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Interactions between work-life balance, work environment and psychological distress among selected medical facilities staff in Lagos, Nigeria

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Abstract

This study assessed the interactions between work-life balance, work environment and severity of psychological distress (PD) among workers in medical facilities in Lagos Nigeria. A total of 215 participants (males = 115 and females = 100; mean age = 31.0±11.0) who were purposively selected from publicly and privately owned hospitals responded to the Work Environment scale 10, Work life balance scale and the General Health Questionnaire-12 (GHQ-12). Results show that work-life balance (WLB) and psychological distress were negatively correlated (r = -.18, p= .01). This implied that the higher the rate of work-life balance, the lower the psychological distress among the workers in medical facilities in Lagos, Nigeria. Work environment (WE) significantly and independently predicted the severity of psychological distress of workers in medical facilities in Lagos, Nigeria [F (1, 213) = 13.83, p <.01]. WLB and WE jointly and independently predicted PD. Job designations significantly influenced PD, with nurses reporting the highest mean scores, followed by doctors. Gender had no significant influence on psychological distress [t (213) = -1.45; p >.05]. This implies that male medical practitioners in Lagos, Nigeria (M= 29.37; SD= 5.51) do not differ from those of their female counterparts (M= 30.69; SD= 7.11), suggesting that both female and male participants manifested similar psychological distress. Based on the findings of this study, it is concluded that age, duration of service, work-life balance,
Heritage

and work environment are strong predictors of PD among workers in medical facilities in Lagos, Nigeria. Nurses also reported the highest PD, followed by medical doctors. The provision of an enabling work environment and a healthy balance of work and family life is recommended.

Keywords: Digital Humanities, Artificial Intelligence, Technological Determinism, Ethical Implications, Cultural

Introduction

Most people experience stress once in a while however, psychological distress has a more profound effect on individuals. The American Psychological Association (APA dictionary, 2018) defines psychological distress (PD) as a collection of unpleasant mental and physical symptoms that are typical of most people's mood swings. PD may be a sign of major depressive illness, anxiety disorder, schizophrenia, somatisation disorder, or several other clinical problems, according to the American Psychological Association (2018). Psychological distress can vary from mild emotional stress to serious psychological stress and may be a red flag for major psychiatric issues. It is noteworthy that experiencing PD is not always an indication of the presence of a mental health disorder.

Distress is a diagnostic criterion for some psychiatric disorders, such as major depression and generalised anxiety disorder, as well as impairment in day-to-day functioning, which is a sign of the intensity of symptoms in other disorders (e.g., obsessive-compulsive disorders, post-traumatic stress disorder) (Ridner, 2004). Consequently, psychological distress (PD) would primarily be considered a medical concern if it is combined with other symptoms that meet the diagnostic requirements for mental disease (Elbay et al., 2020). According to Payton (2009), psychological distress is essentially described as an emotional state of suffering marked by depressive symptoms such as melancholy, anxiety, hopelessness, and loss of interest. These symptoms could be related to somatic symptoms, which include headaches, sleeplessness, and low energy and are likely to differ depending on the culture (Kirmayer, 1989).

Lin et al. (2024) have highlighted a high prevalence of psychological distress, including burnout, despair, and anxiety, among medical practitioners, raising serious concerns about the prevalence of psychological distress among the population. According to Billings et al., (2021), medical health professionals serve as front-line healthcare

providers, equipped to treat patients with a wide range of ailments. That means that to meet health requirements, individuals have to work long and stressful shifts and continually run the risk of contracting an infection. In summary, individual coping abilities may not be sufficient to handle the sources of pain they are exposed to (Billings et al., 2021). According to Appelbom et al. (2024), employees in the health industry are seen to be under the greatest stress since they must remain vigilant at all times. These healthcare professionals frequently feel as though they are being overworked and don't even have enough time for personal hobbies (Billings et al., 2021). Regretfully, poor working conditions and a lack of work-life balance are major contributors to psychological distress among healthcare professionals (Appelbom et al., 2024).

