

Article

From stress to exit: occupational stress, work engagement, and turnover intentions among nurses in an emerging economy

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Abstract: In emerging economies in Sub-Saharan Africa, persistent nurse shortages and system pressures heighten concerns about stress, engagement, and retention. Understanding how occupational stress influences work engagement and turnover intention is essential for strengthening workforce stability and advancing Sustainable Development Goal 3, which emphasizes a resilient and effective health workforce. This study examines the effect of occupational stress on nurses' work engagement and the mediating role of turnover intention. A cross-sectional descriptive survey design was employed. Data were collected from 417 nurses working in public hospitals within the Accra Metropolitan Area, Ghana. Standardized questionnaires measured occupational stress, work engagement, and turnover intention. Regression and mediation analyses were conducted to test direct and indirect effects. Occupational stress had a significant negative effect on work engagement. Occupational stress showed a positive but non-significant relationship with turnover intention. Turnover intention significantly predicted work engagement. However, the indirect effect of occupational stress on work engagement through turnover intention was not significant, indicating no mediation effect. Unexpectedly, turnover intention positively predicted work engagement. Occupational stress directly reduces nurses' work engagement in Ghanaian public hospitals, but turnover intention does not mediate this relationship. The weak association between stress and turnover intention may reflect limited job mobility and contextual labour market conditions. Interventions aimed at reducing job demands and strengthening institutional support systems are necessary to sustain engagement.

Keywords: occupational stress; work engagement; turnover intention; JD-R model; nurses; Ghana

1. Introduction

Occupational stress is a persistent challenge within healthcare systems worldwide. It refers to the harmful physical and psychological reactions that occur when job demands exceed an individual's capacity to cope. Nurses are particularly vulnerable because of long working hours, staff shortages, emotional labour, heavy workloads, and limited resources. High stress levels are consistently reported in the profession [1]. Beyond its effects on physical and psychological well-being, occupational stress has important consequences for work engagement, which is central to job performance and satisfaction [2].

Work engagement is defined as a positive, fulfilling, work-related state of mind characterised by vigour, dedication, and absorption [3]. Engaged nurses invest energy in their roles, demonstrate commitment to patient care, and remain psychologically

connected to their work. When stress becomes chronic, however, energy is depleted, reducing engagement and increasing withdrawal behaviours.

In Ghana, nurses form the backbone of the healthcare system. They serve as primary caregivers and coordinate patient care within facilities that often operate under significant resource constraints [4]. However, Ghanaian nurses frequently report high stress levels, which affect their well-being and the quality of patient care delivery [5]. Given the country's ongoing nurse shortages and resource limitations, sustaining engagement is essential for effective healthcare delivery and workforce retention.

This study aligns with the United Nations Sustainable Development Goals, particularly Sustainable Development Goal 3 (SDG 3), which seeks to ensure healthy lives and promote well-being for all. Achieving this goal depends heavily on a stable, motivated, and engaged health workforce. Understanding how occupational stress influences nurses' engagement and retention is therefore critical to strengthening healthcare systems and advancing global health outcomes.

Although occupational stress and turnover intention have been extensively examined in the international literature, much of the existing evidence originates from non-African contexts such as South Korea and Indonesia [6]. Differences in healthcare systems, organisational structures, and cultural contexts limit the direct applicability of these findings to Ghana. Furthermore, many studies conducted within Ghana focus on burnout, job satisfaction, or workplace conditions rather than directly examining the mechanisms through which occupational stress influences work engagement.

While previous studies suggest that occupational stress reduces engagement [2] and increases turnover intention [7], limited attention has been given to the potential mediating role of turnover intention in the relationship between occupational stress and work engagement among nurses in Ghana. Addressing this gap is important because Ghana continues to face nursing shortages and increasing pressures on healthcare delivery. Consequently, this study investigates the relationship between occupational stress, turnover intention, and work engagement among Ghanaian nurses, with particular attention to the mediating role of turnover intention.

2. Literature review

2.1. Theoretical foundation: Job Demands-Resources (JD-R) model

The Job Demands-Resources (JD-R) model provides the theoretical foundation for understanding the relationship between occupational stress, turnover intention, and work engagement. The model proposes that every occupation consists of job demands and job resources. Job demands refer to physical, psychological, social, or organisational aspects of work that require sustained effort and may lead to strain. Job resources, on the other hand, facilitate goal achievement, personal growth, and motivation [8]. A key strength of the JD-R model is its applicability across occupations because job demands and resources differ by work context, making it particularly suitable for healthcare settings [8].

