

# Perceived Stress, Well-Being, Institutional Stress Management Systems and Work Performance of Women Lecturers: Conditional Process Analysis

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## Abstract

The objective of this research was to perform a conditional process analysis to understand the impact of perceived stress on work performance, the mediating role of well-being in the stress-work performance relationship, and the moderating function of institutional stress management systems in the interplay between stress, well-being, and work performance among female lecturers holding managerial roles in twelve chosen higher education establishments in Ghana. A quantitative methodology, utilising a descriptive survey design, was adopted for this investigation. The study involved 270 participants, and the institutions were selected using a purposive sampling method. It was discovered that well-being plays a crucial role in mediating the relationship between stress and work performance, and that institutional stress management systems significantly moderate the relationships between stress and well-being, well-being and work performance, and stress and work performance among the women. The study concluded that the introduction of effective stress management systems could alleviate the harmful impacts of stress on well-being and work performance. It was, therefore, recommended that management of higher educational institutions in Ghana should ensure that their institutions have formal stress management policies or support systems for staff in their institution which should be accessible to staff.

**Keywords:** perceived stress levels, well-being, instructional stress management systems, work performance, conditional process.

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## 1.0 Introduction

The escalating issue of stress in the professional environment is of significant concern, especially for employed women. The repercussions of elevated stress levels can manifest in physical, psychological, and behavioural forms within an individual. Female workers often report enduring, non-lethal health issues that can be debilitating over time. The most severe implications of stress pertain to performance. In this paper, the researchers delved into empirical research on stress, its influence on well-being, its effect on performance, and the institutional mechanisms in place to manage stress and mitigate its adverse impact on performance.

## 2.0 Literature Review

### 2.1 Mediating Effect of Well-being on Stress and Work Performance

Occupational stress is a phenomenon that has affected every working individual in various organisations, corporations, or institutions, either positively or negatively. A review of literature on occupational stress, well-being, work performance, and institutional stress management systems revealed that regardless of whether the organisation is public or private, there is no consensus among researchers regarding the performance indicators. Scholars from diverse disciplines have employed varying parameters to gauge the influence of stress on work performance. The primary conclusion drawn from most of the research articles and journals reviewed is that there is a negative correlation between work stress and work performance.

Individuals' perception and tolerance of stress differ significantly, with some thriving under pressure and

others struggling with the "eleventh-hour syndrome" (Krishnan, 2014). Krishnan (2014) further elaborates on the substantial toll excessive stress can take on individuals, organisations, and society as a whole. A considerable number of employees may experience anxiety disorders or illnesses related to stress. In terms of productivity, it's projected that each employee affected by stress, anxiety, or depression forfeits approximately 16 workdays annually. For the purpose of this analysis, stress will be viewed solely as a detrimental factor and will be examined within the confines of the workplace environment.

The concept of well-being, denoted by various terms in psychological studies, significantly influences health outcomes. It encompasses more positive emotions and fewer negative ones. However, the dimensions of this concept vary according to a multitude of theories and viewpoints. Despite efforts by universities and other institutions to enhance staff well-being and positivity, knowledge on how to achieve this remains scarce (Alharbi & Smith, 2018). The pervasive notion that "work is dreadful" is widespread. Ahmed's (2022) report on the State of the Global Workplace, published on Wednesday, 15th June 2022, revealed heightened stress levels among employees. The study revealed that a significant 60% of employees experienced a sense of "emotional detachment" in their workplace, with a further 19% regularly suffering from "misery." These statistics exceeded those recorded in 2020, a year that set a new high in the proportion of workers expressing daily stress. The analysis underscored the disturbingly low levels of global employee engagement and well-being, which are obstructing considerable opportunities for growth. A scant 9% of the global workforce can be described as "thriving and engaged", while the bulk (57%) are "unengaged and not thriving". This has precipitated a notable worldwide decline in the general well-being of workers, especially in South Asia and Europe. A mere 11% of South Asian workers and 47% of European workers perceive their overall life quality as "thriving." Even within the group of "most engaged" workers in the United States and Canada, a mere 33% reported a sense of engagement in their work. Despite high engagement levels, workers in the U.S. and Canada are the most stressed globally. Workers in Australia and New Zealand reported the highest quality of life, yet 63% of respondents claimed they were "flourishing, and 71% of respondents in the U.S. and Canada believe that it is now a good time to look for a different job (Ahmed, 2022).

Work-related stress is considered the most significant occupational health issue in the United Kingdom (UK), following musculoskeletal disorders like back problems (WorkStressUK, 2016). Stress-related illnesses and absences cost approximately £4 billion annually. Carr, et al. (2011) explored strategies for fostering a healthier and more productive environment and discovered that stress adversely impacts employees' health and performance. They also found that stress symptoms could be mental, physical, behavioural, and emotional. Cooper and Blackwell (2004) noted that stress manifests in various ways. For example, a highly stressed individual may develop conditions like high blood pressure and ulcers. These can be classified into three general categories: Physiological, Psychological, and Behavioural symptoms.

Prolonged exposure to stress has profound and detrimental effects on health. Stress is implicated in the onset of various health conditions such as asthma, amenorrhoea, coronary heart disease, chest discomfort, diarrhoea, dyspepsia, headaches, migraines, diabetes mellitus, ulcers, and diminished sexual drive, among other potential complications. In an era where the prevalence of AIDS is alarmingly high, it is crucial to understand that stress can suppress the immune system. This suppression makes individuals with HIV more susceptible to potential infections and diseases. These may include Depression, characterized by frequent feelings of loneliness, dissatisfaction, despondency, low energy, and loss of sexual interest; Anger, marked by frequent loss of temper, annoyance, irritation, criticism of others, and anger over trivial matters; Cognitive disturbance, often manifested as difficulty in remembering or concentrating, and experiencing a blank mind; Suicide, the potential act of ending one's life; Anxiety, and frequent upset or sour stomach (Dar et al., 2011).

## **2.2 Moderating Effect of Institutional Stress Management Systems on Stress, Well-being and Work Performance**

The strain of physical and mental demands surpassing an individual's capabilities has been identified as a risk factor for chronic stress, particularly among women. This is especially true when there is a lack of control over work schedules, leading to increased self-reported stress and a higher likelihood of taking sick leave (Ala-Mursula et al., 2005). The repercussions of occupational stress on job performance and the wider economy are substantial. It can significantly undermine workers' overall productivity, affecting both their efficiency and precision (Lovelace et al., 2007). Occupational stress accounts for roughly 40% of employee turnover and half of all absences from work. The annual financial burden of work-related stress and its consequences in the US is estimated to exceed 60 billion for employers and between 250 and 300 billion for the economy (ILO, 2016).

Elevated stress levels can also lead to increased absenteeism, higher turnover rates, more accidents, deteriorating physical and mental health, poor job quality, and reduced performance. Absenteeism has become a significant issue in industrialized nations due to its economic implications. For example, data on sickness absence indicates that the US industry loses approximately 550 million working days (3-7%) annually, while in the UK, this figure stands at 3.7% of the total working days (Rhenen et al, 2007). Johansson and Abrahamsson

(2018) argued that issues in the working environment should be viewed as production problems to realize economic benefits. Gray-Stanley et al. (2010) suggested that those involved in occupational health and employee medical expenses are starting to acknowledge the immense hidden costs of stress.

