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The level of perceived stress, burnout, self-efficacy, and coping strategies among physiotherapy academicians during the COVID-19 lockdown

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Abstract.
BACKGROUND: During the coronavirus 2019 (COVID-19) pandemic, academicians were juggling their personal and professional life amid lockdown while trying to deliver maximum knowledge through online classes. This chronic stress is emotionally draining and can eventually lead to burnout.
OBJECTIVE: To examine the levels of perceived stress and burnout and examine the effects of self-efficacy and coping in reducing stress and preventing burnout in academicians during the COVID-19 lockdown.
METHODS: This survey included 63 physiotherapy academicians from various physiotherapy colleges in India. Assessments used to collect data were the Perceived Stress Scale, Oldenburg Burnout Inventory, General Perceived Self-Efficacy Scale, and the Brief Resilient Coping Scale. The data was collected through Google Forms and sent through an online mode via various social media apps.
RESULTS: This study revealed that the majority of the physiotherapy academicians were experiencing moderate levels of stress eventually leading to burnout. Stress levels were higher in academicians with more than 10 years of experience. Also, self-efficacy and resilient coping were negatively correlated with perceived stress and burnout.
CONCLUSION: Academicians experienced increasing amounts of stress during the COVID-19 pandemic, which, if not addressed on time, can lead to job burnout.

Keywords: COVID-19, stress, burnout, mental health, pandemic

1. Introduction

The first case of coronavirus 2019 (COVID-19) was reported in December 2019 in Wuhan, Hubei Province, China, and was later officially declared a global pandemic in March 2020 [1]. By May 2020, COVID-19 spread to nearly 200 countries and various countries implemented a lockdown to control the spread of this viral disease. India reported its first case on January 30, 2020, following which the

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first lockdown was implemented on March 25, 2020 [1, 2]. The implementation of the lockdown affected the lives of all professionals around the globe in different aspects due to the change in the workplace setting. Many jobs shifted to remote working and telecommunication; education also turned to online, e-learning, and distance learning modes [3]. This e-learning era took a toll on academicians' social, mental, and psychological health as they had to cope with the ongoing demands and learn to quickly develop the skills to teach and train their pupils online [4]. Academicians in India were more vulnerable to stressors because they faced a wide range of issues that caused stress, from dealing with the basics like unpredictability of power outages and poor internet connectivity to other structural issues like curriculum, teaching methods, dealing with abusive parents, and salary cuts to students' notorious behaviour during online classes [4, 5]. Academicians juggled their personal and professional lives amid the lockdown while trying to deliver maximum knowledge through online classes. These factors can result in chronic stress, which is emotionally draining and can eventually lead to burnout, which is a measured primary outcome of stress [3, 4]. The European Agency for Safety and Health at Work reported that stress was most common in education and health-related professions (up to 28.5%) compared to other job sectors [6].

Burnout is a syndrome of emotional exhaustion and cynicism [7] and relates to a feeling of weariness, disinterest, and reduced performance [8]. Burnout reactions have been categorised into three domains: Emotional exhaustion (depletion of emotional reserves), depersonalization (increasing cynicism and pessimism towards others), and diminished personal accomplishment (a growing feeling of work-related dissatisfaction) [9]. Ultimately, this burnout may lead to dissatisfaction and absenteeism along with various psychological issues like anxiety and depression, physiological problems like headache, tachycardia, and hypertension, and behavioural issues like alcoholism, smoking, and sleep disorders [10]. All healthcare and helping professionals, such as teachers, are more prone to burnout [9, 10].

Self-efficacy refers to the speculation and judgement of whether an individual is capable of completing an action. Burnout is defined as "a crisis of self-efficacy" [10]. Self-efficacy influences an individual's thinking and acting behaviors. A person with low self-efficacy sees the world in a pessimistic way and cannot cope with society's demands. In contrast, those with higher self-efficacy are more optimistic and have better coping behaviours, thus recovering quickly from their setbacks [11]. In 1992, Chwalisz et al. found that teachers with low self-efficacy reported higher job burnout levels than teachers with high self-efficacy [12].

Coping is cognitive and behavioural efforts used to manage external or internal demands appraised as taxing or exceeding an individual's resources. A more popular approach to coping is resilient coping, which uses cognitive skills effectively, active problem-solving ability, and attributes that indicate a capacity to face a stressful situation. The distinguishing feature of resilient coping is promoting positive adaptation despite high stress [13].

