


The mediational role of individual and organizational factors in the work engagement and occupational stress relationship

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Abstract

This study investigated the mediating role of individual and organizational factors on the relationship between work engagement and occupational stress among males and females, junior, mid-level and senior staff members in the banking sector using a cross-sectional survey. Employing a quantitative study, data was gathered from 288 banking staff. Findings show a significant positive relationship between work engagement and age, educational level, one's position in an organization and organization tenure, and a significant negative relationship between work engagement and gender and occupational stress. There were age, educational level and gender differences in work engagement. There were differences in the level of work engagement in relation to organizational tenure. One's position, educational level and gender significantly predicted work engagement but age and organization tenure did not. However, educational level, age, one's position and organizational tenure mediated the relationship between occupational stress and work engagement. These findings have implications for employee well-being and satisfaction and productivity in the organizational setting.

Keywords

Occupational stress, work engagement, individual factors, organisational factors, mediation

Introduction

Stress is an undeniable experience in our daily activities, and the stress factor in organisations, particularly, makes work challenging to many. This is of particular concern since employees are the pivot of organisational success (Marcus and Gopinath, 2017) and this stress may affect employees' levels of engagement. Work engagement has been defined variedly. While some researchers describe it as the mental state of arrest to a company (Pocnet, Antonietti & Massoudi, 2015), others combine the mental state with the behavioural state of commitment to an organisation (Marcus and Gopinath, 2017). For instance, employee engagement has been defined as 'the state in which individuals are emotionally and intellectually committed to the organisation' (Marcus and Gopinath, 2017: p.502). It has equally been explained as a 'positive energy and concentration that an individual puts into work' (Pocnet et al., 2015: p.18). The feeling of superiority and recognition are motivating factors that keep employees engaged in organisations (Marcus and Gopinath, 2017). Consequently, when employees are connected to their organisations, they become satisfied and committed (Hakanen et al., 2008), and feel inclined to engage in organisational citizenship behaviours (Bakker and Bal, 2010; Schaufeli et al., 2006). Employee engagement has also been observed to improve employees' well-being (Schaufeli et al., 2006), as such, the organisation is not the sole beneficiary of employee engagement.

On the other hand, such a mental and physical commitment often leaves one stressed out. Thus, job stress

'represents the negative outcomes resulting from work overload' (Pocnet et al., 2015: p.18). Teleş (2021) adds that stress is a 'psychological response that allows us to deal with problems and a reaction to an event or events that produce negative feelings' (Lomas, 2000 cited in Teleş, 2021; p. 1). Despite this negative outcome of employee engagement, it remains a desired characteristic every organisation hopes to instil in their employees (Halbesleben, 2010). The banking sector has become a competitive field due to the rise in demand for services corresponding to the spring-up of several banks with flexible forms of services. This growing competition has led to the adoption of several strategies such as weekend banking, internet banking, smartcard technology, and mobile phone banking which supports Bass' (2014) assertion that businesses that want to survive the competition need to adopt strategies that introduce change in work schedules. For instance, employees are engaged in long working hours, weekend services, increased pressure to meet targets, and regulatory bottlenecks, which in the long run, lead to lifestyle challenges, occupational stress, poor

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relationship with colleagues and customers, and low productivity outcomes (Dartey-Baah and Ampofo, 2015; Dhankar, 2015).

Upadaya and Salmela-Aro (2015) call for a future study to reveal occupational stress' detailed effects on engagement. Although there are several pieces of research on occupational stress, work engagement, and job satisfaction in the Ghanaian banking sector, there is a paucity of research regarding establishing the relationship between occupational stress and work engagement and the mediation role of individual and organisational factors. This paper does this by ascertaining the relationship between the three components of employee engagement (vigour, dedication and absorption) and occupational stress and the mediating role of organisational and individual factors among employees. This study provides answers to these issues to assist the management of banks in designing and adopting a well-structured employee engagement framework that would reduce work stress and increase employee satisfaction and productivity. This paper has been divided into four parts after this introduction. The first part deals with the review of literature, leading to the statement of hypotheses, followed by the methods used in conducting the study. The third part presents the findings of the research, while the fourth details the discussions. The limitations, implications, and conclusions are presented last.

