THE JOURNAL OF CONCURRENT DISORDERS

CDS PRESS

Open Access Original Research

Stress, Coping and Job Satisfaction in UK Academics During the COVID-19 Pandemic

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Citation: Jimoh, O. F., Kirkman, A. Kotera, Y., Taylor, E. C. (2024). Stress, Coping and Job Satisfaction in UK Academics During the COVID-19 Pandemic. Journal of Concurrent Disorders, 6 (2), 80-102.

Founding Editor-in-Chief: Masood Zangeneh, Ph.D.

Editor: Maryam Mokhtari, Ph.D.

Received: 06/12/2023
Accepted: 09/11/2023
Published (Online First): 09/15/2023

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Abstract. *Objectives***.** The occurrence of work-related stress is high among UK academics. This is associated with increased risk of ill-health, reduced productivity, and lower job satisfaction. These might have been exacerbated by the coronavirus disease (COVID-19) pandemic. Social support and coping strategies have the potential to ameliorate the impact of stress but have been less explored in academics; these were explored in a cross-sectional study. *Methods*. Fifty academic staff were recruited via links posted on social media and through snowballing sample technique. The survey included key demographics such as age, gender, relationship status, educational attainment, known to have relationship with work-related stress. Other measures include perceived stress, social support, coping strategies and job satisfaction. *Results*. Moderate stress was found in UK academics. Greater impact of COVID-19 and greater use of avoidance coping were significant predictors of higher stress. *Conclusion***.** Encouraging the use of adaptive coping strategies such as problem solving, through staff training could help to reduce stress. Future longitudinal research should examine stress and coping in academics, establishing causation, while accounting for confounders such as contract type, teaching hours, and class sizes. Stress-management interventions should account for pandemic-related stressors including high workload and isolation, as academics continue to engage in hybrid/remote working. *Implication*. It is important that universities put in place support systems to reduce the level of stress in academics. This could be through training and education in the use of adaptive coping strategies, such as planning and problem solving as well as support from co-workers and management; which are associated with positive psychological wellbeing.

Keywords: Work, Stress, Job Satisfaction, COVID-19.

Introduction

Work-related stress is a psychosocial risk with adverse health outcomes (Kortum et al., 2010), and is defined as "the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope" (World Health Organisation, 2020). In a systematic review which examined the cost of work-related stress in over eight countries (including Australia, Canada, Denmark, France, Sweden, Switzerland, United States and the United Kingdom), the estimate was between US$221.13 million to $187 billion (Hassard et al., 2018). The breakdown of the cost reported that productivity related losses were between 70 to 90%, while health care and medical costs accounted for the remaining 10 to 30% (Hassard et al., 2018). In the UK, work-related stress in addition to anxiety and depression was responsible for 50% of ill-health at work (Health and Safety Executive, 2021); it was most prevalent in education as well as Human health and social work activities (Health and Safety Executive, 2021). Those who teach in higher educational institutions experience higher work-related stress and the risks of developing mental health problems are higher compared to other working populations (Guthrie et al., 2017). Furthermore, the number of higher education staff accessing occupational health services due to poor mental health has increased (Morrish, 2019). In the UK, 63% of academics considered leaving their current jobs and a high 72% described themselves as stressed (Education Support, 2019).

Academic Work-Related Stress

According to research, university academic staff reported high levels of stress, that exceeded that of other professional groups and the general population (Kinman & Johnson, 2019; Tytherleigh et al., 2007). Key academic stressors identified in the literature include reductions in funding, heavy workload, sourcing for funding, working hours, poor work-life balance, increase in student: staff ratio, role ambiguity, striving for publications, lack of organisational support and career progression (Abouserie, 1996; Kinman & Jones, 2008; Gail Kinman & Wray, 2013a; Siakwa, 2014). Research shows that 75% of academics "agreed or strongly agreed" that they found their job stressful (Kinman & Wray, 2013b). Furthermore, British academics reported to be the least satisfied and most likely to regret their career choice when compared with their European counterparts (Bentley et al., 2013). A recent report found that between 2009 and 2015 there was a 77% increase in counselling referral and 64% increase in occupation health referrals respectively among within UK university staff (Morrish, 2019), which reflects increasing poor mental health.

