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The Effect of Workplace Stress on Employee Engagement, the Mediation Role of Leadership Style

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ABSTRACT

The aim of the current study was to investigate the impact of workplace stress on employee engagement within Iraqi universities through the mediator role of leadership style. Work-related stress and non-work-related stress were identified as representing workplace stress. Employee engagement has been measured through three types: social engagement, affective engagement, and intellectual engagement. Two types of leadership styles have been tested: directive and participative leadership. the structural equation Modeling was used to test the study model. A sample of 245 employees in Iraqi universities, including university professors, was targeted. Only 214 respondents participated in the survey. The results showed that non-work-related stress is the most influential factor in employee engagement. Furthermore, it has been found that the participative leadership style mediates the relationship between work-related and non-work-related stress and employee engagement. There is one exception; participative leadership did not mediate the impact of non-work-related stress on intellectual.

INTRODUCTION

Rapid and intense environmental changes have different impacts on the various sectors that affect or are affected by them. This impact seems evident in the business sector, which must respond quickly and effectively to environmental changes to ensure success or survival at the very least. It is possible that changes in the external environment may affect the internal performance of organizations, including rediscovering best practices, emphasizing efficiency, protecting intellectual property, and promoting human creativity and innovation. Yet that's not always the case; there is another undesirable aspect left by external environmental changes on the internal level of organizations, such as performance pressures, competitive efforts, and the struggle to survive. When environmental changes impose new work challenges, this is reflected in the efforts of employees, who ultimately try to fulfill their commitment by adapting to external changes or perhaps turning them into opportunities whenever possible. The acceleration of events results in additional pressures on employees, both physically and mentally, which may greatly limit their sense of well-being in the workplace. Some jobs add additional burdens that are necessary to adapt to the internal and external changes of the organization. As a result, employees have difficulties meeting deadlines, leading to higher levels of physical and psychological stress. Things can get worse if the supervisors' and managers' dissatisfaction is added as additional emotional stress. Regardless of the different forms of workplace stress, its causes can be summarized into a set of factors such as poor relationships with colleagues, exposure to bullying or exclusion, increasingly challenging job requirements,

and factors arising from a negative work environment. Therefore, monitoring workplace stress is necessary due to its direct link to negative outcomes, especially for employees, such as high absenteeism rates, decreased performance, and reduced participation.

Increasingly, the impact of workplace stress on various aspects of an organization, including the outcomes of human resources, is being observed and monitored. Employees are the most valuable asset of an organization and a key reason for its success and prosperity. If work stress has negative effects on employee outcomes, then that requires greater attention and control. One of the aspects that is negatively affected by workplace stress is employee engagement. One of the challenges facing companies' nowadays, especially in light of the difficult economic and social conditions, is the problem of low employee engagement levels. Employee engagement is a key indicator of a company's success, as it significantly affects employee performance and company results. Employee engagement is the relationship between the employee and the company and can be achieved by creating an inspiring and motivating work environment, providing the necessary support for employees to achieve their professional and personal goals, offering continuous training and development, providing more opportunities for interaction with employees, and improving communication between them. Employee engagement is important because it improves productivity and quality, reduces absenteeism and tardiness, and contributes to improving the company's image and making it a place where employees want to work. To achieve employee engagement, companies should implement some measures such as giving employees more freedom and flexibility at

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work, providing continuous training and development, motivating them in different ways such as offering rewards and promotions, and improving the quality of communication between employees and management and providing a healthy and suitable work environment.

Leadership styles vary from person to person and depend on personal culture and values. It is important to know leadership styles and apply them in the workplace to reduce tension and improve interaction among employees. Effective leadership styles encourage employees to participate and innovate, and allow them to feel tolerance and challenge. For example, democratic leaders use active listening and encourage participation to improve employee performance. This allows them to easily feel tolerance and acceptance, which helps reduce tension in the workplace. Additionally, leaders who follow a personal leadership style are characterized by their ability to communicate well with employees and motivate them to achieve goals. This style helps improve interaction and relationships among employees and reduces tension in the work environment. The main idea here is that effective leadership styles can lead to reducing tension in the workplace and improving interaction among employees. Leadership is often seen as the means to transform a negative work environment into a more productive one. Leadership contributes to role distribution and encourages creativity and innovation. In fact, the most important functions of leadership are to transform the workplace into a positive environment that supports employee creativity and, consequently, to achieve organizational goals.

In this study, we explore the potential impact of workplace stress on employee engagement. We primarily focus on the unique role of leadership style in improving the quality of the workplace and emphasizing positive employee outcomes. Thus, the main aim of the current study is to investigate the effect of workplace stress on employee engagement as well as the mediating role of leadership in that relationship.