The concept of work-life balance, as defined by Lupu and Ruiz-Castro (2021), consists of three words: life, work, and balance. It broadly refers to setting appropriate priorities between work, which includes career and ambition, and life, which includes pleasure, health, leisure, spiritual development, and family. The balance, on the other hand, is defined as contentment and effective functioning at work and home with a minimum of role conflict. It refers to the degree to which people are equally involved in and content with their roles as family members and professionals. The absence of conflict between work and personal or family responsibilities is a common definition of work-life balance (Quick et al., 2004). Lupu and Ruiz-Castro (2021) have proposed that problems resulting from an unbalanced work-life schedule can be divided into three groups: physiological effects (such as fever, headaches, and insomnia); emotional effects (such as anger, anxiety, and dissatisfaction); and behavioural effects (such as substance abuse, absenteeism, and poor communication), all of which are indicators of psychological distress.

According to Sundstrom et al. (2000), the settings, circumstances, and conditions in which individuals operate are referred to as the work environment. According to Brinner (2000), it is further defined as a category that encompasses the physical environment, job characteristics (such as workload), organisational features, and extra-organisational characteristics, including the industry sector and local labour market conditions. The dynamics of the work environment can negatively or increasingly impact an employee's motivation, personal control, and interpersonal relationships (Yusuf & Metiboba, 2012). According to Briner (2000), there are a variety of intricate ways in which an employee's psychological health may be impacted by features of their workplace. According to Briner (2000), there are a variety of intricate ways in which an employee's psychological health

may be impacted by features of their workplace. According to Briner (2000), anxiety and psychological discomfort account for a significant share of the frequent psychological issues that arise in the workplace and have a detrimental influence on both employees and their employers (Hassan, 2018). This gave rise to a variety of behavioural strategies that helped establish a thoughtful connection between the workplace and the mental well-being of workers at different levels. While examining the relationship between work environment and psychological health, a study by Wong and Greenwood (2023) suggested further research to definitively establish the role of work environment on employees' psychological health.

Due to the large number of patients who come in for emergency care and other reasons at odd hours, many medical professionals are required to work different shifts and be available at all times. This implies that they may not be able to focus on anything other than their jobs or spend much time with their families, making it impossible for these professionals to maintain a work-life balance (Billings et al., 2021). For this reason, the two independent variables—work-life balance and the work environment, as well as the demographic factors, were chosen to examine their impact on psychological discomfort in the same set of workers who are at risk (Samadbeik et al., 2024).

The relationship between demographic variables and the psychological well-being of health professionals is a well-researched area. Various studies have explored how factors such as age, gender, marital status, education, and employment status influence the mental health and overall well-being of healthcare workers (Samadbeik et al., 2024). Research indicates that age and gender can significantly impact psychological well-being (Sirgy, 2021). For instance, younger healthcare professionals often reported higher levels of stress and burnout compared to their older counterparts (Smith et al., 2023). Gender differences also exist, with female healthcare workers frequently experiencing higher levels of psychological distress than males (Viertiö et al., 2021). The study is focused on the staff of medical facilities in Lagos State. There is a paucity of literature on the interactions between work-life balance, work environment and psychological distress among staff of medical facilities in Lagos, Nigeria. Hence, this research seeks to contribute to closing this knowledge gap.

Hypotheses

1. There will be a significant correlation between work-life balance and psychological distress among workers in medical facilities in selected hospitals in Lagos, Nigeria.
2. The work environment will significantly predict psychological distress among workers in medical facilities in selected hospitals in Lagos, Nigeria.
3. Work-life balance and work environment will jointly and significantly predict psychological distress among the participants.
4. Job designations will significantly influence psychological distress among medical workers in Lagos.
5. There will be a significant gender influence on psychological distress among workers in medical facilities in Lagos, Nigeria.