The impact of work-related stress for academic staff includes disrupted sleep, depression burnout and cognitive impairment, these symptoms were reported by 55% of UK academics in a recent survey of 6,439 (Grove, 2018). The findings were echoed by Gorczynski et al.,

(2017) that found symptoms of mild mental disorder in 43% of UK academic staff, nearly twice the prevalence of mental disorder in the general population. Similarly, negative emotions expressed through excessive crying and fear of going to work was also reported (Mark & Smith, 2018). Research indicates that there is a robust relationship between work related stress and wellbeing (Kotera et al., 2020). At a university level the impact of the work-related stress may affect the quality of teaching, research and increase absenteeism (Mark & Smith, 2018).

COVID-19 and Academic stress

The recent COVID-19 pandemic has negatively impacted some individual's mental health (McPherson et al., 2021) and reports have found an increase in stress, depression, and anxiety in the UK population (Jia et al., 2020; Zavlis et al., 2021). However, little research has considered the effect of the pandemic on stress in UK academics. For example, university staff had to quickly adapt and transition courses from face-to-face teaching to online platforms, which sometimes required further training (Sahu, 2020). These COVID-19 related changes were reported to negatively impact mental health among academic staff (Kinman & Wray, 2020; Sahu, 2020). A large UK study (n=2,821) involving three universities found higher risk of work overload and work life conflict in academics staff when compared with their non-academic counterparts (Kinman & Johnson, 2019). Furthermore, researchers (Shen & Slater, 2021) in a university in Northern Ireland (UK) found 87 academic staff reported moderate stress levels but had poor emotional wellbeing.

Stress, coping and social support

Chang and Taylor (2014) suggest that the effects of stress are governed not only by the level of pressure experienced, but also by the resources available/coping strategies to deal with it. Coping strategies is conceived as multidimensional and could exert positive (adaptive) or negative (maladaptive) to different situations (Chang & Taylor, 2014). Adaptive coping is associated with positive psychological wellbeing, while maladaptive coping can lead to increased psychological distress, anxiety, depression and burnout (Du Plessis & Martins, 2019; Kersh, 2018).

Maladaptive coping in recent research has been reported with academic staff, such as smoking, drug use, overeating and drinking (Kabito et al., 2020; Shen & Slater, 2021). Furthermore, academics often reported working evenings and weekends to meet with the demands of academic job, as it was difficult to complete work schedule within the usual working hours (Darabi et al., 2017a). Working long hours has been identified as a stressor (Kinman, 1998). Other academics guarded their time by working on certain days of the week, but for some, it resulted in feelings of guilt (Delello et al., 2015). Avoidance coping was another maladaptive strategy that academic staff reported, which can lead to increased stress, anxiety, depression and

burnout (Du Plessis & Martins, 2019; Karekla & Panayiotou, 2011; Mark & Smith, 2012).

Adaptive coping is also reflected within the literature and support and social support from co-workers and management, recognition and achievement, high morale and flexible working conditions helped some academics cope with stress(Gillespie et al., 2001). Time management and support from work colleagues were identified as positive coping strategies in two separate UK studies (Darabi et al., 2017b; Kinman & Wray, 2013a). Academics who reported support from work colleagues felt they understood their problems and as such were also able to provide appropriate support (Darabi et al., 2017b). However, in a UK qualitative study, while most academics acknowledged the importance of social support from colleagues and family members, it was also reported that for some it had a negative impact on their wellbeing if the communication was not positive (Mark & Smith, 2018).

