing 25 push-ups in a time per day during COVID-19 lockdown. Various Studies have also suggested that push-ups offer more cardiovascular benefits than cardio. when COVID-19 has prompted us all to rekindle our love with bodyweight workouts that can be done in the living room. (<https://www.wellandgood.com/push-ups-during-COVID-19/>)

Analysis of study shows that 87% teachers of Dr. B. R. Ambedkar University can perform 25 bent knee sit-ups per day during COVID-19 lockdown. whereas 13% teachers were not performing 25 bent knee sit-ups per day during COVID – 19 lockdown.

Analysis of study shows that 95% teachers of Dr. B. R. Ambedkar University can holding half squat position up to 30 seconds or more during COVID-19 lockdown. Whereas 05%

teachers cannot holding half squat position up to 30 seconds or more during COVID – 19 lockdown. Who also recommended that strengthening exercises will help improve muscles that have become weaker as a result of your illness? You should aim to do three sessions of strengthening exercise each week. Strengthening exercises will not make you feel breathless in the same way as fitness exercises. Instead, your muscles will feel like they have worked hard (WHO).

Analysis of study shows that 76% teachers of Dr. B. R. Ambedkar University were performing any kinds of meditation up to 30 minutes during COVID-19 lockdown. Whereas 24% teachers were performing any kinds of meditation up to 30 minutes during COVID – 19 lockdown. Kamlesh Patel also stated as “meditation acts as a silent regulator for all systems in our being – physical, mental, emotional and spiritual to function in harmony. The impact of this is the ability of the body and mind to respond to internal and external stress with extreme effectiveness (Saima 2020).

Yoga is an effective and time tested immunity booster. It can help lower your stress level, improve your quality of sleep and remove toxins from the body, thereby improving your overall health conditions (TOI Jun 28, 2020).

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