Research exploring the effects of work-related stress on organisational outcomes has uncovered several associated behaviours that impact performance, competitiveness, and the company's public image. For instance, a poor psychosocial work environment that contributes to job stress can lead to increased absenteeism and presenteeism, decreased motivation, satisfaction, and commitment, and a higher rate of employee turnover and intention to leave (Vahtera et al., 2004). All these factors can result in negative human, social, and financial costs. Absenteeism has been extensively studied due to its common occurrence and the associated costs to businesses and society, while presenteeism has received less attention (Aronsson & Gustafsson, 2005).

Mathis and Jackson (2000) proposed that the evaluation of an organisation's human resource performance necessitates the consideration of unit labour cost or the total labour cost per unit of output. They further posited that an individual's performance is influenced by three elements:

- a. capacity to perform the task;
- b. degree of exertion; and
- c. the assistance provided to the individual.

The principles widely acknowledged in organisational theory propose that Performance (P) is the outcome of Ability (A), Effort (E), and Support (S), that is,  $(P = A \times E \times S)$ . The absence or reduction of any of these components results in a decline in performance. The significance of evaluating the standard of production as an aspect of performance is emphasised, as one strategy could be to augment quantity at the cost of quality. As articulated by Chase et al. (2008), performance is assessed by the outputs produced per labour hour. Nevertheless, this measure does not assure profitability, particularly when surplus output remains unsold and builds up as inventory. To determine if performance has been enhanced, questions such as 'Has the action taken increased output or decreased inventory?' and 'Has the action taken reduced operational costs?' should be asked. This leads to a refined definition: Performance includes all actions that drive a company towards its goals. Mathis and Jackson (2000) defined performance as an evaluation of the volume and standard of work completed, considering the cost of the resources used.

However, individual reactions to identical work differ due to personal factors that also influence stress. For example, type A personalities, who are driven by work and feel obligated to be timely and meet deadlines, usually expose themselves to more stress than others (Desseler, 2000). This is further reinforced by Eatough et al. (2011), who emphasised that the interaction between work and personal lives and how individuals handle work-related stress is a complex issue. Blumenthal (2003) employed an inverted U-shaped curve to demonstrate the effect of stress on performance, indicating that performance escalates with increasing stress, but after a certain point, performance reaches its peak and starts to deteriorate. This suggests that while stress can boost performance, it becomes harmful and counterproductive when it escalates to a level of severe discomfort. Blumenthal (2003) further argued that excessive stress is detrimental, destructive, and undermines human well-being and performance. Stress can impact an individual's well-being by causing dysfunction or disruption in various areas, which can permeate into the organisational sphere and lead to decreased productivity (Muhammad and Kishwar, 2019).

Frost (2003) posits that such type of agony manifests in individuals through a reduced sense of self-esteem, and a loss of confidence and optimism, which can be detrimental to both performance and morale. The tangible repercussions of this include a decrease in profits due to factors such as reduced productivity or even a large-scale departure. Furthermore, Frost (2003) suggests that aside from the financial implications of employees leaving, actions such as retaliation, sabotage, theft, vandalism, withdrawal tendencies, discussions with friends and family, or generally exhibiting cynicism or distrust can all contribute to direct or indirect financial burdens on the organisation. To conclude, Frost (2003) asserts that if leaders within an organisation can identify and address emotional distress as it arises, they could potentially reverse situations in the workplace that could otherwise be fatal.

Throughout the years, the scientific community has extensively studied the impact of psychosocial hazards on organisational outcomes such as job satisfaction, motivation, commitment, and the propensity to resign, as these are deemed as key indicators of individual and organisational performance. The significance of job satisfaction as a determinant of workers' health, well-being, and performance has been underscored (Faragher et al., 2005). Comprehensive research supports the conclusions drawn from smaller studies, highlighting that job satisfaction is influenced by psychosocial hazards such as extended work hours, job demands, limited opportunities for career progression and promotion, unsatisfactory work relationships, emotional fatigue, burnout, conflict between work and family, and exposure to workplace bullying and harassment. These hazards are further intensified by work-related stress (Mosadeghrad et al., 2011; Chung & Kowalski, 2012; Kazi & Haslam, 2013). Moreover, work-related stress and job dissatisfaction negatively affect workers' motivation and commitment, thereby increasing their likelihood to resign. There is substantial evidence indicating that the

inclination to leave a job is associated with work stress (Tominaga et al, 2007; Yeh & Yu, 2009; Ofili et al., 2009, Bonsdorff, 2010).

In contrast, relationships that provide support indirectly contribute to the reduction of stress and the intention to leave a job by influencing the perception of stress, while communication relevant to the job directly impacts the intention to leave (Kim & Lee, 2009). The direct and indirect expenses associated with this are only now starting to be calculated. However, certain developed nations are beginning to evaluate the economic consequences of work-induced stress, related behavioural tendencies, and health issues. For instance, the annual cost of depression related to work in Europe is estimated to be €617 billion. This figure encompasses the costs of absenteeism and presenteeism (€272 billion) borne by employers, productivity loss (€242 billion), healthcare expenses (€63 billion), and social welfare costs in the form of disability benefits (€39 billion) (Matrix Insight, 2012). On a national scale, Safe Work Australia (SWA) approximated that the annual cost of work-related stress to Australian society was AU \$5.3 billion in 2008/2009. This amount includes costs incurred due to production interruptions and medical expenses (SWA, 2015).

The researcher posits that stress, contrary to popular belief, isn't always detrimental. Despite its numerous adverse effects, stress can also yield positive results. As Payne et al. (2005) and Shaikh et al. (2013) suggest, excessive stress can indeed lead to negative consequences and severe health issues, but a moderate amount can be advantageous and invigorating. They further argue that without a certain level of stress, many individuals might not accomplish much, as they would be preoccupied with future tasks rather than focusing on the present, which could strain their relationships. Taylor (2003) also underscores the significance of stress for several reasons. Primarily, it aids in identifying common daily stressors and provides further proof of the stress-disease correlation. Taylor also asserts that while it's impossible to evade all work-related stress, understanding the stress-inducing aspects of a job can pave the way for job redesign and the implementation of stress management strategies. However, Guzzo et al. (2022) found that job tenure, rather than age, has a significant impact on team performance. They discovered that the tenure of team leaders, not their age, positively affected team performance. This finding aligns with individual-level psychological research, which doesn't support an age-performance correlation, contrasting with economic research literature that often identifies a negative relationship between age and performance across all study levels.

The research conducted by Stankeviciene et al. (2021) meticulously examined the mediating role of work-life balance (WLB) in the relationship between the structural elements of work culture, including temporal flexibility, supportive supervision, and operational flexibility, and employee well-being. The data for this study was gathered through a survey administered to employees in both the private and public sectors in Lithuania. The findings of the study underscore that each aspect of work culture significantly shapes the well-being of employees, has a profound direct impact on well-being, and influences WLB. The study suggests that the direct influence of work culture on well-being was markedly greater than the indirect influence via WLB. Furthermore, the study suggests that a work environment that is supportive of families can assist employees in enhancing their WLB, which subsequently leads to increased job satisfaction, reduced stress, and improved well-being and job performance. This research expands the application of well-being as a mediating factor in organisational settings, and its conclusions could be valuable for professionals aiming to enhance employee well-being to augment performance within their organisations. This paper aims to bridge the knowledge gap concerning the potential for institutional stress management programmes to moderate the relationship between stress and well-being, while directly impacting employee performance.