Job satisfaction and stress

Different factors may determine the extent to which academic staff experience work related stress and job satisfaction, such as, marital status, job security, and position held (Meng & Wang, 2018; Ornek & Esin, 2020). Lower levels of job satisfaction have been associated with higher levels workplace stress (Lawal & Idemudia, 2017; Tao et al., 2018). Darabi et al., (2017a) explored UK academics job satisfaction and reported increased job dissatisfaction due to limited interaction with students, increasing administrative work, difficulties with obtaining research funds and insecure job. However, married academics reported increased job satisfaction and better work-life balance (Delello et al., 2015). Furthermore, academics precarious contracts have been associated with reduced job satisfaction and psychological stress (Tao et al., 2018). A survey carried out by the University and College Union (UCU), the largest union for academic and academic-related staff in the UK (University and College Union, 2019), showed that 71% of university staff have had their mental health impacted by working on an insecure contract, while 43% said that they believed that it had affected their physical health. The position held by the academic staff has been reported to have an impact on wellbeing, as junior academics reported higher stressed than their senior colleagues (Meng & Wang, 2018). While stress is widespread in academics, the sources of stress and levels varied widely.

Research regarding the wellbeing of university staff is limited, as most studies have focused on students and healthcare professionals (Çelmeçe & Menekay, 2020; Denovan et al., 2019). Many factors outlined may influence academic staff stress, therefore, the aim of the study was to investigate the association between social support, coping, job satisfaction and stress in UK academics during COVID-19 pandemic.

METHOD

Ethical approval

Ethical approval was received through the University Ethics Committee (ETH 2021-1329). Consent was obtained before participants took part in the research.

Design and procedure

Using a cross-sectional design, UK academic university staff were recruited to investigate associations between social support, coping strategies, job satisfaction (independent variables) and perceived stress (outcome variable) during the COVID-19 lockdown. Recruited through online links via social media, institutional research recruitment adverts and snowballing; from January to April 2021. The survey was hosted on Qualtrics, and completion of survey took approximately 20 minutes.

Measures

The survey included key demographics (age, gender, relationship status, educational attainment) shown to have a relationship with work-related stress by previous studies and employment details (contract type and educational status) (Morrish, 2019; Ornek & Esin, 2020). An additional question was added to assess how COVID-19 pandemic affected the work life of academics. "On a scale of 0-10, how adversely has the COVID-19 pandemic affected your work life".

Perceived Stress

The Perceived Stress Scale (PSS) (Cohen et al., 1983) was used to assess the academic's stress. The PSS measures the extent to which individuals appraise situations in their lives as uncontrollable, unpredictable, and overburdened (Cohen et al., 1983). The shortened version (PSS-10) was used (Cronbach's α between .74 and .91(Chaaya et al., 2010; Cohen & Janicki-Deverts, 2012). The scale has two factor structure (Barbosa-Leiker et al., 2013; Cohen & Williamson, 1988), six negatively worded items (Items 1,2, 3, 6, 9, 10), and four positively worded items (Items 4, 5, 7, 8). Response is rated on a 5-point Likert scale (0= never to 4=very often). The four positively stated items are reversed scored and summed up across all scale items. The score ranges from 0-40, higher scores indicate higher stress; three categories: 0-13 = low stress; 14-26 = moderate stress; and 27-40 = high stress.

Job satisfaction

Job satisfaction was assessed using the Generic Job Satisfaction Scale (Macdonald & Maclntyre, 1997), a reliable and valid measure of job satisfaction across a wide range of occupation (Cronbach's Alpha reliability of .77). The 10 statements related to satisfaction at work. Scored on five-point Likert scale (1= strongly disagree to 5=strongly agree). Higher scores indicated higher job satisfaction (Interpretation: 42-50 = very high; 39-

41=high; 32-38 = average; 27-3l = low; and 10-26 = very low). The scale was modified with the addition of two COVID-19 related questions to reflect work-related issues at the time. “I have felt supported over the COVID-19 pandemic by my workplace” and “I feel my workplace has put in appropriate measures to support staff in response to the COVID-19 pandemic”. This was to reflect some work-related issues during the pandemic. Cronbach’s alpha in this study was 0. 82, with the addition of COVID-19 related items, it was .85.