In a systematic review, Watts and Robertson found that burnout is common in university teaching staff and is comparable to healthcare professionals. It was also revealed that younger employees experience more burnout [8]. In another study done in Pakistan, higher levels of work stress were reported among the teaching staff of a university. Work stress was also found to be negatively correlated with job satisfaction [14]. Another recent survey evaluated the increasing job stress among physiotherapy teachers during the COVID-19 pandemic, revealing that they experienced stress more often during the pandemic [4]. All the above studies shed light on the growing stress on university and physiotherapy teachers. Although many studies have been conducted to investigate the effects of self-efficacy and coping with stress and burnout, no studies on physiotherapy academicians in the COVID-19 era have been discovered. Therefore, this study examined the level of perceived stress in physiotherapy academicians during the COVID-19 lockdown and their self-efficacy and coping strategies to deal with the stress, which can eventually lead to burnout.

2. Materials and methods

2.1. Participants and procedure

Study participants included both male and female physiotherapy academicians from various physiotherapy colleges in India and clinical physiotherapists. Participants who did not sign the informed consent form were excluded. Data was collected during the lockdown. The survey was open to participants from May to September 2020. The study

used snowball sampling and included 63 participants (25 males and 38 females). A Google Form was created with informed consent and demographic details (age, sex, marital status, job sector, qualification, and experience in years). All four scales were added to different sections of the survey. Study participants were given a questionnaire to fill out through various social media platforms like WhatsApp and Facebook Messenger. All participants were asked to provide informed consent in the survey questionnaire. Descriptive statistics, i.e., mean and standard deviation (SD), were calculated for all four variables: Perceived stress, burnout, perceived self-efficacy, and resilient coping and inter-correlational analysis were done through Pearson's correlation test for all four variables. This study was not submitted to the Institutional Ethics Committee (IEC) due to the COVID-19 lockdown. However, the study was done in accordance with the guidelines of the Declaration of Helsinki (2013 revision) and national guidelines for biomedical and health research involving human participants (Indian Council of Medical Research of 2017).

2.2. Instruments used

2.2.1. Perceived Stress Scale (PSS)

The PSS is a classic stress assessment instrument. Questions on this scale ask about your thoughts and feelings in the last month. It rates the questions on a scale of 0–4 (where 0 denotes never and 4 denotes very often). The total score for ten questions is 40. It groups the individual's stress into low (0–13), moderate (14–26), and high (27–40). The scale has good reliability (alpha = 0.85) [15].

2.2.2. Oldenburg Burnout Inventory (OBI)

The OBI is a 16-item scale that measures burnout exhaustion and disengagement dimensions. The scoring was done on a scale of 1 (strongly agree) to 4 (strongly disagree). Its two subscales, "exhaustion" and "disengagement from work," have Cronbach's alphas of 0.87 and 0.81, respectively [16].

2.2.3. General Perceived Self-Efficacy Scale (GPSS)

The GPSS is a universally accepted scale to measure self-efficacy. It consists of 10 items that measure an individual's optimism, motivation level, and ability to deal with difficult situations. Responses are measured on a 1–4 scale where a score of 1 denotes low self-efficacy, and a score of 4 indicates higher self-efficacy. The internal consistency for the scale is $\alpha = 0.86$ [11].

2.2.4. Brief Resilient Coping Scale (BRCS)

The BRCS is a 4-item measure designed to analyse an individual's tendencies to cope with stress. The items on this scale assess active problem-solving and coping patterns. Everything is designed to assess a person's behaviour and actions on a scale of 1–5. The internal consistency of the scale is = 0.69 [13].

3. Results

The survey was sent 125 potential participants, out of which 63 filled-out surveys were received. Hence, the response rate was calculated to be 50.4%.

3.1. Details of the included physiotherapy academicians

The sample consisted of 25 males and 38 females. The participants in the age range of 20–30 were 28, 31–40 were 33, and 41–50 were 2. The maximum number of study participants out of 63 had the designation of assistant professors, i.e., 47, followed by 7 lecturer/demonstrators, 5 associate professors, and 4 professors. Most participants were working in the private sector, i.e., 44, whereas 10 were working in the government sector and 9 were working in a semi-private or government-aided organization. The majority of the participants had an experience of fewer than 5 years, i.e., 35, while participants with 5–10 years of experience were 16; those with 10–15 years of experience were 11. Only one participant had an experience spanning more than 15 years. Most participants were married (i.e., 41), while the rest (22) were unmarried (Table 1).