### **2.3 Theoretical Review/Perspective of this Research**

An exploration was undertaken to comprehend the perspectives of various authors and theorists on the notions of stress and performance. The literature on stress, as penned by numerous experts and authors in the stress domain, was also scrutinised. Theories such as the Demand Control Model, Job-Demands-Resources, Effort-Reward Imbalance Model, Response Theory, Stimulus Theory, Transaction Theory, Psychological Capital Theory, Social Support Theory, and Organisational Culture Theory were deemed pertinent to the research. This is due to their ability to forecast the interplay between the study's variables, which, when thoroughly examined, will aid in the application of stress management strategies like well-structured stress policies or guidelines to alleviate employee stress and enhance their performance.

### **3.0 Problem Statement**

In general, the prevailing literature outlines the responsibilities of lecturers, but it fails to account for the administrative duties some educators undertake in addition to their teaching and research roles. Furthermore, it overlooks female lecturers who juggle their academic roles with their familial responsibilities as mothers or wives. The literature also neglects to connect lecturers' job performance with stress and well-being, particularly within the context of Ghana's public universities. Therefore, this study aims to evaluate how female lecturers balance academic tasks such as lesson planning, lecture note preparation, teaching, and research with

administrative duties.

The truth of professional life is that employees strive to maintain a balance between their work and personal lives, which can either positively or negatively impact their work performance and well-being (Balaji, 2014). Bell et al. (2012) examined the correlation between perceived job stress, job pressure, job threat, and employee well-being. They discovered a strong negative correlation between perceived job stress and work-life balance, which in turn negatively affected employee well-being, but had a weaker positive impact. While these findings may be applicable in various settings, further research is necessary to validate them. Workplace stress is not the sole determinant of employee well-being; other factors such as organisational changes, job insecurity, and non-work-related stress can also influence it.

The results of this research may not be definitive, but the study's constructs are undoubtedly significant from a personnel perspective. Stress impacts all facets of contemporary life, including work, family, and home (Shields et al., 2019). Job-related stress is a growing concern due to its substantial economic implications for both organisations and employees (Kelloway et al., 2008). The stressors include multiple roles, discrimination, and stereotyping. The primary sources of stress are job-related factors such as poor working conditions, work overload, and time pressures (Alfes et al. 2018), role ambiguity and conflict within the organisation, career development issues like job insecurity and inappropriate promotion, and poor workplace relationships. Other extreme factors include workplace bullying, organisational structure, and climate, including limited involvement in decision-making and office politics (Cirjaliu et al., 2016). Even ineffective communication can escalate work stress to the point where employees consider leaving their jobs. These stressors, unfortunately, cannot be easily dismissed. Leaving a job could lead to debt and financial instability, which would only add to the stress (AIS, 2022). Given these predictors, this study will investigate well-being and institutional stress management systems as mediating and moderating factors in the impact of stress on work performance. A data analysis method that integrates statistical mediation and moderation analysis in a study is known as conditional process analysis (Bachl, 2017). In Ghana, no comprehensive study on stress and work performance has explored a conditional process analysis as this study intends to.

#### **4.0 Purpose of the Study**

The purpose of the study is to use conditional process analysis to assess how perceived stress impacts work performance, how well-being mediates the relationship between perceived stress and work performance and the role of institutional stress management systems in moderating the relationship between stress, well-being and work performance among women lecturers in managerial positions in the twelve selected higher educational institutions.

#### **5.0 Objectives of the Study**

The study sets out to assess how perceived stress impacts work performance, how well-being mediates the relationship between perceived stress and work performance and the role of institutional stress management systems in moderating the relationship between stress, well-being and work performance among women lecturers in managerial positions in the twelve selected higher educational institutions.

#### **6.0 Research Hypotheses**

- H<sub>0</sub>1: Well-being does not significantly mediate the relationship between perceived stress levels and work performance.
- H<sub>0</sub>2: Institutional stress management systems do not significantly moderate the relationship between perceived stress levels and the well-being of women lecturers in managerial positions in selected higher educational institutions.
- H<sub>0</sub>3: Institutional stress management systems do not significantly moderate the relationship between the well-being and work performance of women lecturers in managerial positions in selected higher educational institutions.
- H<sub>0</sub>4: Institutional stress management systems do not significantly moderate the relationship between perceived stress levels and the work performance of women lecturers in managerial positions in selected higher educational institutions.

#### **7.0 Research Methodology**

The research approach adopted in this study was descriptive, utilising a quantitative methodology.

#### **7.1 Sampling population and size**

The study was carried out across twelve public higher education institutions in Ghana. The Republic of Ghana, officially recognised as such, is home to a variety of educational institutions. These encompass four conventional public universities (PTU) - the University of Ghana, located in Legon, Greater Accra Region, University of Cape

Coast, situated in Cape Coast, Central Region, Kwame Nkrumah University of Science and Technology in Kumasi, Ashanti Region, and University of Education, Winneba in Winneba, Central Region. Additionally, there are four public technical universities (PTeU) - Accra Technical University in Accra, Greater Accra Region, Tamale Technical University in Tamale, Northern Region, Kumasi Technical University in Kumasi, Ashanti Region, and Takoradi Technical University in Takoradi, Western Region. Furthermore, four private universities (PU) are also present - Valley View University in Oyibi, Greater Accra Region, Regional Maritime University in Nungua, Greater Accra Region, All Nations University in Koforidua, Eastern Region, and Central University in Miotso, Greater Accra Region. The target (total) population was 454 women lecturers in managerial positions in twelve selected higher educational institutions in Ghana. A sample size of 270 women lecturers in managerial positions in Table 1 was determined using proportional stratified sampling technique. First, according to Krejcie and Morgan (1970), a total population of 454 to 460 will have a representative sample of 270. The sample size of 270 was distributed proportionately among the strata or subgroups within the population (type of universities and their population size), according to the proportion or percentage each represents in the total population. This was to ensure that each group was fairly represented and that any characteristics measured truly reflect their nature. Furthermore, this method is dependable as it ensures an equal selection of items that display diverse characteristics, thereby creating a sample that accurately reflects the entire population. Consequently, this sample offers a more comprehensive representation of the total population. The lottery method of simple random sampling was then employed for the selection of specific participants in each stratum.

**Table 1: Sample Distribution**

Name of Institution	Population Size	Sample Size
Public Tertiary Universities	231	137
Public Technical Universities	128	76
Private Universities	95	57
<b>Total</b>	<b>454</b>	<b>270</b>

**Source: Survey Results from the Twelve Universities, 2023**

## 7.2 Data collection instrument, procedure and analysis

The close-ended questionnaire was used to collect the data. The instrument's consistency was assessed by computing Cronbach's alpha for all items. The reliability of scaled items was determined using the 26th version of the Statistical Package for the Social Sciences (SPSS). The reliability outcomes for all the study's variables are displayed in Table 2. Constructs A, B, C, and D, which encapsulate the study's primary theme, achieved reliability coefficients of 0.903, 0.912, 0.825, 0.737, and 0.843 respectively. The reliability scale was within the acceptable range, with Cronbach's Alpha ( $\alpha$ ) exceeding .7 for all variables. Given that the instruments were scored multiple times, Cronbach's alpha is considered the most suitable. This is corroborated by Creswell and Plano-Clark (2007), who noted that Cronbach's alpha is employed when measures contain multiple scored items.