LITERATURE REVIEW

Workplace Stress

Stress at the workplace is important because it directly affects the health and performance of employees (Chao *et al.*, 2015). If employees constantly feel stressed, it can lead to fatigue, exhaustion, and anxiety, negatively impacting their concentration and productivity (Vignoli *et al.*, 2017). If stress continues for a long period of time, it can lead to greater health problems such as high blood pressure, heart and cardiovascular diseases, and depression (Xu *et al.*, 2019). Therefore, it is important for companies to take measures to reduce stress in the workplace and provide a healthy and comfortable working environment for their employees. The emergence of workplace stress theories is one of the biological sciences concerned with monitoring the health of employees in the workplace and their potential impact on their overall health (Hobfoll, 1989). Since then, studies and academic work have continued to be interested in monitoring stress in the workplace due

to its direct relationship with organizational outcomes and employee well-being (Badu *et al.*, 2020). According to (Anthony-McMann *et al.*, 2017), employees who experience stress are more susceptible to frustration, which leads to a lack of engagement in the workplace. This opinion is based on the Conservation of Resources Theory, which suggests that individuals naturally seek to preserve valuable resources and experience stress due to fear of losing them. Employees respond poorly to tasks and new changes that do not align with their knowledge or thinking patterns (Hicks & Caroline, 2007; Nikolaou & Tsaousis, 2002). That might become more difficult when employees feel unable to adapt, not just unwilling (Çelik, 2018). When employees feel a lack of control over task accomplishment or a constant fear of losing good job gains, it leads to increased levels of stress and may result in a loss of control over performance (Wagner & Harter, 2006). We include here the primary factors that lead to stress in the workplace, but this does not mean that they are exclusive. Workplace stress can arise from several factors, including a toxic work environment (Colligan & Higgins, 2006; Hoboubi *et al.*, 2017), conflicting roles and responsibilities (Van den Brande *et al.*, 2016), unequal pay and benefits (Kakemam *et al.*, 2019), poor leadership style (Boyer-Davis, 2018), and so on.

(Kerdpitak & Jermisittiparsert, 2020) acknowledge the internal factors within organizations that lead to workplace stress, yet, they find that non-work-related factors play an equal role in creating stress in the workplace. (Kerdpitak & Jermisittiparsert, 2020) base their opinions on the ideas of (Eddy *et al.*, 2016; Foy *et al.*, 2019). Therefore, the factors of workplace stress can be discussed in two groups: work-related factors and non-work-related factors. Earlier, we discussed the factors related to work. The non-work-related factors include all other personal, social, and family factors of the employees' own lives. Non-work-related pressures, such as financial difficulties, marital problems, personal illnesses, and other social demands, can also contribute to increased stress in the workplace. According to (Foy *et al.*, 2019) opinion, culture, social roles, and change requirements also contribute to increased stress levels in the workplace, which are directly linked to absenteeism, decreased productivity, and engagement.

Employee Engagement

Emotionally, work engagement is usually described as the degree to which employees consider work as an important part of their lives, and think about it even when they leave the workplace (Kanungo, 1982). Work engagement refers to a set of relationships between employees and the company they work for, which includes elements such as loyalty, dedication, interest, and connection to the organization and its goals (Arifin *et al.*, 2019; Cesário & Chambel, 2017). Work engagement is considered a very important aspect for any company, as employees who are actively engaged in their work and committed to their tasks and the company's objectives tend to be

more productive and creative (Bakker & Leiter, 2017). They also feel satisfied and happy in their work and enjoy better mental and physical health, which in turn leads to increased profitability and an improved reputation for the company, attracting more talented employees (Gill, 2015; Upadaya *et al.*, 2016). fostering and achieving work engagement is one of the most important challenges facing companies today, and management should work to provide an inspiring and motivating work environment, provide opportunities for training, development, and advancement, as well as improving communication and connection between management and employees, and recognizing and emphasizing outstanding performance (Knight *et al.*, 2017). In line with the principles of work engagement, employee engagement is a result of a supportive work environment (Bailey *et al.*, 2017; Osborne & Hammoud, 2017). This ultimately depends on management's initiatives and programs aimed at supporting and nurturing employees (Pandita & Ray, 2018). (Chandani *et al.*, 2016) pointed out three levels of employee engagement: (1) active engagement, where employees are motivated by their passion to perform and participate. (2) Regular engagement, where employees perform their main tasks without passion or internal drive. (3) Disengaged employees who do not feel sufficient satisfaction or happiness to enhance their performance. (Soane *et al.*, 2012) developed a model for measuring employee engagement based on (Kahn, 1990) theory, which addressed employee engagement through a set of essential requirements such as job role, positive influence, and activation. The (Soane *et al.*, 2012) model focuses on social, affective, and intellectual engagement, assuming that each of these aspects plays a crucial role in the overall engagement of employees. Social engagement focuses on the degree of connection of the employee with their other colleagues and the extent to which they possess shared values. (Johnston, 2018) adds that social engagement focuses on collective activities within the workplace, including attempting to reach a common goal. Affective/Emotional involvement at work refers to the emotional relationship that connects an individual to their job and workplace. It's the extent of an employee's passion for their work, the feeling of belonging and commitment to the organization, and experiencing positive emotions such as excitement, pride, and loyalty. Emotional involvement is an important aspect of employee engagement, and it's critical for organizational success and productivity (Mañas *et al.*, 2018; Soane *et al.*, 2012). Intellectual engagement is concerned with the degree of cognitive comprehension or perception of the employee's role in the workplace, meaning the extent to which perceived knowledge is utilized in performing job tasks (Soane *et al.*, 2012). Intellectual engagement in work refers to the extent to which an individual participates mentally in their work tasks, experiencing the feelings of challenge, learning, and growth. It involves the effective use of an individual's mental potential to solve problems, make decisions, and contribute to the development of