Social support

Social support in academics was measured using the Social Support Questionnaire - Short Form (SSQ6), assessing the availability and overall satisfaction of a person’s social support (Sarason et al., 1987). The SSQ-6 is a brief 6-item questionnaire (Sarason et al., 1987). The scale displays a highly satisfactory internal consistency (a= 0.97 for Number and a= 0.94 for Satisfaction). Each item in the questionnaire requires a two-part answer. Firstly, participants list all the people available to provide support in each situation described (maximum of nine persons). Based on this the participants generate a Social Support Questionnaire-6 Number Score (SSQN). This was then coded as ‘work-related’ or ‘non-work related’. Secondly, the participants rate on a 6-point scale the overall level of satisfaction with the support given. It is scored on a Likert scale (1=very dissatisfied to 6=very satisfied) and used to generate the Social Support Questionnaire-6 Satisfaction Score (SSQS).

Measurement of Coping

Brief COPE (Carver, 1997), a multidimensional 28-item self-reported questionnaire that measures effective and ineffective ways of coping with stressful life events was used to measure coping. It has 14 subscales: active coping, planning, positive reframing, acceptance, humour, religion, using emotional support, using instrumental support, self-distraction, denial, venting, substance use, behavioural disengagement, and self-blame (Carver, 1997). Scored on a four-option Likert-type response format from “I haven't been doing this at all” (score of 1) to “I've been doing this a lot” (score of 4). The result is expressed as a profile, not an overall score and there is no reversal of coding. The four-factorial structure of Brief COPE displayed the most adequate psychometric properties, consisting of problem focused coping, avoidant coping, socially supported coping and emotion focused coping, with Cronbach’s alpha value ranging between 0.51 and 0.78 (Bose et al., 2015).

Participants

Academic staff in the UK in teaching or research roles or both, were invited to take part in the study. Academics had to be at least 18 years, currently employed at a UK university on a part-time of full-term basis, their contract could be permanent or fixed. Those not directly employed by

the university i.e., agency staff were excluded. 54 participants responded to the online survey; ineligible responses (n=4) were removed leaving a sample of 50 responses. No payment or incentive were offered for participation.

RESULTS

Descriptive statistics indicated that participants included 34 (68%) females, most of whom were married or living with a partner (76%, n=38). Participants' mean age was 43.2 ± 10.6 years, ranged between 36 to 45 years, with 14% above 55 years. Most participants were educated to doctoral level (62%, n=31). An equal number of participants had permanent and fixed-term contracts, with over three-quarter reporting contract lengths of more than 20 months (Table 1). In the sociodemographic question examining COVID-19 impact participants most reported changes in work patterns (64%), increased workload (27%), uncertainties about job contract/income (23%) and social isolation (23%). However, positives were reported (18%) and included productive working (through quiet environment and lack of commuting).

T*able 1: Demographics of study participants*

Demographic Variable	*n*	*%*
Age (years)		
Up to 25	1	2
26-35	12	24
36-45	17	34
46-55	13	26
56 and above	7	14
Gender		
Female	34	68
Male	16	32
Relationship status		

Married	31	62
Widowed	2	4
Divorced/separated.	2	4
Never married.	8	16
Living with partner	7	14
Highest Educational level		
Bachelor	10	20
Masters	9	18
Doctorate	31	62
Contract type		
Fixed term	25	50
Permanent term	25	50
Contract length		
Less than 12 months	8	16
More than 12 months	42	84

The mean total score of perceived stress amongst academics was 17.4 ±6.64, indicating "moderate" levels of stress, with 8% reporting high stress. Total mean score of job satisfaction was 32.25 ± 6.6, indicating "average" job satisfaction. Within the job satisfaction questionnaire, the questions examining impact of COVID-19 also showed moderate effect on academics [5.9 ± 2.71, on a scale of 0-10] (Table 2). Academics reported the use of a variety of coping strategies. Of the Coping Inventory components, Emotion-focused coping was the most reported by academics (17.82 ± 4.38), followed by socially-supported coping (11.32 ± 3.91), and problem-focused coping (10.34 ± 3.0). Avoidance coping was least reported the least (8.17 ± 2.86) (Table 2, Appendix B). Responses from the SSQ6 indicated social support was provided by family (52%), non-family (40%, managers/colleagues) and others (8% God/themselves).