According to the JD-R model, excessive job demands that are not balanced by adequate resources trigger a health-impairment process characterised by exhaustion, disengagement, and withdrawal behaviours [9]. In healthcare settings where nurses routinely experience high workloads, emotional strain, and resource shortages, prolonged exposure to job demands may increase occupational stress, reduce engagement, and encourage intentions to leave the organisation. Conversely, adequate

job resources, such as supervisory support, autonomy, and feedback, activate a motivational process that enhances work engagement and buffers the negative effects of job demands [9].

Within the present study, the primary job demands include occupational stress arising from excessive workload, time pressure, emotional demands associated with patient care, staffing shortages, and inadequate workplace resources. These demands were operationalised through the occupational stress scale. Although specific job resources such as supervisory support, autonomy, and organisational support were not directly measured, the JD-R model was adopted primarily as an explanatory framework to understand how excessive job demands influence work engagement through both direct and indirect psychological pathways. Longitudinal evidence further shows that persistent job demands reduce employee well-being over time, whereas job resources sustain engagement and resilience [10]. Therefore, the JD-R model provides an appropriate framework for explaining how occupational stress may directly reduce work engagement and indirectly influence employee outcomes through turnover intention.

2.2. Occupational stress among nurses

Occupational stress remains one of the most prevalent challenges confronting nurses globally. The nature of nursing work exposes practitioners to continuous physical, emotional, and psychological pressures. Factors such as heavy workloads, staffing shortages, long working hours, role ambiguity, and emotionally demanding patient interactions contribute significantly to workplace stress.

Beyond affecting employees' well-being, occupational stress undermines healthcare organisations by increasing burnout, reducing productivity, and compromising the quality of patient care [11]. In nursing environments, persistent exposure to stressors may gradually erode employees' physical and psychological resources, making effective job performance increasingly difficult. This highlights the need to understand occupational stress not only as an individual concern but also as an organisational challenge requiring strategic intervention.

Empirical evidence from Ghana highlights the severity of this challenge. For instance, a comparative study conducted in the Ashanti Region found that nurses experienced high levels of stress due to workload pressures, inadequate resources, and poor remuneration [12]. Similarly, Dartey [13] reported that nurses in the Ho Municipality experienced fatigue, psychological strain, and reduced work performance as consequences of occupational stress. Research conducted in two government hospitals further revealed moderate to high stress levels associated with long working hours, difficult patient interactions, and interpersonal workplace challenges [14].

2.3. Occupational stress and work engagement

Work engagement represents a positive and fulfilling work-related state characterised by vigour, dedication, and absorption [15]. Engaged employees demonstrate enthusiasm, commitment, and persistence in their work activities.

Research suggests that occupational stress negatively affects work engagement. Excessive stress depletes employees' psychological and emotional resources, reducing their ability to remain energetic and committed to their roles. Galanti et al. [2] found that heightened occupational stress was associated with lower levels of employee work engagement. Within nursing environments, persistent exposure to stressful working conditions may therefore diminish nurses' enthusiasm, concentration, and

dedication to patient care.

This relationship is consistent with the JD-R model, which argues that excessive job demands exhaust employees' energy and weaken motivational states. Empirical evidence from healthcare settings similarly shows that occupational stress is inversely associated with work engagement because sustained stress limits employees' ability to remain psychologically invested in their work [16,17]. These findings suggest that reducing workplace stress is essential for sustaining high levels of employee work engagement.

2.4. Occupational stress and turnover intention

Turnover intention refers to an employee's conscious and deliberate willingness to leave an organisation. It is widely recognised as one of the strongest predictors of actual turnover behaviour.

Literature consistently demonstrates that occupational stress increases turnover intention. Employees experiencing prolonged stress often become dissatisfied with their jobs and seek alternative employment opportunities. A study conducted at a hospital in Allam found that elevated stress level was associated with high turnover intention [6]. Similarly, Liu et al. [7] reported that occupational stress significantly predicted employees' intentions to leave their organisations.

Mosadeghrad [11] further argues that occupational stress contributes to turnover intention by reducing employees' commitment and satisfaction with their work environment. More recently, Maharani and Tamara [18] found that occupational stress directly increases employees' intentions to leave, particularly when work-life balance and job satisfaction deteriorate. These findings underscore occupational stress as a key antecedent of employee retention.

