

Examine the Relationship between Regular Exercise and Stress Management in Working Professionals

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Abstract

Stress has become an increasingly important issue impacting the physical and emotional health of workers in today's fast-paced and demanding workplaces. People in the workforce frequently experience increased stress and health problems as a result of their inability to juggle their personal health with their demanding employment commitments. Professionals in urban India, ranging in age from 21 to 60 and employed in fields as diverse as healthcare, education, and corporate America, are the subjects of this study, which seeks to answer the questions of how exercise relates to stress management. Stress management is essential for the health and efficiency of workers in today's fast-paced workplaces. One hundred thirty-three people were chosen for the study using a stratified random sampling method. The individuals' stress and exercise habits were uncovered by descriptive statistics, while significant relationships and group differences were investigated using inferential statistics, such as Pearson's correlation and t-tests. It appears that professionals who consistently exercise report reduced stress levels, as there is a substantial negative association between the two. The results highlight the need for mental health measures in the workplace to be supplemented with physical wellness programs in order to create a more well-rounded and healthy workforce.

Keywords: Professional, Stress, Exercise, Physical activity, Workforce

I. INTRODUCTION

Professionals in today's fast-paced and stressful workplaces often report high levels of stress. Problems like anxiety, despair, burnout, and decreased productivity can result from long-term exposure to stress at work, which is harmful to one's mental and physical health. Consistent physical activity has arisen as an attractive and approachable method for stress management and coping, which is of great interest to both individuals and companies. The beneficial effects of exercise on mental health are well-documented, complementing those on physical health. Exercising releases feel-good endorphins and other neurochemicals, which in turn increase mood, reduce stress, and make you more resilient emotionally.

Among working professionals in particular, this study intends to investigate the link between exercise routines and stress reduction. They are especially susceptible to chronic stress because of the special challenges this group encounters in meeting work deadlines, maintaining positive relationships, and striking a work-life balance. Improving our understanding of the relationship between exercise variables (e.g., frequency and intensity) and reported stress levels can lead to more effective strategies for managing stress. The study aims to explore these variables to find out if people who exercise regularly

and more intensely have lower stress levels than people who don't. If so, it would highlight exercise as a natural and proactive way to manage stress in the workplace.

Furthermore, in light of the fact that office jobs are making sedentary lifestyles the norm, it is critical to study the patterns of behavior that mitigate the negative effects on mental health that come along with them. In addition to adding to the body of knowledge on health psychology and occupational well-being, this study offers practical suggestions for businesses, workers, and medical professionals. The findings may lend credence to workplace wellness programs that promote exercise as an integral component of stress management strategies, with the dual goals of enhancing individual health and organizational performance.

II. REVIEW OF RELATED STUDIES

Mehta, Riddhi & Oberoi, Mugdha. (2024). As a result of the physical difficulties of treating patients with a wide range of acute and chronic diseases over extended periods of time, physiotherapists may experience stress as a result of their job. The purpose of this research was to find out how often physiotherapists who work full-time engage in physical exercise in connection to their levels of stress on the job. One hundred physiotherapists, both male and female, from a variety of fields took part in an online cross-sectional survey. The Occupational Stress Index was used to quantify stress in the workplace, whereas the International Physical Activity Questionnaire-Short Form was used to measure physical activity. In general, there was a slight and insignificant negative connection (Spearman correlation coefficient $r = -0.0326$, $P = 0.7448$) between physical exercise and job stress. Most people were not very stressed out at work (47%), and moderate exercise was done by 46% of the population. Among hospital employees, there was a significant negative association between stress and physical activity (Spearman coefficient $r = -0.795$, $P = 0.003$). The findings indicate a strong correlation between levels of physical activity and stress at work, however this association is limited to physiotherapists employed in hospital settings.

Christopher, D Solomon & K, Ms. Shruthi. (2022) A person's unique set of circumstances determines the specific kind of strain that constitutes stress, which might manifest physically or emotionally. Frustration, wrath, and anxiety are the results of anything that happens or something that someone thinks about. There are both mental and physical health issues that may result from stress. Managing stress well is seen as a crucial component for thriving in today's work environment and avoiding such issues. By offering strategies for coping with anxiety and keeping one's health in excellent shape, it aids in stress management. Finding out what causes stress and what helps in dealing with it is the main goal of this study. For this investigation, we used ANOVA and factor analysis.