Materials and Methods

The survey research method of data collection was employed as the research design in this study. The population of the research involved the medical practitioners in Lagos State, as this study was conducted in Lagos State, Nigeria. It was focused specifically on hospitals within the state. A cross-sectional research design was adopted in this study. A multi-staged sampling technique was used to select a total of 215 participants (males = 115 and females = 100; mean age = 31.0±11.0) from both publicly and privately owned hospitals within Lagos metropolis.

Work-Life Balance Scale

This scale was originally developed by Fisher-McAuley et al. (2003) to assess employee perceptions of work-life balance. The original scale consisted of 19 items designed to measure three dimensions: Work Interference with Personal Life (WIPL), Personal Life Interference with Work (PLIW), and Work/Personal Life Enhancement (WPLE). The modified 15-item version has been widely used in subsequent research to evaluate work-life balance. Ijide and Uzonwanne (2015) reported the scale's reliability using Cronbach's alpha coefficient. WIPL scored 93, PLIW scored 85, and WPLE scored 69. A high score denoted less interference, and less interference was understood to mean a better work-life balance. Due to the positively written nature of the items, the scoring for the WPLE dimension was 1, 2, 3, 5, 6, and 7 (i.e., 1 for Not at

all, 4 for Sometimes, and 7 for Always). A high score denoted a significant improvement in professional and personal life. It is thought that greater work-life balance is correlated with higher levels of work/personal life enhancement (Ijide & Uzonwanne, 2015).

Work Environment Scale (WES)

The Work Environment Scale (WES) was developed by Moos and Insel (1974). It measures the social environment of various work settings and includes ten sub-scales divided into three sets: Relationship Dimensions, Personal Growth or Goal Orientation dimensions, and System Maintenance and System Change dimensions.The psychometric properties of the sub-scales proved to be acceptable. All the sub-scales were significantly correlated with at least one satisfaction item, and /or the time the staff expected to continue at the ward (Rossberg et al., 2004).The internal consistency of the sub-scales was calculated as Cronbach's alpha. Most notably, the self-realisation sub-scale was strongly correlated to general satisfaction with the ward, and to the time the staff expected to work on the ward in the future, while conflict was strongly negatively correlated with liking for staff. WES-10 appears to measure four clinically meaningful subscales. It seems well suited for use in further research and evaluation of clinical milieus (Rossberg et al., 2004).

Psychological Distress Scale

The General Health Questionnaire (GHQ-12) is a widely used tool for screening general psychiatric morbidity. Its psychometric properties have been extensively studied, demonstrating good reliability and validity across various populations and settings. The GHQ-12 has shown high internal consistency, with Cronbach's alpha coefficients typically ranging from 0.82 to 0.85. Test-retest reliability is also strong, indicating that the measure produces stable results over time.The GHQ-12 has been validated in numerous studies, showing good construct validity. It effectively distinguishes between cases and non-cases of psychiatric disorders. The GHQ-12 has been used in Nigerian studies (Akpunne & Akinnawo, 2017; Akpunne et al., 2020).

Results
Socio-Demographic Data of Respondents

This section gathers information on the demographic characteristics of the research participants.
The distribution of respondents by sex shows that 53.5% of the respondents are male, while 46.5% are female. Mean age 31.0±11.0

years. The educational qualification distribution shows 6.6% (14) had senior secondary school degrees, 3.3% (7) had Diploma/OND degree, 5.2% (11) had Higher Diploma degrees, 64.3% (137) were B.Sc. degree holders, 1.4% (5) had MBBS certificate, 14.6% (31) were M.Sc. holders and 4.7% (10) were PhD holders. Also, 37.1% (79) were married, 61.0% (131) were single, and 1.9% (5) were divorced. Based on the employment status of the participants, it was revealed that 22.1% (47) were doctors, 27.7% (59) were nurses, 24.4% (53) were administration personnel, and 25.8% (56) fell under the others category. Finally, the organization type of the participants shows 34.3% (74) worked in public organisations, while 65.7% (141) worked in privately-owned hospitals.