Within Ghana, Poku et al. [19] found that burnout and workplace conditions significantly influenced nurses' turnover intentions, suggesting that stressful work environments contribute to retention challenges within the healthcare sector.

2.5. Turnover intention and work engagement

Employees who intend to leave their organisations are generally less psychologically invested in their work. Turnover intention often reflects reduced organisational commitment, lower motivation, and diminished enthusiasm toward job responsibilities.

Studies indicate that higher turnover intention is associated with lower levels of work engagement [20,21]. Employees contemplating departure are less likely to invest substantial emotional and cognitive resources into their work. Within nursing contexts, intentions to leave may therefore weaken dedication, vigour, and absorption, ultimately affecting patient care quality and organisational effectiveness.

This negative association has been consistently supported by literature. Lu et al. [20] reported that employees with higher work engagement exhibit lower turnover intentions because engaged employees develop stronger attachment to their organisations. Similarly, Memon et al. [21] found that work engagement reduces employees' desire to leave by strengthening their commitment and satisfaction with their jobs.

2.6. The mediating role of turnover intention

The JD-R model suggests that excessive job demands can trigger withdrawal-related outcomes, including turnover intention, which may subsequently reduce engagement. Occupational stress may therefore influence work engagement both directly and indirectly through turnover intention.

Although prior studies have independently examined the relationships between occupational stress and work engagement, as well as occupational stress and turnover intention, limited research has explored turnover intention as a mediating mechanism, particularly within the Ghanaian nursing context. Existing Ghanaian studies have focused primarily on burnout, resilience, workplace conditions, and retention factors [19,22,23]. Consequently, the indirect pathway through which occupational stress affects work engagement via turnover intention remains insufficiently understood.

Examining this mediating relationship contributes to both theory and practice by extending the JD-R framework and providing evidence that may inform interventions aimed at reducing nurse turnover and enhancing workforce engagement in Ghana's healthcare sector. Turnover intention was conceptualised in this study as a psychological withdrawal mechanism rather than merely a final organisational outcome. Within the Job Demands-Resources (JD-R) framework, prolonged exposure to excessive job demands initially depletes employees' physical and psychological resources, leading to occupational stress. As employees experience sustained stress, they may begin to psychologically withdraw from their organisations by developing intentions to leave before actual turnover occurs. This cognitive withdrawal can subsequently diminish work engagement because employees who are mentally disengaging from an organisation are less likely to invest vigour, dedication, and absorption in their work. Thus, turnover intention represents a theoretically plausible mediating variable through which occupational stress may indirectly influence work engagement. At the same time, the JD-R model also recognises a direct health-impairment pathway whereby excessive job demands reduce engagement independently of withdrawal cognitions. Consequently, this study simultaneously examines both the direct effect of occupational stress on work engagement and the indirect pathway operating through turnover intention.

Previous empirical studies lend support to this proposed mechanism. Yim et al. [24] demonstrated that occupational stress influences nurses' turnover intention through intervening psychological processes, while Kim and Hyun [25] showed that work engagement mediates the relationship between employees' personal resources and turnover intention. Together, these findings suggest that withdrawal intentions may represent an important psychological pathway linking stressful work environments to employee attitudes and behaviours, although evidence from the Ghanaian healthcare context remains scarce.

2.7. Hypotheses

Based on the empirical insights, the study hypothesized the following (See **Figure 1**):

H1: Occupational stress has a negative and significant effect on work engagement.

H2: Occupational stress has a positive and significant effect on turnover intention.

H3: Turnover intention has a negative and significant effect on work engagement.

H4: Turnover intention mediates the relationship between occupational stress and work engagement.