3.2. Stress levels of physiotherapy academicians

The results showed that 7.93% of the study participants reported high levels of stress, with PSS scores between 27 and 40, and that 61.90% had moderate levels of stress, with PSS scores between 14 and 26 and 30, and 16% experienced low levels of stress, with PSS scores between 0 and 13 (Fig. 1). The majority of the academicians experienced moderate stress levels irrespective of their experience in years, i.e., 22 out of 63 had an experience of fewer than 5 years, 9 had an experience of 5–10 years, and 7 had an experience of 10–15 years (Table 2). 26 of the participants

Table 1
Demographic characteristics of physiotherapy academicians

Demographic details	Percentage (*n*)
Age (years)	20–30 = 44.44%(28)
	31–40 = 52.38%(33)
	41–50 = 3.17%(02)
Gender	Males = 39.7%(25)
	Females = 60.3%(38)
Designation	Assistant professor = 75%(47)
	Associate professor = 8%(5)
	Professor = 6%(4)
	Lecturer/demonstrator = 11%(7)
Job sector	Private = 69.8%(44)
	Semi-private/govt. aided = 14.3%(9)
	Government = 15.9%(10)
Experience (years)	Less than 5 = 55.55%(35)
	5–10 = 25.4%(16)
	10–15 = 17.5%(11)
	More than 15 = 1.6%(1)
Marital status	Married = 65%(41)
	Unmarried = 35%(22)

Table 2
Stress level of physiotherapy academicians according to experience in years

Stress level	Experience in years			
	<5	5–10	10–15	>15
Low	31.42%(11)	31.25%(5)	27.27%(3)	
Moderate	63%(22)	56.25%(9)	64.63%(7)	1
High	5.71%(2)	12.5%(2)	9.09%(1)	

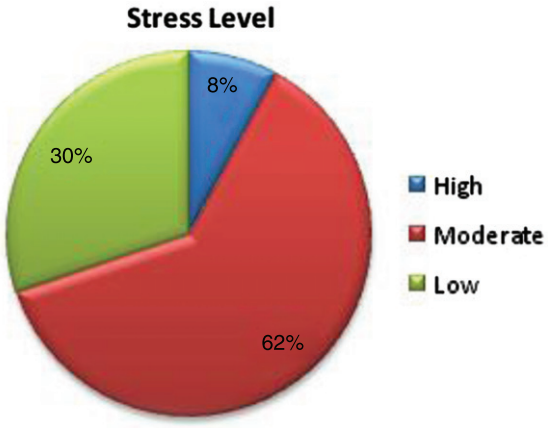

Fig. 1. Stress level among the participants.

Table 3
Stress level of physiotherapy academicians according to job sector

Stress level	Job sector		
	Private	Semi-private	Government
Low	29.5%(13)	22.22%(2)	40%(4)
Moderate	59.1%(26)	77.8%(7)	60%(6)
High	11.4%(5)		

working in the private sector had moderate levels of stress, while 13 of the academicians had low levels of stress. Only five had high levels of stress. In the semi-private sector, most academicians exhibit moderate stress levels, i.e., 7, whereas only 2 showed low stress levels. Academicians working in the government sector also showed majorly moderate stress levels, i.e., 6, while 4 showed low-stress levels. These statistics depict that academicians are exhibiting moderate levels of stress on the PSS scale, irrespective of job sector (Table 3).

Descriptive statistics, i.e., the mean and standard deviation (SD), were calculated for all variables. Perceived stress, burnout, perceived self-efficacy and resilient coping are shown in Table 4.

3.3. Correlation between burnout, perceived stress, self-efficacy, and resilient coping

The inter-correlational analysis through Pearson's correlation test was also conducted for all four variables, as shown in Table 4 and Fig. 2. The results showed that perceived stress had a moderately positive correlation with burnout (OBI scores) ($r = 0.501$) and a negligible negative correlation with self-efficacy ($r = –0.164$) and resilient coping ($r = –0.285$). Also, burnout had a negligible negative correlation with self-efficacy ($r = –0.278$) and resilient coping ($r = –0.201$). The correlation between self-efficacy and resilient coping was also moderately positive, with $r = 0.618$ (Fig. 2).

Table 4
Mean, standard deviations and correlations of the variables

Variables	Mean	SD	1	2	3	4
1. Perceived stress	16.73	5.46	$r = 1$	$r = 0.501^{**}$	$r = –0.164$	$r = –0.285^{*}$
2. Burnout	36.08	6.30		$r = 1$	$r = –0.278^{*}$	$r = –0.201$
3. Perceived self-efficacy	31.81	5.08			$r = 1$	$r = 0.618^{**}$
4. Resilient coping	15.59	2.99				$r = 1$

$^{**}p < 0.01$ $^{*}p < 0.05$.

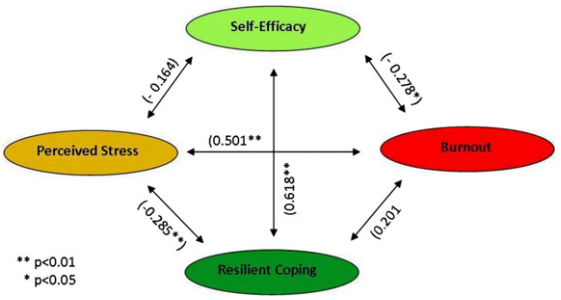

Fig. 2. Correlation among all variables.