new ideas and strategies (McCormick & McMullen, 2019; Strachan, 2015; Ha, & Le, 2023).

Leadership Style

Recently, leadership has become a distinctive new approach to managing employees and organizations in general. The new leadership styles place importance on strategic integration in order to improve management and follow strategic direction (Manning & Curtis, 2019). An effective leader today is described as a good diagnostician who has a style that meets the requirements of the situation they are working in (Kumari, 2018). Different leadership methods are used for employees based on the level of guidance, empowerment, and decision-making authority (Khan *et al.*, 2015). According to (Goleman *et al.*, 2002) the common leadership styles range from autocratic to democratic to participative. This scale focuses on the degree of involvement of subordinates in decision-making. The more autocratic the leadership style, the more the leader monopolizes decision-making without active participation from others. (Gandolfi & Stone, 2016) outlines five features of leadership: (1) the presence of one or more leaders; (2) the existence of followers for the leadership; (3) a focus on action and directing others towards that purpose; (4) the importance of setting a course of action and working to fulfill it; and (5) establishing the primary goals and objectives of the work.

The leadership styles mentioned in literature differ according to the location of their application, cultural and environmental characteristics. Therefore, there are no universally agreed-upon leadership styles. (Gandolfi & Stone, 2018) opines that leadership has gone through different time periods, resulting in various styles. Leadership began by focusing on command and control, then moved towards empowerment and tracking, and finally towards connection and nurturing. (Khan *et al.*, 2015) include the following leadership styles: autocracy style (the leader retains the maximum amount of power), authoritarian style (making decisions unilaterally and forcing others to implement them), democratic style (considering the opinions of others in decision-making), participative style (discussing the decision with others and making it collectively), and laissez-faire style (where the responsibility for sub-decision-making is left to others). In his discussion of innovation, (Łukowski, 2017) presents leadership styles in several categories, including directive versus participative leadership, where creativity increases when the leadership style is more participative. Interactive leadership, where leaders encourage others to express their opinions and engage in strategic participation. Charismatic leadership, where leaders are seen as role models to be followed. And transformational leadership, which can address change and provide more innovation. In the current study, we are testing two types of leadership styles: directive and participative leadership, as we believe that these are the closest styles to the business environment in Eastern societies (Fellows *et al.*, 2003; Galperin *et al.*, 2017; Nor Amin *et al.*, 2017; Siddiqua *et al.*, 2022).

Hypothesis Development

Workplace Stress and Employee Engagement

Several experimental studies have shown the existence of a relationship between work stress and employee engagement (Dinh, 2020; Rasool *et al.*, 2021; Wang *et al.*, 2022). Usually, employee engagement tends to be weaker in more stressful work environments, regardless of the causes of that stress (Winasis *et al.*, 2020). Stress in the workplace has a negative impact on employees' performance as well as their productivity and creativity (Naseem, 2017; Pandey, 2020). We are investigating the relationship between work-related and non-work-related stressors and employee engagement. Work-related stressors include a toxic work environment, conflicting roles and responsibilities, unequal pay and benefits, poor leadership styles, and so on. On the other hand, non-work-related stressors include all other personal, social, and family factors of the employees' own lives. Thus, we investigate the relationship between workplace stress and employees' engagement through the following hypotheses:

H01a: work-related factors of stress have a negative effect on social engagement.

H01b: work-related factors of stress have a negative effect on affective engagement.

H01c: work-related factors of stress have a negative effect on intellectual engagement.