Test of prevalence

Table 1: Prevalence of Psychological distress among workers in medical facilities

	Nil (%)	**Mild (%)**	**Moderate (%)**	**Severe (%)**
PD	20.6	27.3	36.6	15.5

Source: Researcher fieldwork

Table 2

		Mean	**SD**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1	Age	31.04	11.00	1						
2	Sex	1.46	.49	-.106	1					
3	Job status	2.54	1.10	-2.80**	-.021	1				
4	Duration of Service	6.95	7.36	.898**	-.119	-.290**	1			
5	Work life Balance	59.52	7.44	.109	-.060	-.025	.056	1		
6	Work environm	32.	3.96	.08	.0	.0	.0	.0	1	

	ent	41		6	19	15	16	21		
7	Psychological distress	29.97	6.31	-.190**	.104	-.070	-.183*	-.183*	-.265**	1

Pearson's correlation Matrix of variables of interest and PD
***. Correlation is significant at the 0.01 level (2-tailed).*
**. Correlation is significant at the 0.05 level (2-tailed).*
Source: Researcher fieldwork

Table 2 is a summary of the correlation matrix of the variables of interest in this study. There is Significant negative correlation between age and psychological distress (r = -.109, p <0.01). This result implies that younger medical workers reported higher PD scores. Also significant inverse correlation was found between PD and duration of service (r = -.183, p <0.05), work life balance (r = -.183, p <0.05) and Work environment (r = -.265, p <0.01) respectively. This result is an indication that the fewer the duration of service higher PD scores. Also that the poorer the work life balance and work environment the more the psychological distress reported by the participants.

Test of Hypotheses

Table 3:*Pearson's Correlation of Work-Life Balance and Psychological Distress among Medical Practitioners.*

N = 215

Variable	**N**	**r**	***P***
Work life Balance	215	-.183	.013
Psychological distress			

Source*: Researcher fieldwork*

As shown in Table 3, the correlation coefficients between work life balance and psychological distress of workers in medical facilities in Lagos, Nigeria was negatively significant (*r*= -.18, *p*= .01). This implies that the higher the rate of work-life balance, the lower the psychological distress among the medical practitioners in Lagos, Nigeria. This finding supports the formulated hypothesis and was accepted.

Table 4: *Regression Analysis of Psychological Distress by Work Environment.*

Variables	**Beta (β)**	**t**	**F**	**R^2**	**Sig**	**P**
Psychological Distress	43.24	11.98	13.83	.07	.00	<.01
Work Environment	-.41	-3.72				

Source: *Researcher fieldwork*

The result in Table 4 revealed that work environment significantly and independently predicted the severities of psychological distress of worker in medical facilities in Lagos, Nigeria [F (1, 213) = 13.83, p<.01], which also accounted for 7% variance in the dependent variable of psychological distress (R^2 =.07). This result confirmed the formulated hypothesis and thus was accepted.

Table 5: Regression analysis of joint influence of WLB and WE on Psychological distress among medical facilities workers

Predictors	**β**	**T**	**Sig.**	**R^2**	**F**	**P**
(Constant)	51.28	10.01	.000			
Work Life Balance	-.15	-2.40	.018	0.94	8.99	.000
Work Environment	-.39	-3.46	.001			

Source: Researcher fieldwork

The fourth hypothesis was tested using the multiple regression analysis. As summarized in Table 5 the results indicated a significant joint predictive influence of work life balance and work environment on psychological distress (F [2,213] = 8.99, R^2 = .94; P < .01) with the variables accounting for 9.4% of the variance in Psychological distress among the participants. Also the analysis show significant beta contributions of work life balance (β=-.15, p <.05) and Work environment (β= -.39, p <.05) and psychological distress scores among workers in medical facilities in Lagos.

One way ANOVA was conducted to compare PD among the medical facilitiesstaff based on their job designations. The job designations were categorized into four groups: doctors, Nurse, Administrative staff and others (pharmacies, medical laboratory, radiologists etc). The independent variable represented the four different job designation categories, while the dependent variable was PD scores. Table 4 summarized the means and standard deviations for PD among the participants based on job destinations.