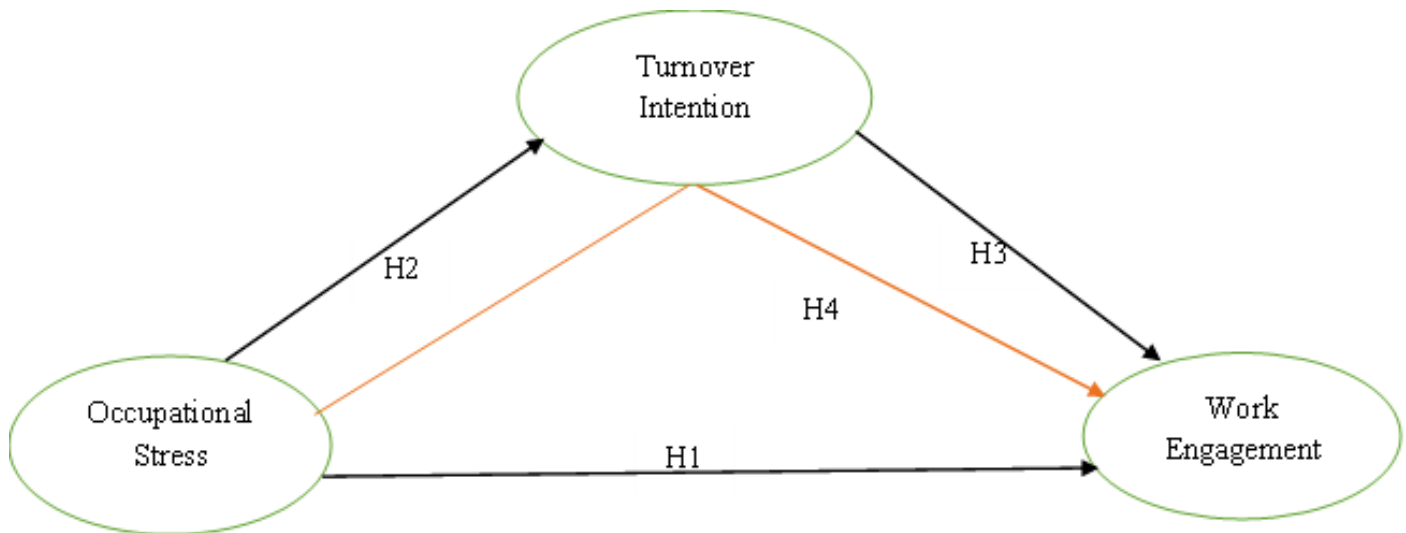


Figure 1. Conceptual framework.

Source: Authors' own work

3. Methodology

The study adopted a cross-sectional survey design to sample 515 participants from selected hospitals in Ghana. The population of the study (nurses working in hospitals in Ghana) was selected due to their crucial role in healthcare and the significant occupational stress they face, which impacts their work engagement and turnover intention. This made them an ideal population for exploring these relationships, providing insights into the well-being and retention of healthcare workers. Participants were, however, selected conveniently; this sampling technique was adopted due to the busy work schedules of the respondents. The researchers therefore took advantage of their annual general meeting and seminar held by the Ghana College of Nurses and Midwives during the period of data collection. After data screening and cleaning, 417 responses were deemed suitable for data analysis. The sample comprised 309 (74.1%) females and 108 (25.9%) males. Most of the respondents were within the age of 31–40 years; the highest educational qualification was a bachelor's degree, and most of them were married (See **Table 1**).

Table 1. Demographic information of respondents.

Variables	Frequency	Percentage
Gender		
Female	309	74.1
Male	108	25.9
Total	417	100
Age		
18–30	128	30.7
31–40	146	35.0
41–50	76	18.2
51–60	67	16.1

Continuation Table:

Variables	Frequency	Percentage
Total	417	100
Qualification		
HND/Diploma	56	13.4
First Degree	249	59.7
Master's Degree	112	26.9
Total	417	100
Marital status		
Single	289	69.0
Married	121	29.0
Divorced	7	2.0
Total	417	100

Source: Authors' own work

Participation was voluntary, and informed consent was obtained from all respondents before administering the questionnaires. Confidentiality and anonymity were strictly maintained throughout the study.

3.1. Research instruments

Occupational stress was measured using an adapted eight-item version of the Perceived Stress Scale (PSS) developed by Cohen et al. [26]. The scale assessed nurses' perceptions of stress arising from workplace conditions, workload, emotional strain, time pressure, and their ability to cope with job demands. Sample items included *"I felt that I was unable to control important aspects of my work"* and *"I felt overwhelmed by the amount of work I had to complete."* Minor wording modifications were made to align the items with the Ghanaian nursing context while preserving their original meaning. Responses were measured on a five-point Likert scale, ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The original scale demonstrated satisfactory reliability (Cronbach's $\alpha = 0.83$), and the adapted instrument produced a Cronbach's alpha of 0.733 in the present study.

Turnover intention was assessed using the six-item scale developed by Jacobs and Roodt [27], which measures employees' conscious intention and willingness to leave their current organisation. Sample items included *"I often think about leaving this organisation"* and *"I will probably look for a new job within the next year."* Responses were recorded on a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree, with higher scores indicating stronger intentions to leave the organisation. The original instrument reported a Cronbach's alpha of 0.92, while the current study obtained a Cronbach's alpha of 0.751, indicating acceptable internal consistency.