**Table 2: Reliability Results for the Variables of the Study**

Variable (N = 270)	M	SD	Cronbach's Alpha ( $\alpha$ )
Work performance	3.739	.654	.903
Perceive Stress Levels	3.792	.532	.912
Well-being	3.625	.473	.737
Institutional Stress Management Systems	4.037	.684	.843

\*\*Correlation is significant at  $p < 0.1$  (two-tailed)

The validity of the instruments was established on three levels, namely; Face Validity, Content validity, and Construct validity (Moskal, & Leydens, 2000).

The study employed a conditional process analysis using Hayes (2018) process macro v3.2 (Model 59) for the data analysis.

## 8.0 Results Analysis, Discussion and Findings

### 8.1 Testing for Mediation Effect of Well-being on the Relationship between Stress and Work Performance

In the process of examining Hypothesis 1, the research projected that well-being would not serve as a mediator in the relationship between stress and job performance. The mediation effect was analysed by adhering to the four-step procedure outlined by MacKinnon (2012). This method necessitates:

- a significant correlation between stress and well-being;
- a significant correlation between well-being and job performance;
- a significant correlation between stress and job performance, taking into account the factor of well-being;
- a significant coefficient for the indirect route from stress to job performance via well-being. The bias-corrected percentile bootstrap method is employed to ascertain the fulfilment of the final condition.

The study incorporated variables such as the respondents' type of institution (public, technical, or private),

age, marital status, children, academic and professional credentials, position, and experience in all analyses.

Table 3 delineates the outcomes of the multivariate regression analysis, executed via the PROCESS macro v3.2 (Model 4) as proposed by Hayes (2018). The initial phase of the analysis (Table 3, Model 1) uncovers a noteworthy association between stress and well-being, as indicated by a coefficient of .264 and a p-value less than .001. This particular model elucidates 25.7% of the total variance ( $R^2 = .257$ ), while all the control variables were found to be non-significant. In the subsequent step (Table 3 Model 2), a significant correlation was discovered between well-being and job performance, with a coefficient of .352 and  $p < .00$ . This model explains 29.4% of the variance ( $R^2 = .294$ ). In the final step (Table 3 Model 2), stress was found to be significantly correlated with job performance, with a coefficient of  $-.256$  and  $p < .001$ , while adjusting for well-being.

**Table 3: Results for mediation effect of well-being on the relationship between stress and work performance**

Predictors	Model 1 (Well-being)		Model 2 (WP)		Model 3 (WP) Total Effect	
	Coeff.	T	Coeff.	t	Coeff.	T
Institution	.021	.162	.017	.047	.005	.142
Age	-.082	-.736	-.063	-.012	-.193***	-.819
Offsprings	.053	.033	-.095***	-.243	-.017	-.432
Academic qualification	-.017	-.950	.027	.040	.068***	.297
Professional qualification	-.029	-.643	.031	.038	.059***	.325
Position	.043	.625	.048	.021	.092	.604
Experience	.035	.575	.097	.052	.363***	1.186
Stress	-.264***	-6.868	-.256***	-6.059	-.278***	-8.366
Well-being	-	-	.352***	5.024	-	-
R <sup>2</sup>	.257		.294		.285	
F	18.932***		39.615***		29.965	

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

N = 270

Source: Field Data, 2023

Once more, the comprehensive influence of the research outcomes is disclosed in Model 3 of Table 3, where stress exhibits a coefficient of .278, with a significance level of  $p < .001$ . The covariate analysis suggests that factors such as age category, academic and professional credentials, and tenure significantly influence the performance of employees at work.

Subsequently, the bias-adjusted percentile bootstrap technique's outcomes, as shown in Table 4, demonstrate a substantial indirect effect of stress on job performance via well-being ( $b = .223$ ,  $t = 4.750$ ,  $SE = .223$ , 95 per cent CI = [.127, 0.269]), thereby endorsing Hypothesis 3. The direct influence of stress on job performance, in the context of the mediating factor (Well-being), was also significant ( $a = .416$ ,  $p < .001$ ). Therefore, it can be inferred that well-being plays a partial mediating role in the relationship between stress and job performance.

**Table 4: Mediation Summary**

Total Impact S -> WP	Direct Impact S -> WP (a)	Relationship H1: S -> W -> WP	Indirect Impact (b)	Boot SE	Confidence Interval (CI) LLCI ULCI	t-stat.	Conclusion
-.278 (0.000)	0.416 (0.000)		0.223		0.127 0.269	4.75	Partial Mediation

Source: Field Data, 2023

N = 270

Typically, individuals may exhibit anger, hostility, or aggressive tendencies in response to stressful circumstances, which can also lead to health complications. Indeed, the manifestations of stress can impact one's physical state, cognitive processes, emotions, and actions. Recognising the common indicators of stress can aid in its management. Unaddressed stress can lead to a variety of health issues, including hypertension, cardiac diseases, obesity, and diabetes. As shown in Table 3, Model 1, there is a significant correlation between stress and well-being, with a coefficient of .264 and a p-value of less than .001. This model accounts for 25.7% of the variance ( $R^2 = .257$ ), with all control variables deemed insignificant. This finding aligns with the study by Barnett and Hyde (2001), which posits that female employees in higher education institutions are more prone to stress-induced ailments such as gastrointestinal disturbances, headaches, hypertension, musculoskeletal discomfort, and fever, particularly as they ascend to senior management roles. Furthermore, Ford et al. (2011) linked high job demands, both psychological and physical, to illness symptoms and increased sick leave, especially among women. The demand-control model, proposed by Karasek and Theorell, implies that jobs with high psychological demands and low decision-making autonomy can lead to illness symptoms. Again, studies

such as Lidwall and Marklund (2006), Bourbonnais and Mondor (2001), Vahtera et al. (2000) posit that employees get headaches, tension, frustration, anxiety, distress, restless, bored and depression when they experience high levels of stress. It can therefore be deduced from the above discussion that stress greatly affects all kinds of employees' well-being without discrimination in terms of gender or socio-cultural background.