H01d: Non-work-related factors of stress has a negative effect on social engagement.

H01e: Non-work-related factors of stress has a negative effect on affective engagement.

H01f: Non-work-related factors of stress has a negative effect on intellectual engagement.

Mediation Role of Leadership Style

Previous literature has discussed various forms of the impact of leadership style on the relationship between workplace stress and employee engagement. Leadership style can mitigate the impact of workplace stress on employee engagement. If leaders adopt an encouraging and supportive leadership style and care for their employees, they will feel valued and appreciated, and they will be more comfortable and satisfied with the work environment and the organization as a whole (Lyons & Schneider, 2009; Olsen *et al.*, 2023). Leaders who intend

to use a democratic, directive, or consultative leadership style can also alleviate stress by encouraging effective participation and shared responsibility for achieving goals, providing guidance, training, and the necessary support to efficiently and effectively carry out tasks (Bhatti *et al.*, 2012; Osazevaru, & Amawhe 2022). However, when leaders follow an autocratic or power-supportive leadership style, it will increase stress on employees and affect their engagement and satisfaction with work (Erskine & Georgiou, 2017). Therefore, the right leadership style can play an important role in improving employee engagement and reducing the impact of work stress on their performance (Pishgooie *et al.*, 2019; Saad *et al.*, 2018). Based on the above discussion, the conceptual model is shown in Figure 1. We propose the following hypothesis:

As for the work-related stress factors, we propose the following hypothesis:

H02a: Directive leadership style mediate the effect of work-related stress factors on social engagement.

H02b: Participative leadership style mediate the effect of work-related stress factors on social engagement.

H02c: Directive leadership style mediate the effect of work-related stress factors on affective engagement.

H02d: Participative leadership style mediate the effect of work-related stress factors on affective engagement.

H02e: Directive leadership style mediate the effect of work-related stress factors on intellectual engagement.

H02f: Participative leadership style mediate the effect of work-related stress factors on intellectual engagement.

As for the non-work-related stress factors, we propose the following hypothesis:

H03a: Directive leadership style mediate the effect of non-work-related stress factors on social engagement.

H03b: Participative leadership style mediate the effect of non-work-related stress factors on social engagement.

H03c: Directive leadership style mediate the effect of non-work-related stress factors on affective engagement.

H03d: Participative leadership style mediate the effect of non-work-related stress factors on affective engagement.

H03e: Directive leadership style mediate the effect of non-work-related stress factors on intellectual engagement.

H03f: Participative leadership style mediate the effect of non-work-related stress factors on intellectual engagement.

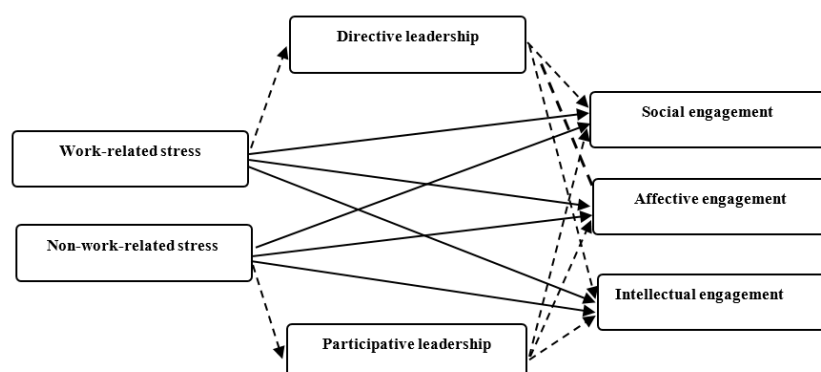


Figure 1: Conceptual model

METHODOLOGY

Instrument

A questionnaire was used as a tool for data collection in the current study. The questionnaire consisted of 28 sub-items. 4 sub-items were assigned to each dimension (Work-related stress WS, Non-work-related stress NWS, Directive leadership DL, Participative leadership PL, Social engagement SA, Affective engagement AE, Intellectual engagement IE.). Items have been assigned according to a 5-point Likert scale (1=strongly disagreed, 5=strongly agreed). Several questionnaire items have been modified based on feedback from knowledgeable academics and professionals in the Iraqi university sector, with the aim of improving the quality of measurement. An electronic version of the questionnaire has been developed to reach the sample effectively from remote locations. We used multiple methods in the survey to reach the targeted sample, including university professor groups through social media platforms such as Facebook and Telegram. The reliability and stability of the questionnaire were verified before starting the distribution phase.