4. Discussion

The present study aimed to investigate participants' stress levels, burnout, self-efficacy, and coping strategies among physiotherapy academicians during the COVID-19 lockdown. Results showed that most teachers were experiencing moderate stress, irrespective of their gender. Academicians with less than 5 years of experience experienced more stress than others with more years of experience. This is in line with the study by Jamaludin et al. [17] and could be due to a lack of work experience, poor coping strategies, or decreased self-efficacy. Also, some academicians with 10–15 years of experience experienced moderate stress levels, which could be due to low acknowledgment of their work, additional responsibilities that took up a lot of time, inadequate wages, or difficulty adapting to change. The findings of our study are in accordance with the results presented by Jain et al., who found that dental and physiotherapy teachers have higher stress scores than nursing and medical teachers [18]. Stress levels are moderate in all job sectors, whether in private, semi-private, or government institutions. Another study done by Chudiwal et al. discussed that physiotherapy teachers were moderately stressed during the COVID-19 pandemic [4]. The same results are also depicted in our study as, during the COVID-19 pandemic, stress increased to moderate levels in most physiotherapy academicians.

Burnout is a primary outcome of stress. It depicts an individual's inability to cope with job stress, eventually causing absenteeism and dissatisfaction, which will degrade their teaching capabilities. Numerous factors can cause burnout: Individual factors like financial instability, marital satisfaction, inflexibility, and poor stress management and organisational factors like lack of job security, lack of promotion policy, inflexible working hours, and role conflict between personal and work life are common causes of burnout [19].

Many studies have identified stress as the direct cause of job burnout among teachers [20–22]. In a study conducted by Babamiri et al., healthcare workers are at elevated risk of job burnout during COVID-19 [23]. A similar study of rehabilitation professionals in Vietnam concluded that these professionals are at a high risk of burnout [9]. Another study done by Teles et al. on Portuguese higher education institutions' teachers revealed that teachers with more experience are subjected to lower levels of stress. These contrasting results in our study could be due to different working environments and work cultures [24]. Due to the COVID-19 pandemic, academicians are teaching online, which leads to more work pressure, increased screen time, and a lack of adaptability to growing technological advances. When such work-related stress becomes too high, they will eventually lose interest in teaching and experience job burnout. This disinterest is aided by pay cuts and students' misbehaviour in the classes, which was prevalent during online classes due to COVID-19.

Through this study, we found that higher levels of stress can eventually lead to burnout among academicians, as stress and burnout are usually directly proportional to each other. The findings of this study are similar to the results obtained by Yu et al. [10]. This study found that self-efficacy is negatively correlated with burnout and stress. This proves that individuals with higher self-efficacy will manage stressful situations more comfortably than those with low self-efficacy. This finding is in accordance with previous studies by Glickman and Tamashiro, who found that academicians with low self-efficacy will experience a higher level of burnout and could leave their profession [25]. Yu et al. stated that self-efficacy mediates the effect of stress on job burnout [10]. Self-efficacy directly affects how academicians choose their teaching activities, manage their moods, and view their failures as stepping stones to success. In this study, we also examined correlations between burnout, perceived stress, self-efficacy, and resilient coping where several resulted in negligible correlations between the variables. This could be because this variable is affected by extreme values, which may exaggerate or dampen the strength of the relationship [26].

Self-efficacy can also assist people in determining the various coping options available to them. Chwalisz, in his hypothesised model, examined how individuals with higher levels of self-efficacy may

utilise problem-solving strategies to generate more coping strategies [12]. These individuals will view stressful situations as more controllable. In our study, there is a high correlation between burnout and stress, and on the contrary, there is a negative correlation between self-efficacy and burnout, which brings to our attention that individuals with higher self-efficacy are less likely to experience job burnout. Hence, physiotherapy academicians can use specific coping strategies such as relaxation, social activities, detachment from work such as frequent breaks to avoid stress, and promoting one's physical well-being by eating properly, resting, and staying engaged in physical exercises to prevent stress and burnout [27]. Through this study, we may assume that the COVID-19 pandemic might have induced moderate stress levels among physiotherapy academicians, which may further lead to burnout.

Although this study is the first to assess stress and burnout in physiotherapy academicians during COVID-19, there are limitations, such as a limited sample size only taken from one state in India. The results could have been more valid if a randomised sample had been included.

5. Conclusion

Physiotherapy academicians experienced an increasing amount of stress in the COVID-19 era, which, if not addressed, can lead to job burnout. It should be a priority for various institutions to generate self-efficacy and coping strategies for their physiotherapy academicians. Institutions should undertake regular workplace and employee assessments to identify the causes of stress and begin well-being programmes for their employees' mental and physical health.

Ethical approval

As the study was conducted during the COVID-19 lockdown, ethical approval could not be obtained.

Informed consent

All participants completed the informed consent section in the survey questionnaire.

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Conflict of interest

None to report.

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