Table 2: Means (M), Standard Deviations (SD), 95% Confidence Intervals (CI), Skewness and Kurtosis with Standard Errors (SE), Z-scores and Normality Tests for Perceived Stress (PSS), Job Satisfaction (JSS), Social Support (SSQ, SSN) and Coping Strategies.

Variable	M (SD)	95% CI lower	95% CI Upper	Skewness (SE)	Z-score Skewness	Kurtosis (SE)	Z-score Kurtosis	K-S Test (Sig.)	S-W Test (Sig.)	N
Stress	17.36 (6.64)	15.47	19.25	-.058 (.34)	-.17	-.97 (.66)	-1.47	.12 (.08)	.97 (.14)	50
Job Satisfaction	33.25 (7.30)	31.18	35.33	.076 (.34)	.23	-.57 (.66)	-.86	.10 (.20)	.98 (.47)	50
COVID impact	5.92 (2.71)	5.15	6.69	-.58 (.34)	-1.71	-.14 (.66)	-.212	.14 (.02)	.94 (.01)*	50
Social support	2.65 (1.42)	2.24	3.05	1.39 (.34)	4.09	2.44 (.66)	3.70	.17 (<.001)	.89 (<.001)*	50
Social support quality	3.85 (1.04)	3.55	4.14	-.84 (.34)	-2.47	.19 (.66)	.29	.18 (<.001)	.91 (<.001)*	50

Problem-focused coping	10.34 (3.0)	9.50	11.20	-.34 (.34)	-1.00	-.62 (.66)	.94	.13 (.04)	.97 (.18)	50
Emotion-focused coping	17.82 (4.38)	16.57	19.06	.48 (.34)	1.41	-.39 (.66)	-.59	.11 (.12)	.96 (.11)	50
Avoidance coping	8.17 (2.86)	7.36	8.99	1.72 (.34)	5.06	2.36 (.66)	3.58	.24 (<.000)	.76 (<.001)*	50
Socially supported coping	11.32 (3.91)	10.21	12.43	.56 (.34)	1.65	-.21 (.66)	-.32	.18 (<.001)	.91 (<.001)*	50

Note: *Variables with significant S-W test ($p<0.5$)

Prior to conducting hierarchical multiple regressions, data were checked for assumptions (See Table 2). Z-scores of skewness and kurtosis were within the range of -3.29 and +3.29 were considered normal for medium samples [$50 < n < 300$] (Kim, 2013) for the majority of variables except Social support Number Score and Avoidance coping strategy. However, transformation of the data did not in any way affect the scores. The relevant assumptions of a multiple regression analysis were tested: The data showed no multicollinearity (VIF < 10), no significant autocorrelation (Durbin-Watson test was 1.72), supporting the assumption of independent errors. The pattern in the normal P-P plot of regression standardized residual showed a linear pattern, supporting the assumption of normal distribution of residuals. Homoscedasticity was checked by plotting the standardized residuals (*ZRESID) against the standardized predicted values (*ZPRED). The random pattern obtained for the scatterplot further confirmed that the assumption of homoscedasticity. With all the assumptions for multiple

regression analysis met, the data was analysed using a hierarchical multiple regression analysis with the 'Enter' method.

A correlation matrix of the key variables can be found in Table 3. Stress was significantly positively correlated with avoidance coping (r(50) = 463, p= .001), socially supported coping (r(50) =.294, p= .038) and COVID-19 worries (r(50) = .357, p=.011). Demographic variables (relationship status, contract length or length and educational level), were not associated with perceived stress and are not shown. Interestingly, job satisfaction scores were significantly correlated with problem focussed (r(50)=.294, p= .038), emotion focussed (r(50)=.502, p= .001) and socially supported-coping strategies (r(50)=.458, p= .001).