Work engagement was measured using the Utrecht Work Engagement Scale (UWES-9) developed by Schaufeli and Bakker [28]. The instrument comprises nine items measuring the three dimensions of work engagement: vigour, dedication, and absorption. Sample items included *"At my work, I feel bursting with energy,"* *"I am enthusiastic about my job,"* and *"I am immersed in my work."* Consistent with the

original instrument, responses were rated on a seven-point Likert frequency scale, ranging from 0 = Never to 6 = Always, where higher scores indicate greater work engagement. The UWES-9 has demonstrated excellent psychometric properties across occupational settings, with the original study reporting a Cronbach's alpha of 0.97. In the present study, the scale also exhibited excellent reliability, with a Cronbach's alpha of 0.953

3.2. Measurement model analysis

The measurement model in this study sought to explain the relationship between the measured items and their corresponding latent constructs to collate the extent to which the items predicted the study's variables [29]. Other measures of the degree of correspondence of the data with the model were calculated with 13 fit indices used, such as goodness of fit (GFI), confirmatory fit index (CFI), chi-square/df (CMIN/DF), RMSEA, and standardised root-mean-square residual (SRMR). According to the recommendations made by Hu and Bentler [30], the following assessment of the model fit was made: CMIN/DF = 2.315, SRMR = 0.048, RMSEA = 0.050, PCLOSE = 0.292. The CFI was within an acceptable range, meaning the model fit well with the data.

3.3. Reliability statistics

According to Hair et al. [31], the reliability coefficient of a variable measures the degree of consistency among its components in producing similar or identical results in future studies. Additionally, they specify that for a variable to be deemed to have acceptable reliability, it must exhibit a Cronbach's alpha value of 0.70 or above.

As explained in **Table 2** below, such variables based on the assessment made in the study (Occupational Stress, Work Engagement, and Turnover Intentions) display the following Cronbach's alpha scores of 0.733, 0.953, and 0.751, respectively, which are sufficient. Such findings exceed the criterion proposed by Hair et al. [31], thus suggesting the heightened reliability of the measured variables. Their Cronbach's alpha coefficients are well above the 0.70 benchmarks per the literature reviewed by Hair et al. [31], emphasising that these variables are strong measures.

Table 2. Reliability statistics.

Variables	Number of items	Cronbach's Alpha
Occupational Stress	8	0.733
Work engagement	10	0.953
Turnover Intentions	6	0.751

Source: Authors' own work

3.4. Normality test result of the measured constructs

According to Tabachnick and Fidell [32], examining the skewness and kurtosis values serves as an approach to assessing the normality of data. This implies that a normal distribution is said to be present in a dataset if both skewness and kurtosis of that dataset fall within the +2 and -2 range. However, these datasets are considered non-normal when the values exceed +2 and -2. More information on the results of the normality test that the researcher conducted on the study data is provided in **Table 3**.

Table 3. Normality test results.

Variables	Mean	Std. Deviation	Skewness	Kurtosis
Occupational Stress	3.0730	0.65856	0.431	0.238

Continuation Table:

Variables	Mean	Std. Deviation	Skewness	Kurtosis
Work engagement	47.96	3.376	−0.481	0.125
Turnover Intentions	66.0109	1.53367	−0.175	−0.904

Source: Authors' own work

The table presents the values of skewness and kurtosis for Occupational Stress (0.431, 0.238), work engagement (−0.481, 0.125), and Turnover Intentions (−0.175, −0.904), which are within the parameters provided by Tabachnick and Fidell [32] (+2 and −2). Therefore, it can be concluded that the collected data regarding the measured variables in the study respects the normal distribution of data, and further analysis is justified.

3.5. Bivariate correlation result of the measured constructs

A bivariate correlation analysis was conducted to check whether multicollinearity exists in the dataset. Bivariate correlation analysis was further provided to support one of the conclusions on the statistical assessment of the data. According to Hair et al. [31], multicollinearity is indicated when the correlation coefficient between two predictor (independent) variables is 0.70 or above ($r \geq 0.70$). In this study, all inter-construct correlations were below this threshold, suggesting that multicollinearity was not a concern. As shown in **Table 4**, the bivariate correlation matrix indicates that Occupational Stress, Work Engagement, and Turnover Intentions are interrelated. Occupational Stress has a slight but inverse relation with Work Engagement ($r = -0.092$) and a similarly weak positive correlation with Turnover Intentions ($r = 0.068$). On the other hand, work engagement correlates significantly with the rest of the variables ($r = 0.448^{**}$) with the aid of Turnover Intentions, which is emplaced at a 0.01 significant level. Regarding the two negative relationships maintained despite the other factors, no oversized degree of collinearity is seen.