In Table 3 Model 2, a significant correlation was discovered between well-being and work performance, with a coefficient of .352 and  $p < .00$ , accounting for 29.4% of the variance ( $R^2 = .29.4$ ). This result is in line with the research by Wulan and Putri (2016), which emphasizes the paramount importance of workplace well-being in organisational studies related to work performance. In a similar vein, De Simone (2014) posited that an individual's experiences in the workplace, be they emotional or social, undeniably impact the individual both professionally and personally. This is due to the fact that employees dedicate approximately one-third of their time to their jobs and continue to be affected by their work even after leaving their place of employment. Consequently, well-being exerts a substantial influence on work performance. The recent pandemic of COVID-19 has underscored the significant influence of employee wellness on their productivity and, in turn, on the overall business outcomes. The heightened anxiety and stress experienced by employees necessitated employers to adopt a more empathetic approach. Businesses began to understand that proactive measures to prevent employee wellness issues such as burnout, stress, and illness were more cost-effective than addressing these problems post-occurrence. Specifically, the sedentary lifestyle of employees heightens the risk of diseases like diabetes and hypertension. Furthermore, employees reporting frequent or constant burnout are 63% more likely to avail sick leaves, indicating a direct correlation between employee wellness and the cost of absenteeism for employers. Recognising these advantages, businesses began to introduce wellness initiatives. These programmes, while varying in their scope and focus, have demonstrated cost-effectiveness. For instance, Johnson and Johnson (2022) reported savings of \$250 million in healthcare expenses over the past ten years due to their wellness initiatives, yielding a return of \$2.71 for every dollar invested in employee wellness. Research indicates that smokers are twice as likely to be absent from work, and obese workers take three to six more sick days annually compared to their normal-weight counterparts. Conversely, employees who manage stress effectively are less prone to burnout. In essence, optimizing employee wellness enhances their focus and productivity. The COVID-19 crisis highlighted the criticality of maintaining employee morale. Implementing wellness initiatives like health workshops or inter-departmental fitness competitions can significantly boost employee morale. As a part of their employer branding strategy, 78% of employers offer wellness programmes to attract and retain talent. The competition for top talent is fierce, and prospective employees have multiple options to consider for their next employer. Therefore, offering wellness benefits that align with the expectations of your future workforce is crucial to attract top-tier candidates, thereby ensuring your business's success.

In the face of relentless schedules filled with meetings, impending deadlines, incessant emails, and frequently an unmanageable amount of work, workers often find themselves operating non-stop, extending into the weekend, only to awaken on Monday morning to recommence the cycle. Indeed, some thrive in this bustling environment, while others are simply passionate about their profession. Regardless of one's perspective, it is undeniable that employees grapple with significant stress. Their proficiency at their job or their affinity for the disorder is irrelevant – if stress is not managed and is allowed to persist for extended periods, it can result in burnout, a negative attitude, and underperforming or unproductive staff. The persistent issue of employee stress poses a significant challenge for organisations, as it leads to a decline in organisational performance, a reduction in overall employee productivity, an increased rate of errors, substandard work quality, elevated staff turnover, and frequent absenteeism.

In addition, in Table 3 Model 2, stress was significantly associated with work performance with,  $\text{coeff.} = -.256$ ,  $p < .001$ , while controlling for well-being. The finding of the study showed a significant negative relationship between employee stress (independent variables) and employee work performance (dependent variable). This implies that as the stress level of women lectures in managerial positions in this study increases, their performance decreases and vice versa., implying that performance increases as stress reduces and vice versa. The work of Biron (2012) supported by Ganesh et al. (2018), and Akanji (2013) confirms the above results that stress reduces employee performance, increases absenteeism and sickness, and reduces turnovers. Blumenthal (2003) posits that stress-induced behavioural symptoms can result in work absenteeism, subpar planning and budgeting, ineffective task completion, diminished self-confidence, concentration difficulties, decision-making struggles, and job discontent, all of which contribute to a decline in performance. Similarly, Fisher (2014), Muhammad and Kishwar (2019), and Desseler (2000) concur that stress, at the organisational level, is accountable for outcomes such as performance degradation, dissatisfaction, a decrease in both the volume and quality of work output, a lack of drive and dedication, an escalation in absenteeism, and a reduction in turnover or productivity. More so, the result above is supported by several research studies such as Swathi and Reddy (2016) who posit that "stress affects performance negatively"; Bernard (2009), Amponsah (2010), Roberts (2014), and Mosadebhrad (2014) who opine that stress influences performance negatively; Kossek et al. (2012) who concluded that stress negatively affects employee performance. Sincero (2012) focussed on how stress



affects performance and found out that stress negatively affects the performance of employees; Biron (2012), Akanji (2013) and Ganesh et al. (2018) emphasised that stress reduces performance. It can therefore be concluded that stress influences employees' performance negatively.

Again, Table 3 Model 3 reveals the total effect of the study findings with stress having a coeff =.278,  $p < .001$ . Results of the covariates indicate that the type of age, qualification and experience have a significant effect on employee work performance. The finding disconfirms Guzzo et al. (2022) that tenure, as opposed to age, significantly influences unit performance. Moreover, the individual level is consistent with the absence of evidence for an age-performance relationship, economics research literature typically finds negative associations between age and performance at all levels of study. There is no indication of nonlinearities in the correlations between tenure, age, or performance heterogeneity. Ageism and companies' employment of gig or contract labour is highlighted as practical consequences of the results. The variation may be a result of different geographical settings and participates.

In conclusion, the bias-corrected percentile bootstrap method's outcomes, as presented in Table 4, demonstrated a notable indirect influence of stress on job performance via well-being ( $b = .223$ ,  $t = 4.750$ ,  $SE = .223$ , 95 per cent CI = [.127, 0.269]), thereby dismissing the null hypothesis ( $H_0$ ). The direct influence of stress on job performance, considering the mediating role of well-being, was also significant ( $a = .416$ ,  $p < .001$ ). Consequently, well-being was found to be a partial mediator in the connection between stress and job performance. This conclusion is plausible as Krishman (2014) posited that stress perception varies among individuals, with their stress tolerance differing. Some individuals perform optimally under pressure, while others struggle with the "last minute syndrome".

### 8.2 Testing for Moderation Effect of Institutional Stress Management Systems on Stress and Well-being

The analysis of the conditional process, as demonstrated in Table 5, utilized Hayes' (2018) process macro v3.2 (Model 59). The initial multiple regressions, denoted as Model 1 in Table 5, examined the moderating role of institutional stress management procedures on the trajectory from stress to well-being. The model yielded an  $R^2$  of .193, signifying that it explained 19.3% of the variance. Despite the inclusion of covariates in the model, none proved to be significant. The data further revealed a substantial direct impact of stress on well-being, with a coefficient of -.394 and a confidence interval of -.310 to .068. Additionally, the institutional stress management systems were found to exert a significant direct influence on well-being, with a coefficient of .254 and a confidence interval of .078 to .154. Moreover, these systems were observed to moderate the link between stress and well-being, with a coefficient of .216 and a confidence interval of -.037 to .146. Consequently, the second null hypothesis is not corroborated by the findings.