Sampling and Data Collection

We targeted employees at the Iraqi universities to represent the study sample. There is a wide controversy about the continuous work stress experienced by employees in Iraqi universities, including professors. In the pilot survey, many professors reported that they had to complete their work at home, which leads to additional stress due to the inability to fulfill family obligations in exchange for work obligations. We provided the sample with guarantees regarding the confidentiality of the data to be used for research purposes only. The intentionally selected sample focused on employees in Iraqi universities, including professors who hold administrative positions in addition to their work, professors, and administrative staff in important places, including research centers, postgraduate studies affairs, and libraries. So far, there is no official index about the size of the study population, so we intentionally targeted a sample. 245 responses were received. 214 valid responses have been extracted after checking and verification.

Variables and Measures

The conceptual model of the study included three variables. Workplace stress was the independent variable,

the sub-variables were work-related stress and non-work-related stress. Each sub-variable contained 4 items, so the items of the independent variable are 8. Employee engagement represented the dependent variable, with three dimensions: social, affective, and intellectual engagement. Each sub-variable contained 4 items, so the items of the dependent variable are 12. The leadership style is the mediator variable, with two sub-variables: directive and participative leadership. Each sub-variable contained 4 items, so the items of the dependent variable are 8. Thus, the total items were 28. We adopted the (Kerdpitak & Jermstiparsert, 2020; Soltan *et al.*, 2020) scale for measuring workplace stress. Developed by (Soane *et al.*, 2012), a dedicated scale was established to measure the employees' engagement, consisting of three parts: social, affective, and intellectual engagement. We relied on (Soane *et al.*, 2012) work to measure employee engagement in the current study. 8 items of leadership styles, both; directive and participative, have been adopted from (Araffat *et al.*, 2020), all of which have been redistributed into a 5-point Likert scale.

RESULTS AND DISCUSSIONS

Preparation and Analysis

Demographics

Table 1. summarizes the demographic responses. Men are the relatively most participating group in the survey. 116 men responded, with a representation rate of 54% compared to 46% for women. Middle- to older-aged groups had the most responses. 61% of the participants were aged between 32 and older than 39 years. 39% were young. This result is important because older employees are more sensitive to work stress due to other factors besides age, such as social and family obligations. This may increase concerns about reduced work engagement due to stress, whether work-related or not. 40% of the respondents were professors who carry out administrative tasks in addition to their educational duties. 30% were professors with no additional administrative tasks. The remaining 30 percent were mostly administrative staff and others who held unspecified roles. Additional tasks usually increase work-related stress. These data provide a better understanding of work-related stress factors. In terms of work experience, most participants have experience exceeding 10 years. Approximately 70% of respondents have work experience ranging from 10 to more than 14 years.

Table 1: Demographic responses

Variable	Category	Frequency	Percent %	Cumulative Percent %
Gender	Male	116	54	54
	Female	98	46	100
Age	18-24 years	37	17	17
	25-31 years	46	22	39
	32-38 years	59	27	66
	39 or older	72	34	100

Role	Professor with an A.P.	86	40	40
	Professor	64	30	70
	Administrative staff	43	20	90
	Other	21	10	100
Experiences	0-4 years	25	12	12
	5-9 years	41	19	31
	10-14 years	89	41	72
	Above 14 years	59	28	100
Total		214	100	100

Validity and Reliability

Some tests have been applied to ensure the reliability of data measures. Table 2 revealed that all factors loading were acceptable, indicating that the correlation between the items and the components was good enough to proceed. For internal consistency analysis, two methods were used: Cronbach's alpha and the split-half method. All values were greater than the generally accepted 0.7 in

the Cronbach's alpha test. They ranged between 0.816 and 0.879. The results were supportive even after splitting the data into two halves. All values of the split-half analysis were supportive.

According to the results of the Kaiser-Meyer-Olkin (KMO) Test, all values were higher than 0.6, and all of them were statistically significant (sig <0.001), indicating an adequate sample size.

Table 2: Validity and reliability test

Variables		Items	Loading	Alpha	KMO	Split-half
Workplace Stress	Work-Stress	WS1	0.965	0.828	0.770	0.777
		WS2	0.838			
		WS3	0.845			
		WS4	0.895			
	Non-Work-Stress	NWS1	0.809	0.817	0.804	0.828
		NWS2	0.834			
		NWS3	0.793			
		NWS4	0.776			
Employee Engagement	Social Engagement	SE1	0.850	0.848	0.737	0.825
		SE2	0.818			
		SE3	0.793			
		SE4	0.865			
	Affective Engagement	AE1	0.799	0.820	0.768	0.781
		AE2	0.833			
		AE3	0.883			
		AE4	0.738			
	Intellectual Engagement	IE1	0.813	0.879	0.821	0.790
		IE2	0.877			
		IE3	0.880			
		IE4	0.857			
Leadership Style	Directive Leadership	DL1	0.751	0.816	0.769	0.771
		DL2	0.702			
		DL3	0.804			
		DL4	0.721			
	Participative Leadership	PL1	0.795	0.846	0.760	0.780
		PL2	0.830			
		PL3	0.870			
		PL4	0.824			

Confirmatory factor analysis (CFA) was used to examine the reliability and stability of the items relative to their components. Initially, we examined the average variance extracted (AVE) of each item to ensure the convergence validity. We also calculated the composite reliability (CR) score for each latent variable individually. All values of the average variance extracted were greater than the generally accepted value, which is 0.5.