Literature review

Theoretical framework

The argument in this study dwells on the Job demands-resources model developed by Bakker and Demerouti (2007, 2014), that segments working conditions into two primary groups, stressful (job demands) and helpful (resources) (Bakker and Demerouti, 2007). The job demands reflect the stressful aspects of the job, whilst the resources aligned with the job to deal with the job demand reflect the helpful component (Bakker and Demerouti, 2007). This is because job demand can be a source of stress (eg high workload) (Bakker and Demerouti, 2007). Job resources, on the other hand, are resources the employee perceives as helpful in executing the demands of tasks (eg performance feedback) (Bakker and Demerouti, 2007). The basic thrust of the model is that theoretically, when employees perceive the presence of sufficient levels of job resources in dealing with job demands, it elicits high engagement levels through extrinsic and intrinsic motivational processes and vice versa, which lead to job disengagement (Bakker and Demerouti, 2007, 2014). The tenets of this model have been successfully applied to the study of work engagement among various sects of employees (Bailey, Madden, Alfes, 2015; Byrne and MacDonagh, 2017).

The Ghanaian banking sector

Due to the establishment of a favourable business climate, liberalisation of the industry, and adoption of pertinent rules by the Central Bank, the Ghanaian banking sector has experienced a phenomenal expansion in recent years (eg Bank of Ghana Act, 2002; Payment System Act, 2003; Banking Law 2004 – Act 673). As a result, there are now 23 commercial banks, an increase from the previous seven in 1989–

2014, creating fierce competition among them all, especially as additional foreign-owned banks enter the market (Mekpor and Dartey-Baah, 2017) and due to a massive clean-up exercise carried out in 2017 which resulted in the abrogation of the licenses of some indigenous banks, microfinance, micro-credit, savings and loans, finance house, and non-bank institutions (BoG Annual report, 2019). Before this exercise by the Bank of Ghana (the regulator), there were 34 commercial banks. The collapse led to many job losses, hence those who were fortunate to keep their jobs have had to do more (likely to increase their stress levels) to secure them.

Work engagement and occupational stress

Work engagement gives an organisation a competitive edge and has a significant impact on employee well-being and organisational performance (Harunavamwe, Nel & Van Zyl, 2020). A constructive, meaningful and work-related state of mind marked by potency, mental resilience, and the ability to put effort into one's work, even in the face of adversity, is referred to as work engagement (Schaufeli et al., 2002). Garg et al. (2018) posited that employees that are engaged in their work are physically, cognitively, and emotionally invested in it, and they have a strong and productive relationship with it (Kahn, 1990). In the case of disengaged employees, on the other hand, there is less physical involvement in work and an emotional distance among coworkers (Kahn, 1990). An individual reacts emotionally, cognitively, behaviourally and psychologically as a result of unpleasant components of the job content, work organisation, and work environment (Simon and Amarakoon, 2015). Studies have shown that certain people do not display symptoms of disengagement even when they are subjected to high job expectations and working long hours. Rather, they appear to like dealing with stressors (Schaufeli and Bakker, 2004). Occupational stress is caused by the individual's insertion into the organisational context because work, in addition to creating room for growth, transformation, recognition, and personal independence, also generates problems such as dissatisfaction and aggravation (Padula et al., 2012). As rightly defined by Cox (1985) and Cummings and Cooper (1979), occupational stress is described as a negatively experienced characteristic that has negative mental and physical health repercussions as a result of insufficient coping with causes of stress at work. This definition has two crucial dimensions: first, the source of stress must be adversely regarded, and second, the individual must have insufficient coping mechanisms. As a result, stress symptoms are both subjective and contingent on individual characteristics (Dave, 1999), as such, people differ in their susceptibility to stress and their vulnerability to its negative effects. Individuals are more prone to be affected by stress if they lack material resources (financial security) and psychological resources (coping mechanisms), and they are more inclined to react emotionally to situations that are highly competitive and pushed (Michie, 2002).