**Table 5: Moderating Effect of Institutional Stress Management Systems on Stress, Well-being and Work Performance**

Predictors	Model 1: Well-being				Model 2: Work Performance			
	Coeff.	T	LLCI	ULCI	Coeff.	t	LLCI	ULCI
Institution	.019	.201	-.143	.195	.036	1.750	.102	.903
Age	-.085	-.934	-.156	.167	-.019	-1.084	-.321	.218
Offsprings	.047	.293	.131	.163	.203	.754	-.563	.374
Position	.083	1.562	.035	.135	.276	.529	-1.078	.364
Academic qualification	.030	.493	-.173	.094	.276***	-6.532	.174	.342
Professional qualification	.034	.479	-.182	.089	.283***	-6.714	.153	.406
Experience	.067	2.671	.361	.633	.301***	.094	.209	.543
Stress	-.394***	-6.523	-.310	.068	-.327***	3.853	.232	.496
Well-being	-	-	-	-	.255***	1.673	-.098	.271
ISMS	.254***	4.732	.078	.154	.158**	.963	-.734	.167
S x ISMS	.216***	2.058	-.037	.146	-.094*	-3.120	.047	.243
W x ISMS	-	-	-	-	.135**	1.875	.069	.267
$R^2$	.193				.436			
F	17.046***				32.542***			

\* $P < .05$ , \*\* $P < .01$ , \*\*\* $P < .001$ , ISMS, Institutional Stress Management Systems; W = Well-being, S=Stress  
 Source: Field Data, 2023 N = 270

### 8.3 Testing for Moderation Effect of Institutional Stress Management Systems on the Relationship between Well-being and Work Performance

In the second regression analysis, as depicted in Table 5, Model 2, the examination was conducted to ascertain if the institutional stress management systems (SMS) have a moderating effect on the relationship between well-being and job performance. The results presented in Table 5, Model 2, indicate that the interaction of institutional stress management systems does not significantly influence the correlation between well-being and

job performance, with a coefficient of .135 and a confidence interval ranging from .069 to .267. Given that the confidence intervals do not encompass zero, the third null hypothesis is dismissed in this research. These findings corroborate the results of Stankeviciene et al. (2021), which demonstrated that the direct influence of workplace culture on well-being significantly surpasses the indirect effect of work-life balance. With the quest of substituting WLB with SMS, there was no variation in findings. It would, therefore, suggest that there is more to explore. Finally, the findings agree with Huo and Jiang (2023) that work-life conflict hurts employees' well-being, which compromises their ability to execute their jobs effectively.

#### 8.4 Testing for Moderation Effect of Institutional Stress Management Systems on the Relationship between Stress and Work Performance

The subsequent regression examination, as depicted in Model 2 of Table 5, evaluated the moderating role of the institutional stress management system on the trajectory from stress to job performance. As evidenced in Model 2 of Table 21, stress (coefficient =  $-.327$ , Confidence Interval (CI) =  $-.232, .496$ ), well-being (coefficient =  $.255$ , CI =  $-.098, .231$ ), and institutional stress management systems (coefficient =  $.158$ , CI =  $-.734, .167$ ) all exert a substantial direct influence on job performance. Moreover, the interaction effect of institutional stress management systems on the link between stress and job performance was found to be statistically significant (coefficient =  $-.094$ , CI =  $.047, .243$ ). This analysis was conducted considering the covariates of both academic and professional qualifications, and experience, all of which demonstrated a significant impact with coefficients =  $.276$ ,  $p < .001$ , =  $.283$ ,  $p < .001$  and =  $.301$ ,  $p < .001$ , respectively. The model accounted for 43.6% of the total variance, as denoted by an R<sup>2</sup> value of .436, which led to the rejection of null hypothesis 4. This aligns with previous research suggesting that when physical and mental demands surpass an individual's ability, it poses a risk for chronic stress, especially among women. Lack of control over work schedules has been associated with increased self-reported stress and a higher likelihood of taking sick leave, particularly among women (Ala-Mursula et al., 2005). In a similar vein, Gray-Stanley et al. (2010) posited that professionals in occupational health and those interested in employee health and healthcare costs are starting to acknowledge the substantial hidden costs of stress. While the stress management system could directly address problems, it would not function as a buffer between stress and well-being.

#### 8.5 Conditional Effect of the Three Levels of Institutional Stress Management Systems

In conclusion, the investigators postulated that distinct mechanisms would be at play linking stress, well-being, and job performance, influenced by the varying degrees of the participants' organisational stress control systems. Upon analysing the data across three tiers of organisational stress control systems, it was revealed in Table 6 that conditional indirect impacts were observed between stress and job performance through well-being, with one standard deviation beneath the mean of attitude (coefficient =  $.043$ , standard error =  $.035$ , confidence interval =  $.026, .107$ ). This was also significantly present at the mean level (coefficient =  $.086$ , standard error =  $.029$ , confidence interval =  $.044, .138$ ), and at elevated levels of organisational stress control systems (coefficient =  $.139$ , standard error =  $.047$ , confidence interval =  $.075, .216$ ). However, the conditional indirect impact was considerably more potent when the organisational stress control systems were highly effective (plus one standard deviation above the mean). Consequently, these results do not give any support to null hypothesis 4.

**Table 6: The Conditional process analysis showing the indirect effects at three levels of Institutional Stress Management Systems**

Different levels of the moderator ISMS on the indirect effect	Coeff.	SE	LLCI	ULCI
Low ISMS (mean – one standard deviation) = 1-	.043	.035	.026	.107
Mean ISMS (mean = 0)	.086	.029	.044	.138
High ISMS (mean plus one standard deviation = -1)	.139	.047	.075	.216

CI = 95 per cent confidence interval for the indirect effect: if CI does not, I include zero, the indirect effect is considered statistically significant.

Source: Field Data, 2023

#### 9.0 Summary of Findings

The outcomes of the first research hypothesis demonstrated a significant mediation by well-being in the correlation between perceived stress levels and job performance ( $p < .001$ ) and also indicated a substantial negative correlation between stress experienced by employees (independent variable) and their job performance (dependent variable) (coeff. =  $-.256$ ,  $p < .001$ ), with well-being as a control variable. This suggests that an increase in stress levels among female lecturers in managerial roles in this study corresponds to a decrease in their performance, and the converse is also true, indicating that performance escalates as stress diminishes and vice versa. The bias-corrected percentile bootstrap method's outcomes also disclosed a significant indirect influence of stress on job performance via well-being, corroborating the first hypothesis. The direct influence of

Stress on Job performance in the presence of the mediator (well-being) was significant, ( $\beta = .416, p < .001$ ). Therefore, well-being partially mediated the correlation between stress and job performance.

The second hypothesis sought to test whether institutional stress management systems moderate the relationship between perceived stress levels and the well-being. It was found out that institutional stress management systems have a significant direct moderating effect on the relationship between perceived stress levels and well-being. It was also found from hypothesis three that the interaction of institutional stress management systems is significant on the relationship between well-being and work performance, and that institutional stress management systems moderates the relationship between well-being and work performance. Hypothesis four established that, institutional stress management systems interacted significantly with on the relationship between stress and work performance in the presence of the covariates with both academic and professional qualifications, and experience indicating significant effect. Thus, institutional stress management system moderates the path from stress to work performance implying that all institutional stress management systems have significant direct effect on work performance.

## 10. Conclusions

The study highlights the complex interplay between stress, well-being, institutional stress management systems and work performance for women, emphasising the importance of a comprehensive approach that addresses all three factors to optimise women's performance in the workplace. Thus, effective implementation of stress management strategies can help decrease stress, mitigate the detrimental effects of stress on well-being and improve performance.

### 11.0 Limitations of the Study

Getting the right information at the right time, given the limited time and resources for the research was a challenge. Also, it was difficult having access to the respondents who had busy schedules. Even though this limitation did not affect the data directly, it caused the researcher to spend a long time and much money on transportation, as the researcher had to go to the institutions on several occasions.