Also, the composite reliability values were higher than the statistically acceptable value of 0.7, indicating a high degree of reliability and good measurement quality. Based on the outputs of the validity and reliability tests, we used structural equation modeling (SEM) to test the research

model. To assess the model's fit to the data, we calculated the Comparative Fit Index (CFI) and the Goodness-of-Fit Index (GFI). The outputs of CFI indicated an acceptable to excellent fit, ranging from 0.926 to 0.965. The GFI values were also good, ranging from 0.950 to 0.967, This indicates that the study model explains a good range of the observed variance and covariance. The root mean square error of the approximation (RMSEA) was highly acceptable. All values were between 0 and 0.08, indicating a high level of fit quality. Thus, the model is suitable for testing through structural equation modeling. The table 3 summarizes the results of the factor analysis and model fit.

Table 3: Factor analysis and model fit

Items	CMIN/DF	AVE	CR	CFI	GFI	RMSEA
Workplace Stress	2.98	0.759	0.946	0.902	0.950	0.07367
Employee Engagement	1.33	0.719	0.926	0.942	0.962	0.033524
Leadership Style	1.89	0.769	0.945	0.941	0.967	0.055216

Table 3 illustrates descriptive statistics and correlations among the items. Among the workplace stresses, work-related stress was at the highest level within the sample (\bar{x} = 4.340). According to the outputs of the mean, employee social engagement is the most prevalent. The intellectual engagement is the least. However, all items

of engagement were at a high level. The leadership style tends to be participative (\bar{x} = 4.148) rather than directive (\bar{x} = 3.347), according to the sample responses. However, it seems that the characteristics of directive leadership are also present.

Table 4: Descriptive statistics and correlations

Items	Mean	SD	WS	NWS	SE	AE	IE	DL	PL
WS	4.340	0.656	1						
NWS	4.314	0.647	0.850**	1					
SE	4.261	0.723	0.709**	0.813**	1				
AE	4.173	0.748	0.732**	0.762**	0.796**	1			
IE	4.060	0.832	0.730**	0.802**	0.697**	0.811**	1		
DL	3.347	0.872	0.161	0.212*	0.155	0.189*	0.236*	1	
PL	4.148	0.775	0.408**	0.423**	0.436**	0.561**	0.458**	0.119	1

n = 214 Note: Significance level at <0.05*, <0.01**

Hypothesis Testing

The model was tested through structural equation modeling (SEM). Nine statistically significant relationships were obtained among the items. The remaining nine relationships were not significant. Starting with the impact of workplace stress, work-related stress was the only item affecting employee engagement, specifically affective engagement (p < 0.05). Contrary to work-related stress, all non-work-related stressors had an impact on employee engagement. Non-work-related stress has a greater impact on social engagement (Estimate=0.821), followed by intellectual engagement (Estimate=0.770), and finally affective engagement (Estimate=0.489). The output of the model did not reveal a mediating role for the directive leadership style in the relationship between work-related stress and employee engagement (all its elements), all significant levels were greater than 0.05. Confirming what we obtained earlier, participative

leadership mediated the effects of work-related stress on employee engagement at various levels. participative leadership mediated the impact of work-related stress on affective engagement to a greater extent than other items (p = 0.000). in intellectual engagement (p = 0.008). and in social engagement (p = 0.018). Once again, there was no mediating role for the directive leadership style in the effect of non-work-related stress on employee engagement, including all items. All significance levels were greater than 0.05, in the context where the regression slope was negative in the relationship between non-work-related stress and cognitive engagement through directive leadership (Estimate=-0.015-). Regarding participative leadership, there was a mediating role in the relationship between non-work-related stress and employee engagement, particularly in terms of affective (p = 0.000) and social engagement (p = 0.023). Table 5 illustrates the results of hypothesis analysis.

