

Is lack of physical training an eustress or distress among powerlifters during a pandemic.

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Citation of this Article: Alli A, Sindhu R, Prabu D, Rajmohan M, Bharathwaj V V, Dinesh Dhamodhar, Sathiyapriya S, “Is lack of physical training an eustress or distress among powerlifters during a pandemic”, IJDSIR- February - 2023, Volume – 6, Issue - 1, P. No. 245 – 251.

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Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Aim: This study aims to understand the stress caused by physical inactivity during the lockdown period among powerlifters and regular gym goers and to know whether the stress was beneficial or detrimental to them.

Materials and methods: The study was conducted through an online google form, and the data for this study was collected from 150 participants who were

powerlifters. The questionnaire consisted of 15 multiple choice questions, and the participants were mandatorily asked to answer all the questions.

Result: In this study, the subjects were predominantly males between 18-60 years who worked out regularly before the lockdown. The subjects responded that working out was very effective in reducing their stress level. However, their mental well-being was affected

when social lockdown disturbed their physical training routine. As a result, they experienced a major change in their lifestyle, mood state, appetite, and sleep patterns, leading to increased health concerns.

Conclusion: The study result shows that the stress faced by the subjects was detrimental, affecting their mental health and leading to a rise in their physical health concerns.

Keywords: Stress, Physical inactivity, Exercise, Power lifters, Mental well-being, COVID-19 pandemic

Introduction

The spread of the Covid-19 pandemic has put a halt to the fast-moving world and put lives at a standstill. It caused global panic and concern due to its high mortality ratio. The stringent lockdown measures imposed and the need for social distancing norms to curb the spread of the pandemic has created less opportunity for people to be physically active. These safety measures have hampered the routines lives of fitness freaks, impacting their physical and mental well-being across the world. Health and fitness remained one of the most vital concerns as fitness arenas and gyms remained closed for a longer duration. Quarantine for a prolonged period poses a challenge for remaining physically active.[1]

While the necessity to stay sedentary at home for a long period of time not only posed a challenge for the continuity of physical fitness, the hampered physical activity and the restricted social life and uncertainty led to the adoption of unhealthy behaviour and lifestyle, which led to the emergence of psychological and physical health issues [2]. Many researchers have found that many adults face psychological problems while adjusting to their current lifestyle with the fear of contracting the Covid-19 virus [3]. Such health-related problems during the COVID-19 pandemic can be successfully handled through regular physical exercises

[4]. Regular exercise not only helps in maintaining physical and psycho logical health [5] but also help in preventing the occurrence of several diseases such as diabetes, hyper tension, respiratory diseases and cardio vascular problem [6].

One hundred fifty minutes of physical activity in a week can lower the risk of mortality by 33% compared to those being physically inactive [7]. Several studies show that physical activity positively impacts the sleep cycle [8]. Various research has proven that being physically active while taking other precautions is effective in dealing with the health outcomes of the COVID-19 pandemic [4]. Amidst these stringent lockdown measures, how people cope up and find ways to continue their physical fitness remains an important question. The pandemic has made it difficult for fitness freaks and regular gym goers to maintain their normal physical activity at home.

Moreover, the decrease in physical activity and exercise patterns has negatively impacted the mental well-being of these gym-goers [9]. In addition, certain studies suggest that social lockdown impacts weight-related behaviours [10].

The present research aims at understanding people's experiences during the period of lockdown due to COVID 19 and how regular exercise engagements helped them deal with the psycho logical and physical consequences of home confinement.

Materials and methods

The purpose of this research is to identify how lack of physical training affects the mental well-being of the powerlifters leading to eustress or distress during the pandemic. The crux of the study is to understand the mental well-being of powerlifters and their efforts to maintain a healthy lifestyle.

A qualitative approach is being used. The data for this research is collected from 150 participants who are regular gym-goers. Few gyms and gym trainers were contacted for help to conduct this study, and upon their consent, contact details of regular gym members who worked out regularly for at least six months before lockdown were collected.

The following are the inclusion criteria for the participants

- Regular gym-goers who worked out regularly for at least six months before lockdown.
- Individuals above 18 years of age.
- Powerlifters who depend on the gym for their physical fitness.

The following are the exclusion criteria for the participants

- Powerlifters practising other exercises rather than gym workouts.
- Individuals with already existing psychological issues.

The participants were explained about the purpose of the study and were requested to fill out the google form, which was circulated to their contact numbers. The online survey is made up of 15 multiple-choice questions. Participants answering the survey will be mandatorily asked to answer all 15 questions.

The questionnaire consists of five sections. Section 1 consists of demographic details such as Name, Age, Gender and Email id. Section 2 consists of questions related to the workout routine and effect of physical activity in reducing stress and if the mental well-being of the participant is affected due to lack of exercise.