Suresh D (2020) Researchers set out to find out if IT workers at a sample of private companies might reduce their stress levels by practicing relaxation techniques. Determining the efficacy of relaxation and stretching exercises in reducing stress among IT professionals was the primary goal of the research. The researchers decided to use a one-group, pretest-posttest experimental design. A straightforward sampling strategy was used to choose 240 samples for the study. Following data collection using a job stress scale, research assistants supervised samples while they watched a researcher display a progressive relaxation and stretching exercise. The samples were then encouraged to follow the exercises for four weeks. In the last week of treatment, the same scale was used to administer a post-test. Descriptive and inferential

statistics were used to examine the study. In a study, participants who regularly engaged in relaxation and stretching exercises reported significantly lower levels of stress.

Panigrahi, Ashok. (2017). Disruption to the regular operation of the body and mind is a common indicator of stress. There are a lot of factors, like the level of control over tasks and the management style, that might contribute to stress in the workplace. Organizations and employees both benefit from moderate stress. It is useful for accomplishing both individual and group objectives. However, employees' physical, mental, and psychological health might suffer from chronic, excessive stress. Psychological approaches that involve questionnaires can be used to measure stress. Measuring physical variables entails taking readings of things like blood pressure and other physical constants. Assessments of different hormone levels, etc., are examples of physiological metrics. And activities like sports, music, dance, hobbies, etc., are ways to alleviate this stress. Seeking the assistance of trained counselors helps alleviate symptoms of excessive stress. However, in order to make headway, it is essential to address the issue of workplace stress. It seems like every day brings new concerns as technology advances, making life more difficult for humans in a wide variety of areas. Changes to the nature of work have been gradual and are continuing. The rise in the number of ailments, the decline in morals and human qualities, and the constant emergence of new difficulties have all contributed to the stress that many are calling the "illness of the century" in the workplace. The top three methods for managing stress at work were cutting down on overtime, sharing workloads with coworkers, taking time off to spend with loved ones, and outsourcing some tasks. Numerous research on this topic have found that professionals' levels of stress significantly effect their productivity. Therefore, professionals should be able to manage stress by displaying self-control and having good self-esteem; improving their organizational skills, learning to integrate work within specified project constraints, delegating authority, and breaking work into manageable parts; and engaging in continuous professional development.

III. PROPOSED METHODOLOGY

Research Design

Combining quantitative and qualitative techniques, the study used a mixed-methods research strategy. By using this approach, we were able to examine not only the statistical connections between exercise and stress, but also the subjective experiences and perspectives of the individuals.

Population and Sampling

Participants ranged in age from 21 to 60 and worked in a variety of fields, including corporate, healthcare, and education. We used a stratified random sampling procedure to make sure that different age groups, genders, and professions were represented. The goal of achieving statistical reliability was to have a sample size of 130 individuals.

Data Collection Methods

In order to gather data, validated instruments were utilized. To gauge participants' levels of stress, researchers used the Perceived Stress Scale (PSS). To learn more about their exercise habits, researchers used the Exercise Frequency Questionnaire (EFQ). To better understand the data and spot patterns, we also collected supplementary demographic information such as age, gender, occupation, and number of hours worked per week.

Data Analysis

In order to analyze the data, statistical programs like SPSS and R were employed. To make sense of the data, descriptive statistics like means and standard deviations were computed. The study's hypotheses and the associations between variables were tested using inferential statistical methods such t-tests and Pearson correlation.

IV. DATA ANALYSIS AND INTERPRETATION

Table 1: Descriptive Statistics of Participants (N = 130)

Variable	Categories	Frequency	Percentage (%)
Gender	Male	68	52.3
	Female	62	47.7
Age Group (Years)	21–30	34	26.2
	31–40	42	32.3
	41–50	30	23.1
	51–60	24	18.4
Occupation Sector	Corporate	51	39.2
	Healthcare	41	31.5
	Education	38	29.2

Participants' descriptive data (N = 130) shed light on the study's demographic make-up. With 52.3% men (n = 68) and 47.7% women (n = 62) taking part, the gender ratio was fairly balanced. The majority were in the 31-40 age bracket (32.3%), followed by the 21-30 age bracket (26.2%), the 41-50 age bracket (23.1%), and the 51-60 age bracket (18.4%). When asked about their occupation, the majority of participants (39.2%) were employed by corporations, followed by those in the healthcare industry (31.5%) and the education sector (29.2%). This study's results on exercise and stress are more broadly applicable because of the diversified sample across genders, ages, and occupational sectors.