Table 5: Hypothesis Testing

Hypothesis	Path	Estimate	C.R.	P	Conclusion
H01a	WS → SE	0.047	0.407	0.684	Not Supported
H01b	WS → AE	0.292	2.416	0.016*	Supported
H01c	WS → IE	0.198	1.480	0.139	Not Supported
H01d	NWS → SE	0.821	6.800	0.000**	Supported
H01e	NWS → AE	0.489	3.891	0.000**	Supported
H01f	NWS → IE	0.770	5.533	0.000**	Supported
H02a	WS → DL → SE	0.035	0.609	0.554	Not Supported
H02c	WS → DL → AE	0.063	1.098	0.275	Not Supported
H02e	WS → DL → IE	0.116	1.821	0.071	Not Supported
H02b	WS → PL → SE	0.164	2.394	0.018*	Supported
H02d	WS → PL → AE	0.304	4.760	0.000**	Supported
H02f	WS → PL → IE	0.206	2.722	0.008*	Supported
H03a	NWS → DL → IE	-0.015	-0.307	0.759	Not Supported
H03c	NWS → DL → AE	0.025	0.451	0.653	Not Supported
H03e	NWS → DL → SE	0.065	1.155	0.251	Not Supported
H03b	NWS → PL → IE	0.105	1.818	0.072	Not Supported
H03d	NWS → PL → AE	0.281	4.563	0.000**	Supported
H03f	NWS → PL → SE	0.156	2.313	0.023*	Supported

Note: Significance level at <0.05*, <0.01**

DISCUSSION

A healthy work environment is essential for the success of management efforts to improve the satisfaction, engagement, and, consequently, productivity of employees (Attridge, 2009; Osborne & Hammoud, 2017). The general trend of current studies tends to focus on linking leadership and management styles toward employee performance and productivity (Lim & Yazdanifard, 2012; Maida *et al.*, 2017). As noted in the descriptive statistics, employee stress at the workplace depends on several factors. The results of the current study support (Kerdpitak & Jermsittiparsert, 2020; Soltan *et al.*, 2020) insights on two types of factors influencing workplace stress: work-related and non-work-related factors. The differences between stress factors are not that significant. It seems that they have a similar impact in terms of intensity or strength. Work-related stress affects employee engagement; affective engagement in specific. There is no significant effect of work-related stress on social and intellectual engagement. The enthusiasm, interest and positive emotional response that individuals exhibit during their engagement with a specific experience or situation could all be influenced by work conditions, including the way they have to do the work and the support they receive. On the other hand, non-work-related stress affects employees' social, affective, and intellectual engagement, respectively, in terms of intensity. Non-work-related stress is more important for monitoring and measurement in this case. It is evident that measuring and addressing non-work-related stress is more challenging for the internal aspect of organizations. Often, organizational leaders may not be able to take

direct action, but their care and support for employees can mitigate the severity of this impact.

Directive leadership style has no mediating role in the relationship between work-related stress and employee engagement in all its aspects. When leaders' approach focuses on high levels of control, centralization of decision-making authority, strong monitoring, and providing specific instructions and guidance to subordinates on how tasks should be accomplished, employees find themselves facing more stress and lower levels of engagement consequently. The directive leadership style is likely to be less effective in several situations, especially when it comes to innovation and renewal. That is not the case in the university work environment, where employees constantly experience more changes and conditions. On the contrary, participative leadership mediates the relationship between work-related stress and employee engagement. Collaborative leadership style and social engagement are closely related. In this style, leaders encourage employees to participate collectively in general and strategic issues, taking all opinions into consideration. These practices can enhance team cohesion and foster initiative and collaboration within the work environment. On the other hand, when leaders involve employees in decision-making processes, top-level issues, and value all of their suggestions and opinions, that is a signal of trust, respect, and recognition. This involvement fosters a sense of empowerment and ownership among employees, leading to higher levels of engagement. The participative leadership style enhances employees' skills and motivates them towards active cognitive engagement. There is a significant and empirically proven correlation between

participative leadership style and creativity. Supportive leaders encourage employees to solve problems in a creative manner and promote the proper sharing and utilization of knowledge within the work environment. As long as stress factors are connected to work and the work environment encourages participation and cooperation, it is natural for leaders to be more capable of understanding and effectively addressing them. Taking into consideration the nature of academic work, which focuses on elements of creativity, dealing with work problems, and ways of success and excellence.