Table 4. Bivariate correlation matrix.

Variables	1	2	3
Occupational Stress	1		
Work Engagement	−0.092	1	
Turnover Intentions	0.068	0.448 ^{**}	1

^{**}. Correlation is significant at the 0.01 level (2-tailed).

Source: Authors' own work

4. Results

4.1. Analysis of the effect of occupational stress and work engagement among Ghanaian nurses

The primary objective of this analysis was to examine the effect of occupational stress on work engagement among Ghanaian registered nurses. Based on the Job Demands-Resources (JD-R) model and prior empirical evidence, it was hypothesised that occupational stress would negatively and significantly predict work engagement. As presented in **Table 5**, the regression analysis supports this hypothesis. Occupational stress had a significant negative effect on work engagement ($B =$

-0.630 , $\beta = -0.092$, $t = 2.817$, $p = 0.001$). This finding indicates that higher levels of occupational stress are associated with lower levels of work engagement among nurses. Specifically, a one-unit increase in occupational stress is associated with a 0.630-unit decrease in work engagement, holding other factors constant.

Table 5. Occupational stress on work engagement.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	49.407	0.787		62.739	0.000
	Occupational Stress	-0.630	0.224	-0.092	2.817	0.001

Dependent Variable: Work Engagement, $R^2 = 0.008$

Source: Authors' own work

Although the relationship is statistically significant, the model explains only a small proportion of the variance in work engagement ($R^2 = 0.008$), suggesting that occupational stress is only one of several factors influencing nurses' engagement at work. Other individual, organisational, and contextual factors not included in the present model may account for the remaining variation in work engagement.

Further, **Table 5** provides better information concerning the dynamics of these variables.

4.2. Exploring the interplay between occupational stress and turnover intention

The second aim of this research was to analyse the relationship between Occupational Stress and Turnover Intention among nurses in Ghana. In this respect, a hypothesis was derived stating that a positive and significant association exists between Occupational Stress and Turnover Intention. The regression analysis in **Table 6** indicates a coefficient of 0.159 for Occupational Stress and a beta of 0.068 for Turnover Intention. However, this coefficient indicates an association of Occupational Stress with Turnover Intention as predicted in the hypothesis. It is astonishing that even though the coefficient is positive, the association is not significant at the 5 % level ($p = 0.163$, $p > 0.05$). Such an apparent association cannot be statistically resolved from sampling error. In addition, this model has a low R-squared of 0.005, which suggests that only a small portion of Turnover Intention could be accounted for by Occupational Stress. **Table 6** presents the results of this finding.

Table 6. Occupational stress on turnover intentions.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	65.521	0.358		182.809	0.000
	Occupational Stress	0.159	0.114	0.068	1.397	0.163

Dependent Variable: Turnover intention, $R^2 = 0.005$

Source: Authors' own work

4.3. Assessing the mediating role of turnover intention

The analysis was done with the help of SPSS using the PROCESS procedure, and

these findings are important in understanding the interactions of these variables in Ghanaian nurses. The linear regression showed that Occupational stress does not significantly predict turnover intention, $p = 0.1632$, as it was established among the Ghanaian nurses with a coefficient of 0.1593. It shows that the occupational stress that nurses encounter does not have a direct and considerable effect on their reasons for quitting their jobs. This may be due to certain aspects that are particular to the health care system in Ghana, including adequate job security provisions, socio-cultural factors, or few job offers in the country. However, the results pointed out the significance of the direct relationship between occupational stress, turnover intention, and work engagement. Data analysis showed that occupational stress has a negative relationship with work engagement, where it predicts work engagement ($p = 0.0051$) with a coefficient of -0.6301 . The higher the occupational stress levels experienced by Ghanaian nurses, the lower the work engagement they show. This is an important result since it indicates the harmful aspects of occupational stress on the nurses' work engagement, hence performance and job satisfaction. On the contrary, Turnover Intention was significantly found to predict Work Engagement ($p < 0.001$) with a coefficient of 1.004. This goes against expectations, suggesting that the nurses considering leaving their jobs may become temporarily more engaged, particularly if it is based on moving and trying to keep good standards or references before leaving (See **Tables 7 and 8**).