### 12.0 Recommendations

In light of the conclusions drawn from the research, several suggestions have been put forth. Firstly, it is imperative for both GTEC and VCG to guarantee that each tertiary educational establishment in Ghana implements a structured policy for managing stress among staff. This policy should aim to foster a healthy work environment, proactively mitigate the occurrence of job-induced stress and associated health issues where feasible, and explicitly outline the measures that will be taken to assist employees grappling with stress-related complications. Also, Deans, UTAG and Welfare Associations should develop and implement stress management programmes specifically designed to address the unique stressors faced by women lecturers in the universities. These programmes should provide tools and strategies to help women lecturers effectively manage stress and enhance their well-being and work performance. They should also create a positive and supportive work culture that prioritises employee well-being. Encourage open communication, provide resources for stress reduction, and promote work-life balance initiatives to support women lecturers in managing stress and improving their work performance. Again, they should conduct regular assessments to identify the specific stressors affecting women lecturers in the universities. Use this information to tailor interventions and support systems to address these stressors effectively and improve work performance. In addition, promote self-care practices among women lecturers, such as mindfulness, exercise, and time management techniques. Encourage breaks and encourage employees to prioritise self-care activities, which can contribute to improved well-being and work performance. Furthermore, Deans, UTAG and Welfare Associations should create opportunities for women to connect and support each other within the organisation. Establish support groups, mentorship programmes or employee resource groups that focus on addressing stress and enhancing well-being. By fostering social support networks, organisations can provide additional resources for women to manage stress and improve work performance.

### 13.0 Suggestions for Future Research

The research was exclusively conducted in Ghana, focusing on female academics in leadership roles across four traditional public, four technical, and four private institutions, with a total target demographic of 454. Given the restricted geographical range and specific demographic, it is recommended that this research be duplicated to encompass other universities within the nation to have a larger demography, as this could yield varying outcomes. Moreover, the investigation was solely centred on female academics in leadership roles, suggesting that future research could include all lecturers or specifically male lecturers from different institutions for comparative analysis. Lastly, the research methodology employed was quantitative, utilizing a closed-ended questionnaire for data collection. It is suggested that subsequent studies consider employing qualitative or mixed methodologies, as these could potentially uncover additional aspects related to the study's variables.

## References

- Ala-Mursula, L., Vahtera, J., Linna, A., Pentti, J., & Kivimäki, M. (2005). Employee work time control moderates the effects of job strain and effort-reward imbalance on sickness absence: The 10-town study. *Journal of Epidemiol Community Health, 59*(10), 851-857.
- Ahmed, M. (2022, June 15). *Workplace stress hits all-time high: Gallup*. People Matters. <https://www.peoplesmatters.in/article/life-at-work/workplace-stress-hits-record-high-in-2022-gallup-survey-34289>.
- Akanji, B. (2013). Occupational stress: A review on conceptualisations, causes and cure. *Economic Insights – Trends and Challenges, 2*(3), 73-80.
- Alfes, K., Shantz, D. A. & Ritz, A. (2018). A multilevel examination of the relationship between role overload and employee subjective health: The buffering effect of support climates.
- Alharbi, E. S. & Smith, P. S. (2018). A review of the literature on stress and wellbeing among international students in English-speaking countries. *International Education Studies, 11*(6), 22-44.
- American Institute of Stress (AIS) (2022). *Stress research*. <https://www.stress.org/stress-research>.
- Amponsah, M. O. (2010). Non-UK university students stress levels and their coping strategies. *Educational Research, 1*(4), 88-99.
- Aronsson, G., & Gustafsson, K. (2005). Sickness presenteeism: prevalence, attendance pressure factors, and an outline of a model for research. *Journal of Occupational and Environmental Medicine, 47*(9), 958-966.
- Bernard, P. A. (2009). *The stressors and coping strategies of women in leadership position* [Mater's dissertation, Andrews University]. Andrews University, Digital Commons. <https://digitalcommons.andrews.edu/dissertations/225>.
- Bachl, M. (2017). Conditional process modeling (mediation analysis, moderated mediation analysis, moderation analysis, and mediated moderation analysis). *The International Encyclopedia of Communication Research Methods, 1*-26.
- Balaji, R. (2014). Work life balance of women employees. *International Journal of Innovative Research in Science, Engineering and Technology, 3*(10), 1348-1354.
- Barnett, R. C., & Hyde, J. S. (2001). Women, men, and work: An expansionist theory. *American Psychologist, 56*, 781-796.
- Bell, A., Rajendran, D., & Theiler, S. (2012). Job Stress, Wellbeing, Work-Life Balance and Work-Life Conflict among Australian Academics. *Electronic Journal of Applied Psychology, 8*, 25-37.
- Biron, C. (2012). What works, for whom, in which context? Researching organisational interventions on stress and wellbeing using realistic evaluation principles. In C. Biron, M. Karanika-Murray, & C. L. Cooper (Eds.), *Organisational stress and wellbeing interventions: Addressing process and context*. (pp. 163-184). Psychology Press.
- Blumenthal, I. (2003). Services SETA. *Employee Assistance Conference Programme, 2*(2), 5-21.
- Bourbonnais, R., & Mondor, M. (2001). Job strain and sickness absence among nurses in the province of Quebec. *American Journal of Industrial Medicine, 39*(2), 194-202.
- Carr, J., Kelley, B., Keaton, R., & Albrecht, C. (2011). Getting to grips with stress in the workplace: strategies for promoting a healthier, more productive environment. *Human Resource Management International Digest, 19*(4), 32-38. <https://www.emerald.com/insight/content/>.
- Chase, R. B., Jacobs, F. R., Aquilano, N. J. & Agarwal, N. K. (2008). *Operations management for competitive advantage*. Tata McGraw-Hill.
- Chung, C., & Kowalski, S. (2012). Job stress, mentoring, psychological empowerment, and job satisfaction among nursing faculty. *Journal of Nursing Education, 51*(7), 381-388.
- Cirjaliu, B., Draghici, A., & Jitarel, A. (2016). *A proposal approach for stress management*. <http://www.toknowpress.net/ISBN/978-961-6914-16-/papers>.
- Cooper, C. L., & Blackwell, P. D. (2004). Stress: A brief history. *Stress and Health, 20*(4), 240-246.
- Dar, L., Almal, A., Maseem, M. A., & Khan, K. U. D. (2011). Impact of stress on employees' job performance in business sector of Pakistan. *Global Journal of Management and Business Research, 11*(6), 1-4.
- De Simone, S. (2014). Conceptualising well-being in the workplace. *International Journal of Business and Social Science, 5*(12), 118-122.
- Dessler, G. (2000). *Human resource management* (8th ed.). Prentice Hall.
- Eatough, E. M., Chang, C. H., Miloslavic, S. A., & Johnson, R. E. (2011). Relationships of role stressors with organizational citizenship behaviour: A meta-analysis. *Journal of Applied Psychology, 96*(3):619-32.
- Faragher, B. E., Cass, M., & Cooper, C. (2005). The relationship between job satisfaction and health: a meta-analysis. *Occupational and Environmental Medicine, 62*(2), 105-112.
- Fisher, C. (2014). "Conceptualizing and Measuring Wellbeing at Work" in Wellbeing: A Complete Reference Guide, Volume III, *Work and Wellbeing*. P. Y. Chen. And C. Cooper, Ed. New Jersey: Wiley Blackwell, pp. 9-35.