Table 6:
Mean and Standard Deviations of Educational Qualifications Scores

METHOD	N	Mean	SD
Doctor	41	28.90	6.17
Nurse	52	32.23	6.70
Admin staff	48	29.79	6.09
Others	53	28.75	5.79
Total	194	29.97	6.31

Source: Researcher fieldwork

An alpha level .05 was used for all analyses. Table 6 shows the analysis of variance for the PD among the participants based on their job designations.

Table 7: *Analysis of Variance for Psychoactive substance*

Source	Sum of Squares	Df	Mean Squares	F	Sig.
Between Groups	392.30	3	130.76	3.4	.019
Within Groups	7298.56	190	38.41		
Total	7690.87	193			

Source: *Researcher fieldwork*

As summarized in Table 7, there was a significant difference in the PD among the respondents based on their job designation at the p<.05 level for the four levels [*F* (3, 193) = 3.40, *p* = .019]. LSD post hoc test results (Table 6) revealed that participants doctors had significant lower mean score in PD (M = 28.90, SD=6.17) compared to nurses (M= 32.23, SD =6.70). No significant mean difference in scores of doctor

and both Admin staff and other staff categories. Also Nurses had significant mean scores (M= 32.23, SD =6.70) compared to other staff categories (M= 28.75, SD = 5.79). No significant mean score differences between Administrative staff and any of the group of job designations.

Table 8
LSD Post Hoc Multiple Comparison Analysis of the Level of job designation Difference on PD

(I) job Status	(J) job Status	Mean Difference (I-J)	Std. Error	Sig.
Doctor	Nurse	-3.33*	1.29	.011
	Admin	-.89	1.32	.501
	Others	.15	1.29	.909
Nurse	Doctor	3.33*	1.29	.011
	Admin	2.44	1.24	.051
	Others	3.48*	1.21	.005
Admin	Doctor	.89	1.32	.501
	Nurse	-2.44	1.24	.051
	Others	1.04	1.23	.402
Others	Doctor	-.15	1.29	.909
	Nurse	-3.48*	1.21	.005
	Admin	-1.04	1.23494	.402

** The mean difference is significant at the 0.05 level.*
Source: Researcher fieldwork

Table 9: Independent samples t-test of gender difference on Psychological Distress among Medical Workers in Lagos, Nigeria.

Dependent Factors	gender	N	Mean	SD	df	t	Sig. (2-tailed)	P
Psychological Distress	Male	105	29.37	5.51	213	-1.45	.15	>.05
	Female	89	30.69	7.11				

Source: *Researcher fieldwork*

The result in Table 9 showed that gender had no significant influence on psychological distress [*t* (213)= -1.45; *p* >.05]. This implies that male medical practitioners in Lagos, Nigeria (*M*= 29.37; *SD*= 5.51) do not differ from those from their female counterparts (M= 30.69; *SD*= 7.11), suggesting that both female and male medical practitioners manifested similar severities of psychological distress.

Discussions

This study assessed the interactions between work-life balance, work environment and selected demographic variables and psychological distress among workers in medical facilities in Lagos, Nigeria. A 36.6% moderate and 15.5% severe prevalence of PD was found among the participants. This high prevalence is in support of previous studies. For instance, the 36.6% moderate and 15.5% severe prevalence of psychological distress found among healthcare workers in this study is consistent with previous research found in Nigeria (Ariyo et al., 2022) and some low-resource countries. For instance 44.1% among Nigerian nurses reported Okwaraji and En (2014), 23.4% by Olagunju et al., (2021) and 49.1% and 5.8%, for moderate and severe psychological distress respectively by Ibigbami et al., (2022), 42.20% and 43.50% for anxiety and depression among a Cameron study (Nguepy et al., 2021), 27.7% among nurses in Ethiopia (Belay et al 2021), and 21% in Sri Lanka (Jayawardene et al., 2013) Also, Grover et al., (2018) reported a 30.1% depression and 16.7% suicidal ideations among Indian medical professionals. A lower rate of 13% was found among Norwegian medical practitioners (Nerdrum & Geirdal, 2014). Similar studies have reported high rates of psychological distress, including burnout, despair, and anxiety among medical practitioners (Lin et al., 2024). According to Billings et al. (2021), front-line medical health professionals have to work long and stressful shifts and continually run the risk of contracting an infection, which could predispose them to psychological distress.