Table 3: Spearman correlation coefficients across key variables (job satisfaction, social support, coping strategies and perceived stress).

Variables	PSS	JSS	JSS COVID-19	COVID-19 impact	Coping – problem focused	Coping emotion focused	Coping – avoidance	Coping – socially supported	Number of social supports	Quality of social support
PSS	1	.064	.039	.357	.238	.155	.463	.294	-.008	-.092
		(.660)	(.790)	(.011)*	(.096)	(.281)	(.001)**	(.038)*	(.955)	(.527)
JSS	.064	1	.970	.159	.294	.502	.184	.458	-.074	449
	(.660)		(<.001)**	(.271)	(.038)*	(.001)**	(.200)	(.001)**	(609)	(.001)
JSS COVID-19	.039	.970	1	.067	.245	.499	.210	.447	-.133	.440
	(.790)	(.001)**		(.642)	(.086)	(.001)**	(.143)	(.001)**	(.356)	(.001)**
COVID-19 impact	.357	.159	.067	1	.115	.182	.175	.285	-.137	.061
	(.011)*	(.271)	(.642)		(.426)	(.205)	(.225)	(.045)*	(.344)	(.673)

Coping – problem focused	.238 (.096)	.294 (.038)*	.245 (.086)	.115 (.426)	1	.638 (.001)**	.396 (.004)*	.504 (.001)**	.204 (.156)	.245 (.086)
Coping – emotion focused	.155 (.281)	.502 (.001)**	.499 (.001)**	.182 (.205)	.638 (.001)**	1	.412 (.003)*	.495 (.001)**	.059 (.685)	.298 (.036)*
Coping – avoidant	.463 (.001)**	.184 (.200)	.210 (.143)	.175 (.225)	.396 (.004)*	.412 (.003)*	1	.448 (.001)**	.074 (.608)	-.033 (.822)
Coping – socially supported	.294 (.038)*	.458 (.001)**	.447 (.001)**	.285 (.045)*	.504 (.001)**	.495 (.001)**	.448 (.001)**	1	.172 (.233)	.359 (.010)*
Number of social supports	-.008 (.995)	-.074 (.609)	-.133 (.356)	-.137 (.344)	.204 (.156)	.059 (.685)	.074 (.608)	.172 (.233)	1	-.013 (.927)
Quality of social support	-092 (.527)	.449 (.001)**	.440 (.001)**	-.061 (.693)	.245 (.086)	.298 (.036)*	-.033 (.822)	.359 (.010)*	-.013 (.927)	1

*Note: * ($p<0.5$). **($p<0.001$).*

Based on these significant correlations, COVID-19 impact, socially supported and avoidance coping strategies, were entered into a hierarchical multiple regression analysis examining the predictors of stress. The order of variables was theoretically driven. At stage 1, COVID-19 impact was entered. Coping strategies –socially supported and avoidance coping strategies were entered at stage two as these were substantive variables

expected to explain a greater proportion of the variance over and above COVID-19 impact.

In step 1 COVID impact significantly accounted for 13% of the variance in stress, R^2 =.128, F(1,48)= 7.03, p= .01. In step 2, adding avoidance coping and social supported coping significantly accounted for an additional 19% of the variance: ΔR^2 =.19, F(3,46)= 6.40 p= .001. When all three variables were added to the model, socially supported coping was not significant (p= 0.80). However greater avoidance coping and COVID impact were significant predictors of higher stress. One unit increase in avoidance score was significantly associated with a .93 unit increase in stress (p= .01). Similarly, a one unit increase in COVID impact was significantly associated with an .68 unit increase in stress (p= .04).