Regarding non-work-related stress, there is no mediating role for the directive leadership style. Non-work-related stress has negative effects on employee engagement, even with the implementation of directive leadership practices, which may focus more on work processes and procedures than on employees' conditions and feelings. Directive leadership styles do not help alleviate the effects of social and familial problems experienced by employees. It is focusing on performance rather than results. This reinforces traditional task-oriented performance among employees without the desire to improve the process or make it more productive. On the other hand, it seems that the situation is different in the case of the participative leadership style. There is a mediating role for participative leadership in the relationship between non-work-related stress, and social and affective engagement. Even when the factors causing employee stress are external, meaning they are not work-related, the participative leadership style will be able to reduce the impact of that stress on employee engagement. Positive relationships and collective participation within the work environment can improve employees' morale by providing them with a positive space for thinking and guidance on how to solve other external challenges. However, participative leadership does not help reduce the impact of non-work-related stress on intellectual engagement. Employees face more challenges in dealing with stress resulting from social, personal, or financial problems. This stress occupies a significant portion of employees' thinking and affects their intellectual engagement within the work environment. Even with programs and initiatives aimed at employee well-being, non-work-related stress depends on the employees themselves. It is essential for employees to make a decision to resolve this conflict in order to mitigate its impact on other areas, including work.

CONCLUSION

In this study, we investigated the impact of workplace stress on employee engagement. We discussed two types of workplace stress: job-related stress and stress resulting from various factors unrelated to work, such as social, family, and personal factors. In the field of employee engagement, we relied on literature regarding different types of employee engagement and subsequently identified three possible types to measure in the current study: social engagement, affective engagement, and intellectual engagement. According to the nature of

the sample in which this study was conducted, where participants spend more time completing tasks from home, we found that non-work-related stress has a greater impact on employee engagement. Work-related stress only affects affective engagement, while non-work-related stress affects all types of employee engagement mentioned above.

Two types of leadership styles have been tested as mediators in the relationship between workplace stress and employee engagement. Directive leadership is the first style, which focuses on authority, delegation, centralized decision-making, and continuous guidance. The second style is participative leadership, where greater attention is given to employees' opinions and their involvement in strategic issues, encouraging teamwork and collaboration to enhance creativity and innovation. In the mediation analysis, there was no role for the directive leadership style in the impact of workplace stress on employee engagement. The directive leadership style is the lowest level within the study variables. Its impact is likely to be less intense, especially when it comes to work-related stress factors. While the presence of a mediator role for the collaborative leadership style in influencing work-related stress on employee engagement, in all its forms, became evident. We concluded that employee stress is at its lowest level due to work factors and that the presence of a supportive leadership style for participation and teamwork can alleviate the remaining impact. In terms of non-work-related stress, there was no mediating role for leadership styles, both directive and participative, in the relationship between workplace stress and employee engagement. However, with the exception of that, there is a mediating role for the participative leadership style in the impact of non-work-related stress on employees' affective and social engagement. In the end, we concluded that the participative leadership style is better in the university workplace than the directive style. Furthermore, workplace stress factors are mostly external, meaning outside the workplace. Perhaps the additional tasks performed by participants at home are one of the factors contributing to these results.

We emphasize giving greater attention to employees' personal issues. These issues are not necessarily work-related but rather unrelated to work. Employees who experience external work pressures need to find support and assistance in the work environment. This can help mitigate the impact of external problems not only on the employees' performance but also on their mental health in general. Flexible leadership styles seem to be the most suitable for the university work environment. It is difficult to separate functional boundaries within the organizational structure for university professors. Even if it is possible, university professors still enjoy privacy and high social status. Supportive leadership styles that promote participation and camaraderie can help reduce external work pressures and may contribute to their resolution in the end.

Despite the procedural results presented by this study

on practitioners and leaders regarding the most suitable leadership styles for the university work environment, the current study was not without some limitations that need to be taken into consideration. In the beginning, the data acquisition phase was somewhat difficult due to the official procedures to obtain approvals. Many participants did not comply with responding, resulting in a number of unhelpful responses. This study was conducted in Iraq and targeted a purposive sample of university employees, including professors. Therefore, the results of the current study cannot be generalized to other countries. There are also limitations in terms of sample size, which is considered small compared to the overall population. Leadership styles are mostly subject to legislation and guidelines that determine how to manage university institutions. This can be an additional constraint in precisely identifying possible leadership styles. Unfortunately, we did not find in the literature what specifically supports the results we have reached. Therefore, we presented our interpretation of the results in light of previous international literature, including those closest to the Iraqi business environment. The university work environment is extremely complex and constantly subjected to changes and emerging events, especially with the activities of international rankings and the accompanying new tasks. It is necessary to identify the roots of workplace stress, both work-related and non-work-related. Work-related stress falls under the control of management and can be easily addressed. It is important to investigate non-work-related stress factors, especially considering the numerous reports highlighting the difficulty of completing job tasks from home. If it is necessary to complete work tasks from home, it is essential to consider providing appropriate financial and moral compensation. Based on the results of the current study, leadership style can enhance a positive work climate and reduce the impact of workplace stress. There is importance in promoting leadership practices based on collective participation and actively listening to employees.

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