Work-life balance had a significant inverse correlation and also predicted psychological distress in this study. This implies that the higher the rate of work-life balance, the lower the psychological distress among the medical practitioners in Lagos, Nigeria. This result is consistent with prior research demonstrating a connection to work-family conflict as a significant predictor of psychological distress. According to Appelbom et al. (2024), poor working conditions and a lack of work-life balance are major contributors to psychological distress among healthcare professionals. Billings et al. (2021) posit that healthcare professionals frequently report being overworked and with limited time for personal hobbies. These findings underscore the

importance of maintaining a healthy work-life balance to mitigate psychological distress and improve overall well-being. Individuals with a perceived balance between their work and life roles tend to be more satisfied with their lives and report better physical and mental health.

The work environment was found to significantly and independently predict psychological distress among workers in medical facilities in Lagos, Nigeria. Adverse work conditions, such as high job demands, low job control, and job insecurity, have been found to significantly predict psychological distress. For instance, a study by Tomczak et al. (2018) found that workers who usually worked evening or night shifts were more likely to experience serious psychological distress compared to those working day shifts. High levels of stress in specific roles, workplace bullying, and an imbalance between effort and rewards can lead to mental health issues like depression and anxiety (Oakman et al., 2020). Chronic stress from these factors can result in more severe health conditions, including insomnia, high blood pressure, and a weakened immune system (Pindek et al., 2019). These findings underscore the importance of creating a supportive and balanced work environment to mitigate psychological distress and promote overall well-being.

Furthermore, this study found that both male medical practitioners in Lagos reported similar psychological distress scores. This finding supports some previous findings (Ariyo et al., 2022). The result of these findings is also consistent with the study conducted by Brennan et al. (2021), who found that female medical practitioners reported higher levels of anxiety, depression and insomnia compared to their male counterparts. These findings underscore the need for targeted interventions to address the unique challenges faced by female medical practitioners to reduce psychological distress and improve their overall well-being. In some studies carried out during the COVID-19 pandemic, Huang and Zhao (2020) and Sandin et al. (2020) reported no significant gender difference in anxiety, stress, and depression levels, thus questioning the assertions that females were more predisposed to PD.

Among the workers in health care facilities, this study found that nurses reported higher psychological scores, followed by doctors. This is similar to previous studies (Bizri et al, 2022; Kramer et al., 2020; Chou et al., 2014). Some reasons for the highest score of PD among medical practitioners are attributed to the fact that the nature of their job requires them to have closer and more frequent contact with patients, which contributes to an added burden. Among medical practitioners,

nurses had reported higher mental health concerns, such as post-traumatic stress disorder (PTSD) and scored worst on several sub-scales of psychological distress and trauma, including social dysfunction and intrusion and avoidance, respectively. Kramer et al. (2020) found that nurses reported higher subjective burden and stress than doctors and other hospital staff (Okwaraji & En, 2014; Kramer et al., 2020). This result can be explained by such factors as nurses being required to work closer and having more frequent contact with patients, which might contribute to an added burden. In addition, nurses typically have a higher level of work-related burnout compared with other medical professionals (Chou et al., 2014).

Conclusion and Recommendations

Based on the findings of this study, it is therefore concluded that work-life balance and work environment are strong predictors of psychological distress among medical practitioners in Lagos, Nigeria. Since the results from this research suggest that individuals who can effectively balance work and life and have a good working environment would experience less psychological distress, hospitals may consider implementing support programs to help their employees balance their life domains. Hospitals may consider providing individuals with a creative and flexible working environment to prevent or reduce psychological distress experienced by such employees. These hospitals should formulate training programs that can help employees develop planning and time management skills.

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