Questions in Section 3 is based on eustress, if the stress due to lack of physical activity has become beneficial to the participant by motivating them to work out more or made them focus on working out more or has the stress improved the energy level or lifestyle of the participant.

Section 4 is based on distress to see if the stress affected the participant's mood, sleep pattern, diet, and health. The final section consists of questions related to the ability of the participants to stick to their normal workout routine and its impact on lifestyle post-pandemic.

Results

Among 182 participants, 64.8% of the samples were males, and 34.6% were females. 85.7% of them work out regularly. The age group of the subjects were between 18- 60 years.

Table 1: Distribution of chi-square test for various responses.

Responses	Chi-Square value	P-value
Working out regularly	0.00393214	1.43
Lack of physical activity in the pandemic affects the mental well-being	0.00393214	5.60
Impact of stress on the performance	0.102586589	0.45

Table 1 shows the distribution of the chi-square test for various responses such as working out regularly ($p=1.43$), lack of physical activity affecting mental well-being ($p=5.60$) and impact of stress on the individual's performance ($p=0.45$).

Figure 1: Effectiveness of workout in reducing stress level.

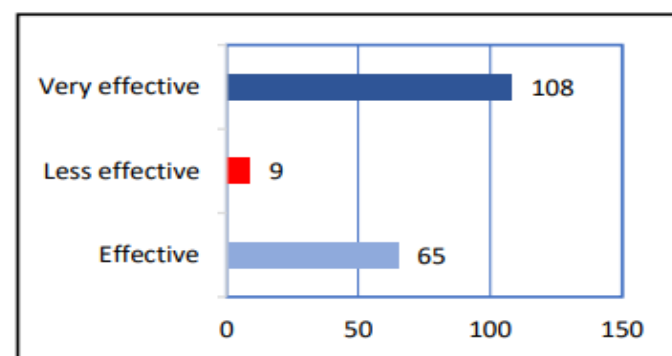


Figure 1: shows the perception of the participants on the effectiveness of working out in reducing stress. 59.3% of

them found working out was very effective in reducing their stress levels.

Figure 2: Stress and appetite changes

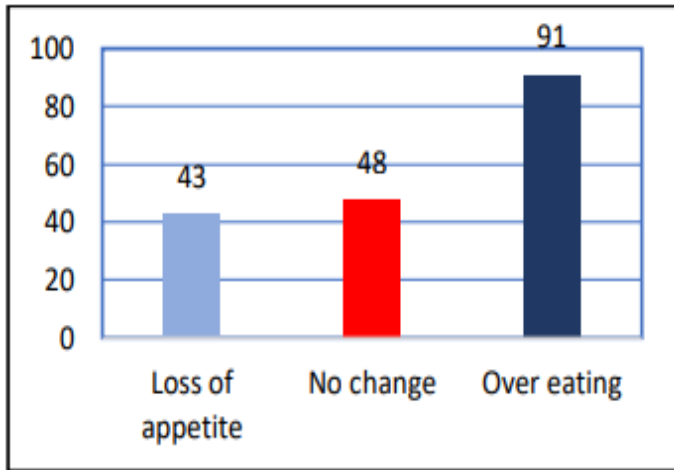


Figure 2 reveals the relationship between stress and appetite changes.

Stress has led to overeating in 50% of the subjects.

Figure 3: Lack of physical activity and anger management

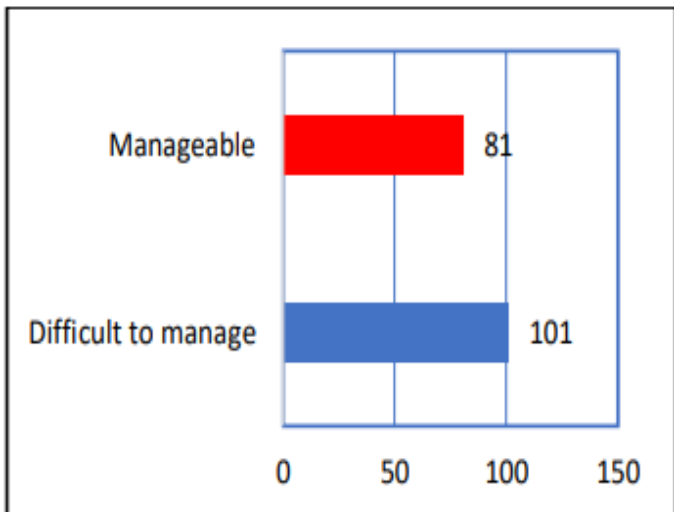


Figure 3 shows the correlation between lack of physical activity and anger management. 55.5% found it difficult to manage.