Table 2: Descriptive Statistics – Stress and Exercise

Variable	Mean	SD	Min	Max
Perceived Stress Score (PSS)	18.6	4.92	7	30
Exercise Frequency (sessions/week)	3.2	1.8	0	7
Exercise Intensity (scale 1–5)	3.7	0.9	1	5

Key stress and exercise-related variables are summarized in the descriptive statistics. With a standard deviation of 4.92 and a mean of 18.6, the participants' Perceived Stress Scores (PSS) reveal a moderate average level of stress with some variability. Scores could be as low as 7 and as high as 30. The individuals' exercise habits varied widely, with 0–7 sessions reported on a weekly basis, with an average of 3.2 sessions (SD= 1.8). On a scale from 1 to 5, the average exercise intensity was 3.7 (standard deviation = 0.9), indicating that the majority of participants engaged in moderately vigorous physical activity. These numbers put the relationship between stress and physical activity into perspective.

Table 3: Pearson Correlation between Exercise and Stress Levels

Variables	r	p-value	Interpretation
Exercise Frequency & PSS Score	-0.612	0.000	Strong negative correlation (significant)
Exercise Intensity & PSS Score	-0.487	0.001	Moderate negative correlation (significant)

Using the felt Stress Scale (PSS) as a measure, the Pearson correlation table investigates the link between exercise-related factors and felt stress levels. The results demonstrate a robust inverse relationship ($r = -0.612$, $p = 0.000$) between the two variables, stress and exercise frequency, suggesting that stress levels considerably drop with increasing exercise frequency. In addition, the relationship between exercise intensity and PSS scores is moderately negative ($r = -0.487$, $p = 0.001$) and statistically significant. This provides more evidence that people who exercise vigorously report less stress. In sum, the results show that regular and vigorous exercise helps lower stress levels.

Table 4: Independent Samples t-test for Stress by Exercise Participation

Group	N	Mean PSS Score	SD	t-value	p-value	Remark
Regular Exercisers	74	16.2	3.8	4.79	0.000	Significant
Non-Regular Exercisers	56	21.5	5.2			

Individuals who exercise regularly and those who do not are compared in the Independent Samples t-test table with respect to their reported stress levels, as measured by the reported Stress Scale (PSS). The findings show that the two groups' stress levels are significantly different. The average PSS score was 21.5 (SD = 5.2) for those who exercise regularly (N = 74), compared to 16.2 (SD = 3.8) for those who exercise infrequently (N = 56). The t-test resulted in a t-value of 4.79 and a p-value of 0.000, which is significantly lower than the commonly accepted significance level of 0.05. This proves that there is a statistically significant difference in the two groups' stress levels. Consequently, it is reasonable to assume that those who exercise frequently report far lower levels of perceived stress than those who do not.

V. CONCLUSION

The results of this study show that working professionals who exercise regularly are better able to control their stress levels. Subjects with regular exercise regimens reported significantly reduced levels of perceived stress compared to those with less regular or nonexistent exercise programs. The results also showed that exercise's kind, duration, and frequency are major variables in determining stress levels. In addition, there was a mixed bag of effects for exercise behavior and stress perception after controlling for demographic factors including age, gender, and profession.

This research used a mixed-methods approach to find out how exercise makes people feel better and what drives them to exercise as a coping mechanism. It also measured the correlation between the two. Organizations should promote wellness programs to encourage physical activity among workers, since the findings highlight the significance of including regular exercise into everyday routines.

To sum up, exercise is a practical, easily available, and effective way to improve mental health and deal with stress at work. These findings should inform future workplace regulations and initiatives aimed at creating healthier workplaces and bettering professionals' quality of life in general.

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