Overall, the whole model significantly explained 29% of the variance in stress in academics R^2 = .29, Adjusted R^2 = .29, F(3, 46) = 6.40 p=.001. See Table 4.

Table 4: Hierarchical Multiple Regression Predicting Perceived Stress from COVID impact and avoidance coping and socially supported coping.

	B	*SE B*	β
Step 1			
Constant	12.18		
COVID-19 impact	.87*	.36	.36
Step 2			
Constant	5.08		
COVID-19 impact	.68*	.32	.28
Avoidance coping	.93*	.32	.40
Socially supported coping	.06	.24	.26

Note. Note: N=50; Step 1 R^2 = .13, Step 2 R^2 = .29, ΔR^2 for block 2 = .19 (p=.001); *B,* unstandardized regression coefficient; SE B, standardised error for coefficients; β, standardized coefficient; *$p < .05$.

DISCUSSION

This study investigated the association between social support, coping, job satisfaction and stress in UK academics during COVID-19 pandemic. Greater impact of COVID-19 and greater use of avoidance coping were significant predictors of higher stress. Moderate stress was reported by academics in this study, which is consistent with results in Northern Ireland during COVID-19 outbreak (Shen & Slater, 2021).

Impact of COVID-19 was a significant predictor of stress. This study was conducted during the COVID-19 pandemic (January to April 2021). Participants most commonly reported changes in work patterns including greater workload and transition to online teaching. This has been similarly reported in previous studies which have highlighted COVID-19 - related changes as additional burden in an already high-risk population for poor mental health (Kinman & Wray, 2020; Kotera, Ozaki, et al., 2022; Sahu, 2020) A cross-sectional study involving 41 countries, identified social isolation, difficulty of combining work with family and adjustment of schedules as challenges in academics (Leal Filho et al., 2021). It is imperative that universities put in place appropriate support systems to reduce the levels of stress in these professionals.

Avoidance coping was also a key predictor of stress in the current study. Previous literature has also indicated an association between avoidance coping and increased psychological and occupational stress, which can lead to anxiety, depression and burnout (Du Plessis & Martins, 2019; Karekla & Panayiotou, 2011; Mark & Smith, 2012). Avoiding or ignoring the sources of stress may help individuals cope initially but not managing the underlying problem becomes detrimental over time (Du Plessis & Martins, 2019). On the other hand, using more helpful coping such as problem solving, is associated with physiological and psychological health and well-being (Darabi et al., 2017b; Kersh, 2018). It may be that academic staff are supported to use more helpful coping strategies through training and educated, but that also support systems are in place to enable the use of helpful strategies such as instrumental coping.

Although correlations indicated that socially supported coping was significantly correlated with stress, it was not significant in the regression analysis. This coping method includes venting of negative feelings as well as receiving help and support from others (Carver, 1997). Social support has been reported to be helpful in academics, especially when provided by empathetic colleagues (Han et al., 2020; Nurendra, 2018). However, there is a growing literature indicating social support can be unhelpful (Gray et al., 2020; Hughes et al., 2022). For example, when social support is critical, conflicting and undependable this can lead to negative personal and social self-esteem (Gray et al., 2020). The lack of statistical significance between social support and stress may reflect the small sample in the study and lack of statistical power. Social support measured by the SSQ6 was also not significantly related to stress but indicated that the majority of participants

were fairly satisfied with their social support, with the majority of supporters reported as family and friends. Familial support may not be effective in buffering the work-related stress (LaRocco et al., 1980), highlighting the unique nature of work stressors in academics.