Table 2: Perception of the participants on lack of physical activity and stress.

Criteria	Responses in n (%)
Sometimes stress motivated to work out more	100 (54.9%)
Stress didn't aid in improving energy level	118 (64.8%)
Stress didn't help in increasing the focus on working out during this pandemic	73 (40.1%)
Stress led to deterioration in the lifestyle	62 (34.1%)
Lack of exercise led to moodiness and irritability	142 (78%)
Lack of physical activity affected the sleep cycle	125 (68.7%)
Lack of physical activity led to health concerns	161 (88.5%)
Easier to get back to normal workout routine post-pandemic	153 (84.1%)
Working out has a highly positive impact on lifestyle post-pandemic	107 (58.8%)

Table 2 depicts the perception of the participants on lack of physical activity and stress. Lack of physical activity has increased health concerns in 88.5% of the subjects. However, 84.1% of the participants will find it easy to get back to their normal workout routine post-pandemic.

Discussion

Lack of physical activity is proved to negatively impact an individual's health. It is one of the major causes of chronic diseases [11]. It can lead to a drastic rise in blood pressure levels and cholesterol levels and increase the mortality rate in type 2 diabetic cases as it causes low cardio respiratory fitness [12].

Furthermore, physical inactivity hinders health profile and affects the mental fitness of an individual, leading to anxiety and depression [13]. It has also affected the normal routine of any profession and work category [14]. The present study was carried out to investigate the relationship between lack of physical activity and the subjects' stress and determine whether the stress was either beneficial or detrimental to them.

In the present study, both male and female powerlifters who worked out regularly in the gym participated. The percentage of male respondents was higher than the female respondents. The study substantiates that working out regularly is very effective in reducing stress. Regular exercises help to boost the production of endorphins which in turn reduces stress levels [15]. Being inactive during the pandemic has affected the mental well-being of most individuals. A short burst of exercise can be beneficial as it can activate the body's metabolites, induce a positive mood, and enhance an individual's overall mental well-being.

Physical inertness and home confinement have created physical and emotional tension among individuals. But this stress has sometimes been beneficial by motivating the individuals to work out more, and it helped in increasing the focus. But, on the contrary, stress has also created a less positive impact on the performance, deteriorated the quality of lifestyle and adversely impacted the improve Ment of energy levels in some individuals.

Physical activity plays a major role in mood regulation. This is supported by a study conducted by Sandro Legey et al. [16]; the study showed a correlation between the increase in physical activity and improvement in mood state. The sedentary behaviour during the pandemic has led to increased moodiness and annoyance among the subjects. Various studies have proved that exercises have improved sleep problems and have been very effective in treating chronic insomnia [17]. Many respondents in this study have agreed that being dormant has affected their sleep patterns. The integral part of weight management is exercise and diet. The stress induced by physical inactivity can alter an individual's diet and eating pattern. According to a study conducted by Eric Robinson et al. [10] in UK, it was reported that social

lockdown has a large influence on weight-related behaviour, especially among adults with higher BMI. In this study, the subjects reported that stress had induced overeating. Stress inducing hormones plays a major role in pushing individuals towards overeating (stress eating) high fat and sugary comfort food. Anxiety and frustration can result in anger. Lack of exercise has led to difficulty in anger management among the subjects. Studies have proven that regular exercise and physical activity positively impact anxiety reduction [18] . A study done by Gerber [19] reported that aerobic exercises could reduce psychopathological symptoms of anger and prevent deeper depressions. A study done by Roh [20] reported that a slow exercise called Pilates has significantly improved self-confidence and helped in anger management in women. The sedentary lifestyle has led to rising health concerns among the subjects. This study shows that the participants have a positive attitude towards lifestyle and workout routine post-pandemic. The participants' perception is that it will be easier for them to get back to their normal workout routine, and it will have a highly positive impact on their post-pandemic lifestyle.

This study also has some limitations; it was conducted through an online google form due to the social lock down during the COVID-19 pandemic, which could have led to information being biased, low response rate, difficulty in reaching certain types of participants. However, this study substantiates that physical inactiveness has led to the rise of health concerns and perturbation among powerlifters and regular gym goers during the pandemic.

Conclusion

Engaging in fitness training can improve overall health and enhance the quality of life. It maximizes the life span of individuals. Exercise combats health conditions

and diseases, pumps up blood circulation and boosts energy levels. During the pandemic, the social lockdown and home confinement posed a hindrance to the maintenance of physical fitness among the powerlifters. It had a negative impact on these individuals' mental health, leading them to a state of distress. These individuals faced different emotional distress such as a change in mood state, appetite changes and difficulty in anger management, which hindered their lifestyle. Hence physical fitness is an absolute requirement for maintaining a healthy and positive lifestyle.

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