- Ford, T. M., Cerasoli, P. C., Higgins, A. J. & Decesare, L. A. (2011). Relationships between psychological, physical, and behavioural health and work performance: A review and meta-analysis. *Work and Stress* 25(3):185-204.
- Frost, P. J. (2003). *Toxic emotions at work*. Harvard Business School Press.
- Ganesh, A., Muthu, M. S., Mohan, A. & Kirubakaran, R. (2018). Prevalence of Early Childhood Caries in India – A Systematic Review. *The Indian Journal of Pediatrics* 86(3). [https://doi: 10.1007/s12098-018-2793-y](https://doi.org/10.1007/s12098-018-2793-y).
- Gray-Stanley, J. A., Muramatsu, N., & Ramirez-Valles, J. (2010). Work stress and depression among direct support professionals: The role of work support and locus of control. *Journal of Intellectual Disability Research*. 54(8), 749-761.
- Guzzo, R. A., Nalbantian, H. R., & Anderson, N. L. (2022). Age, experience, and business Performance: A meta-analysis of work unit-level effects. *Work, Aging and Retirement*, 8(2), 208-223.
- International Labour Organisation (ILO) (2016). Workplace stress: A collective challenge. *International Journal of Cognitive Therapy*, 3(4), 332-344. [www.ilo.org/publns](http://www.ilo.org/publns).
- Johnson & Johnson Health and Wellness Solutions. Report. (2022, July 16). Our approach in Health and Wellness. <https://www.jnj.com>.
- Johansson, K., & Abrahamsson, L. (2018). Gender-equal organisations as a prerequisite for workplace learning. *Learning Organisation*, 25(1), 10-18.
- Karasek, R. A. & Theorell, T. (1990). *Healthy Work. Stress, Productivity, and the Reconstruction of Working Life*. Basic Books, New York.
- Kazi, A., & Haslam, C. (2013). Stress management standards: A warning indicator for employee health. *Occupational Medicine*, 63(5), 335-340.
- Kelloway Shaikh, A. A., Akram, M., Rizwan, M., Kousar, S., & Malik, M. (2013). The Impact of job stress: An imperative insight into the Banking sector. *Journal of Public Administration and Governance*, 3(3), 294-316.
- Kim, H. & Lee, S. (2009). Supervisory communication, burnout, and turnover intention among social workers in health care settings. *Social Work in Health Care*, 4, 364-385.
- Krishnan, L. (2014). Factors causing stress among working women and strategies to cope up. *IOSR Journal of Business and Management (IOSR-JBM)*, 16(5), 12-17. <https://www.iosrjournals.org>.
- Lidwall, U., & Marklund, S. (2006). What is healthy work for women and men? A case control study of gender and sector specific effects of psycho-social working conditions on long-term sickness absence. *Work: Journal of Prevention, Assessment and Rehabilitation*, 27(2) 153-163. <https://psycnet.apa.org/record/2006-12253-006>.
- Lovelace, K. J., Manz, C. C., & Alves, J. C. (2007). Work stress and leadership development: The role of self-leadership, shared leadership, physical fitness and flow in managing demands and increasing job control. *Human Resource Management Review*, 17, 374-387. <https://doi.org/10.1016/j.hrmr.2007.08.001>.
- Mathis, R. L. & Jackson, J. H. (2000). *Human Resource Management*. South Western Collage Publishing.
- Matrix Insight: Executive Agency for Health and Consumers (2012, November 1). Economic analysis of workplace mental health promotion and mental disorder prevention programmes and of their potential contribution to EU health, social and economic policy objectives. *Matrix Insight: Executive Agency for Health and Consumers*. [http://europa.eu/health/mental\\_health](http://europa.eu/health/mental_health).
- Muhammad, E., & Kishwar, A. (2019). The impact of work stress on employee productivity: Based in the banking sector of Faisalabad, Pakistan. *International Journal of Innovation and Economic Development*, 4(6), 32-50.
- Mosadeghrad, A., Ferlie, E., & Rosenberg, D. (2011). A study of relationship between job stress, quality of working life and turnover intention among hospital employees. *Health Services Management Research*, 24(4), 170-181.
- Payne, W. A., Halm, D. B., & Mauer, E. B. (2005). *Understanding your health* (8<sup>th</sup> ed.). McGraw-Hill.
- Rhenen, W. V., Blonk, R. W. B., Dijk, F. V., & Schaufeli, W. B. (2007). Can sickness absence be reduced by effectiveness of two approaches? *ResearchGate*. <https://www.researchgate.net/publication/46681735>.
- Roberts, C. (2014). Stress coping strategies among Ghanaian women in managerial positions. *European Scientific Journal*, 10(14), 205-211.
- Safe Work Australia (SWA) Report (2015, October 29). The cost of work-related injury and illness for Australian employers, workers and the community 2012-13. <https://www.safeworkaustralia.gov.au/system/files/documents/1702/safe-work-australia-annual-report-2012-13.pdf>.
- Shields, G. S., McCullough, A. M., Ritchey, M., Ranganath, C., Yonelinas, A. P. (2019). Stress and the medial temporal lobe at rest: functional connectivity is associated with both memory and cortisol. *Psychoneuroendocrinology* 106, 138–146. <https://doi.org/10.1016/j.psychneuen.2019.04.001>.
- Stankeviciene, A., Tamasevicius, V., Diskiene, D., Grakauskas, Z., & Rudinskaja, L. (2021). The mediating

- effect of work-life balance on the relationship between workplace culture and employee well-being. *Journal of Business Economics and Management*, 22(4), 988-1007.
- Taylor, A. H. (2003). Physical activity, anxiety, and stress. *Physical activity and psychological well-being*, 22-52.
- Tominaga, M., Asakura, T., & Akiyama, T. (2007). The effect of micro and macro stressors in the work environment of computer professionals' subjective health status and productive behaviour in Japan. *Industrial Health*, 45(3), 474-486.
- Vahtera, J., Kivimäki, M., Pentti, J., & Theorell, T. (2000). Effect of change in the psychosocial work environment on sickness absence: A seven year follow up of initially healthy employees. *Journal of Epidemiol Community Health*, 54(7), 484-493.
- Vahtera, J., Kivimäki, M., Pentti, J., & Theorell, T. (2004). Effect of change in the psychosocial work environment on sickness absence: A seven year follow up of initially healthy employees. *Journal of Epidemiol Community Health*, 54(7), 484-493.
- WorkStressUK (2016). *Workplace stress statistics in the UK*. <https://www.workstressuk.com/workplace-stress-statistics>.
- Wulan, D. K., & Putri, M. (2016). Job demands dan workplace well-being pada guru sekolah luar biasa negeri. *Jurnal Penelitian dan Pengukuran Psikologi: JPPP*, 5(1), 28-38.
- Yeh, M., & Yu, S. (2009). Job stress and intention to quit in newly-graduated nurses during the first three months of work in Taiwan. *Journal of Clinical Nursing*, 18(24), 350-360.