Academics in the current study used a variety of coping strategies as previously reported (Chang & Taylor, 2014; Du Plessis & Martins, 2019). Emotion focused coping (self-blame and venting) was most commonly reported in the sample. Emotion focused coping is adaptive when individuals have little control over the source of stress (Folkman & Lazarus, 1985) and may reflect the loss of autonomy and control reported in academics over the pandemic (Charoensukmongkol & Phungsoonthorn, 2020; Kinman & Johnson, 2019; Wood et al., 2022) While avoidance coping was least reported, as outlined above when employed, it was associated with higher stress. Of the sub-categories of avoidance coping, denial, substance use and behavioural disengagements were significantly correlated with stress in the current study. Similarly, unhelpful coping strategies such as smoking and drinking have been previously reported in academics (Chang & Taylor, 2014; Kabito et al., 2020; Shen & Slater, 2021). As perceived stress is widespread in academics, it is important that academics are supported to choose adaptive over maladaptive coping strategies to alleviate stress. Furthermore, as stress is multi-dimensional and may need more than a single coping strategy to effectively modulate its effect. Engaging academic staff in career discussions, building social support with supportive colleagues and job craft training, involving guiding employees to proactively modify their work environment, may also be beneficial to managing work-related stress (Kotera, 2018; Naidoo-Chetty & Plessis, 2021).

Job satisfaction was not significantly associated with stress. Participants reported moderate job satisfaction. There was no statistically significant association between job satisfaction and demographic variables (i.e. age, gender, relationship status, education or tenure type), although previous research has indicated that temporary contracts are associated with reduced job satisfaction and poor psychological wellbeing (Ravalier et al., 2018). However, job satisfaction was significantly associated with problem-focused, emotion-focused and socially supported coping, but not significantly associated with avoidance strategies. There is a debate in the literature about the nature of the relationship between stress and job satisfaction. Work-related stress at low levels is seen as vital to job satisfaction; functioning as a motivator that results in creativity and satisfaction by reducing boredom (Halkos & Bousinakis, 2010; Kotera et al., 2018). However high levels of stress and distress have also been associated with reduced job satisfaction (Mark & Smith, 2012; Singh et al., 2020). Future research could further explore this in academics, examining whether coping moderates the relationship between stress and job satisfaction.

Socio-demographic factors (age, education, gender) examined in the current study were not significantly associated with stress. Previous research on the association of gender with stress in academics has been conflicting. While some studies reported no difference (Abouserie, 1996; Noor & Ismail, 2016), some found significantly higher level of stress in women (Kinman & Wray, 2013b; Slišković & Maslić Seršić, 2011; Van Der Feltz-Cornelis et al., 2020) which may be reflective of disparities in competing interests, tenure and promotion opportunities (Malisch et al., 2020).

A limitation of the present study is its small sample size, which limits generalisability of the findings. The lack of power resulting from a small sample size could also explain non-significant results related to sociodemographic factors (e.g. gender, tenure status; Cotterill et al., 2021). Cross-sectional research does not indicate causation. Future longitudinal research with a larger sample size should be conducted. Additionally, confounding variables such as number of teaching hours, and student-lecturer ratio could be accounted for. Despite limitations, this study adds to the growing understanding of perceived stress in academics during the UK COVID-19 lockdown. With continued remote/hybrid working going forward (Kotera, et al., 2022), it is important to focus on reported stress and coping, to ensure academics are working effectively and positively (Shen & Slater, 2021).

CONCLUSION

In conclusion, this study explored the association between social support, coping strategies, and stress in UK academics during the COVID-19 pandemic. Academics experienced moderate stress. There were no significant differences in stress between permanent and fixed-term staff. The strongest predictors of stress were COVID-19 impact and avoidance coping strategy. Encouraging the use of adaptive coping strategies such as planning, through staff training could help to reduce stress. Future longitudinal research should examine stress and coping in academics, establishing causation, while accounting for confounders such as contract type, teaching hours, and class sizes. Stress-management interventions should account for pandemic-related stressors including high workload and isolation, as academics continue to engage in hybrid/remote working.

IMPLICATION

Adaptive coping strategies are associated with positive psychological wellbeing. It is important that universities put in place support systems to reduce the level of stress in academics. This could be through the training on how to use problem solving or other adaptive coping strategies in the management of stress.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors

Availability of data and material

Conflict of Interest
The authors declare no conflict of interests.

Author's contributions

Informed Consent

Ethics Approval

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