Table 7. Mediation analysis: turnover intention as a mediator between occupational stress and work engagement.

Panel A. Regression results for mediation paths.

Predictor	Outcome	B	SE	t	p	95% CI	R ²
Occupational Stress	Turnover Intention	0.159	0.114	1.397	0.163	[-0.065, 0.384]	0.005
Turnover Intention	Work Engagement	1.004	0.096	10.452	< 0.001	[0.815, 1.193]	0.215
Occupational Stress	Work Engagement	-0.630	0.224	-2.817	0.005	[-1.070, -0.190]	—

Source: Authors' own work

Table 8. Panel B: direct and indirect effects of occupational stress on work engagement.

Effect Type	B	Boot SE	95% Boot CI
Direct Effect (c')	-0.630	0.224	[-1.070, -0.190]
Indirect Effect (a × b)	0.160	0.111	[-0.057, 0.376]

Note: Bootstrapping based on 5,000 samples. Confidence interval = 95%.

Source: Authors' own work

5. Discussion

The present study examined the relationships among occupational stress, turnover intention, and work engagement among nurses in Ghanaian public hospitals, using the Job Demands-Resources (JD-R) model. The findings partially supported the proposed model. Occupational stress significantly reduced work engagement, while turnover intention significantly predicted work engagement. However, occupational stress did not significantly predict turnover intention. Consequently, turnover intention did not mediate the relationship between occupational stress and work engagement, suggesting that occupational stress influences work engagement primarily through a direct pathway.

The finding that occupational stress negatively and significantly predicts work

engagement supports the first hypothesis and aligns with the health impairment process proposed by the JD-R model [33]. According to the model, excessive job demands deplete employees' physical, emotional, and cognitive resources, thereby reducing their motivation and psychological investment in work. The significant negative relationship observed in this study suggests that Ghanaian nurses experiencing high workplace stress are less likely to demonstrate vigour, dedication, and absorption in their professional roles. Although occupational stress explained only a modest proportion of the variance in work engagement, the finding confirms that stress remains an important determinant of nurses' motivational states. This result is consistent with Galanti et al. [2], who found that work-related stress and work-family conflict significantly reduced work engagement during the COVID-19 pandemic because increasing job demands depleted employees' psychological resources. Similarly, de Faria and Lourenção [15] reported that healthcare professionals exposed to persistent occupational stress experienced lower work engagement, particularly in terms of enthusiasm, energy, and commitment. Likewise, Mazzetti et al. [34] demonstrated that chronic workplace stress diminishes work engagement by exhausting personal resources and reducing employees' capacity to remain motivated. The consistency of these findings across diverse occupational and cultural settings reinforces the view that occupational stress is a pervasive barrier to work engagement, particularly in healthcare environments characterised by heavy workloads and limited organisational resources.

Contrary to the second hypothesis, occupational stress did not significantly predict turnover intention among Ghanaian nurses. Although the relationship was positive, it was not statistically significant, suggesting that higher occupational stress does not necessarily translate into stronger intentions to leave public-sector employment. This finding contrasts with previous studies that identified occupational stress as a significant predictor of turnover intention among healthcare employees [1,7]. It also differs from Oliveira and Najnudel [35], who reported that stressful workplace experiences significantly increased employees' intentions to quit. A plausible explanation lies in the contextual realities of Ghana's public healthcare labour market. Despite persistent workforce shortages, formal public-sector employment opportunities remain relatively limited, making voluntary mobility less feasible for many nurses. Consequently, employees may remain in their positions despite experiencing considerable occupational stress because leaving a secure public-sector job entails substantial financial and professional uncertainty. Similar observations have been reported by Bonenberger et al. [36] and Poku et al. [19], who found that employment security, professional commitment, and constrained labour market opportunities often discourage nurses from translating workplace stress into intentions to leave. These contextual conditions may therefore weaken the relationship between occupational stress and turnover intention in Ghana compared with other labour market settings.

The third hypothesis proposed that turnover intention would significantly predict work engagement. Although turnover intention significantly predicted work engagement, the relationship was positive rather than the expected negative direction. This finding is counterintuitive because previous studies generally suggest that employees intending to leave become psychologically detached from their work and subsequently display lower engagement. One possible explanation is that nurses considering future career moves may continue demonstrating high levels of professionalism and commitment while still employed, particularly in healthcare

settings where patient welfare and professional ethics remain central values. They may also strive to maintain strong performance records, positive professional reputations, and favourable references before pursuing alternative employment. Turnover intention may therefore reflect a future-oriented career evaluation rather than immediate psychological withdrawal. Although unexpected, this finding underscores the complexity of employee behaviour in healthcare settings and suggests that turnover intention may operate differently in contexts characterised by strong professional identity and ethical responsibility.

The mediation analysis further revealed that turnover intention did not significantly mediate the relationship between occupational stress and work engagement. Accordingly, the fourth hypothesis was not supported. The absence of a significant indirect effect indicates that occupational stress reduces work engagement primarily through a direct psychological mechanism rather than through withdrawal cognitions reflected in turnover intention. This finding contributes to the JD-R literature by suggesting that the health impairment process may operate independently of employees' intentions to leave the organisation. In other words, occupational stress directly diminishes employees' psychological energy and motivation regardless of whether they intend to stay or leave. Although this finding differs from studies reporting significant mediating effects of turnover intention or related withdrawal constructs, it supports the argument that contextual factors shape mediation mechanisms across organisational environments. Within Ghana's healthcare sector, nurses may continue working despite considerable occupational stress because professional commitment, ethical obligations, collectivist cultural values, and limited employment alternatives discourage organisational withdrawal even when engagement declines.

Collectively, these findings extend the application of the JD-R model within an under-researched Sub-Saharan African healthcare context. While previous studies have largely validated the model in developed economies, the present study demonstrates that the direct health impairment pathway remains robust among Ghanaian nurses. However, the findings also indicate that turnover intention may not be an effective explanatory mechanism linking occupational stress and work engagement in contexts where labour market conditions constrain employee mobility. This extends the JD-R literature by highlighting that institutional and labour market conditions can influence how employees respond to workplace stress beyond the mechanisms originally proposed by the model.

From a practical perspective, the findings underscore the importance of prioritising interventions that reduce occupational stress rather than focusing exclusively on turnover prevention. Because occupational stress directly undermines work engagement, healthcare managers should implement strategies that reduce excessive workloads, improve staffing levels, strengthen supervisory support, expand access to psychological support services, and ensure the availability of essential work resources. Employee wellness programmes, resilience training, stress management initiatives, and continuous professional development opportunities may further strengthen nurses' capacity to cope with demanding work environments. Collectively, these interventions are likely to enhance work engagement, strengthen workforce sustainability, and improve the quality of patient care within Ghana's public healthcare system. Importantly, the weak relationship between occupational stress and turnover intention suggests that employee retention should not be interpreted as evidence of employee well-being. Nurses may remain in their organisations

because of labour market constraints while simultaneously experiencing declining engagement. Managers should therefore monitor employee well-being using indicators beyond turnover intentions alone.

6. Conclusion

Although this study did not establish conclusive relationships between occupational stress, work engagement, and turnover intention among Ghanaian nurses, it makes a valuable contribution to the literature by providing important insights for healthcare system stakeholders. It also illustrates that improving nurses' well-being is a core priority, and many strategies must be evaluated to continue enhancing nurses' satisfaction and retention.

7. Limitations and implications of the study

This study has several limitations that should be considered when interpreting its findings. First, the use of self-report measures may have introduced response bias, while the cross-sectional research design limits the ability to infer causal relationships among the study variables. Second, the sample was restricted to nurses working in public hospitals in Accra, which may limit the generalisability of the findings to nurses in other regions or healthcare settings in Ghana. Furthermore, the exclusive use of a quantitative approach may not have fully captured nurses' experiences and perceptions of their working conditions. Future research should address these limitations by adopting longitudinal designs to examine causal relationships over time, including nurses from diverse healthcare settings and geographical regions, and employing qualitative or mixed-methods approaches to provide a more comprehensive understanding of nurses' workplace experiences. Despite these limitations, the findings make a meaningful contribution to healthcare policy and management in Ghana. They provide evidence that can inform interventions aimed at reducing turnover intention, enhancing employee morale and work engagement, and improving the quality of healthcare delivery. The study also underscores the importance of improving nurses' working conditions and strengthening organisational support systems. Finally, the findings highlight the value of integrating quantitative and qualitative research methods in future studies to generate richer insights into the challenges facing nurses and to inform more effective policy and management interventions.

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