'High work engagement among employees provides advantages both to the individual and organisation' (Jaworek, 2018, p.45). Therefore, this is a desirable trait every organisation hopes to obtain in their employees to fulfil organisational goals. The characteristics of work engagement include vigour, dedication and absorption (Jaworek, 2018;

Schaufeli et al., 2002). A rather exciting observation is that job engagement differs across countries even in the banking sector (Taipale, Selander & Anttila, 2011). This indicates that there may be cultural dynamism in engagement levels even within similar professions, making this study relevant in the Ghanaian context. Occupational stress has been highlighted to relate to work engagement which may be positive or negative. It has been established that engagement is positive for employees' work performance (Bakker et al., 2011; Sonnentag, 2011). However, an argument has also been made that engagement engenders workaholism; meanwhile, prolonged workaholism leads to occupational stress (Upadyaya, Varitainen & Salmela-Aro, 2015). Alternatively, employees with higher work engagement have been reported to experience lower levels of occupational stress and vice versa (Cordioli, Junior & Gazetta, 2019; Pocnet et al., 2015). Chen and Kao (2013) also found a negative relationship between work engagement and burnout. The researchers found that increased work engagement resulted from decreased burnout among employees and vice versa.

Work engagement, individual and organisational factors

Studies have suggested that one's level of position in an organisation impacts one's level of work engagement. In this regard, Jaworek (2018) contributed by investigating the concept among several different occupational groups and found that employees differed in work engagement among the various occupational groups. Sales representatives, welfare services/rehabilitation, and teachers were the most engaged occupational groups, with telesales operators and blue-collar workers being the least engaged employees. Also, position-wise, managers were more engaged than non-managers. Similarly, the findings of Mishra and Mohanty (2016) suggest that there are dynamics in work engagement concerning the position one occupies. The researchers found that one's position as a senior leader and manager significantly correlated with work engagement, which also predicted work engagement. Coetzee and Rothmann (2013) found significant differences in engagement levels based on employee job categories. Bindu and Muralidhar (2016) also observed designation differences in employee engagement. The level of work engagement has been observed to be high among employees in managerial or supervisory positions (Kim et al., 2009).

Age has been implicated in job engagement; an increase in age has been reported to lead to a corresponding increase in level of work engagement (Taipale et al., 2011; Van den Broeck, Vansteenkiste, De Witte & Lens, 2009; Marcus and Gopinath, 2017). Older employees have been reported to have higher work engagement than younger employees (Haley, Mostert & Els, 2013; Schaufeli and Bakker, 2003) with a small amount of shared variance (Schaufeli and Bakker, 2003). Similar findings have been reported by Jaworek (2018), with employees over 50 years old having higher work engagement than younger employees. In an earlier study, it was reported that employees who are 60 years old and above, displayed the highest level of employee engagement (Robinson, Perryman & Hayday, 2004). Despite the evidence above, Klusmann et al. (2008) reported that old

age was associated with lower work engagement. However, other studies have reported that age was not significantly related to work engagement or work stress (Pocnet et al., 2015). Bindu and Muralidhar (2016) found no significant age differences in employee engagement in their study.

Gender has been observed to influence work engagement (Bindu and Muralidhar, 2016). Specifically, gender differences have been observed in the dimension of absorption and dedication to work engagement, with women being higher on these dimensions than their male counterparts (Jaworek, 2018). However, there were no gender differences regarding the vigour dimension of work engagement in research by Jaworek (2018). Contrary to these findings, Pocnet et al. (2015) observed that gender is not significantly related to work engagement or work stress. Marcus and Gopinath (2017) affirmed the finding of Pocnet et al. (2015), when they found that although gender did not influence the drivers of employee engagement, comparatively, females were more likely than their male counterparts, to be influenced by employee engagement initiatives. Also, Coetzee and Rothmann (2013) found no gender differences in work engagement levels. However, Schaufeli and Bakker (2003) and Steyn and Grobler (2016) on the contrary, reported a higher level of work engagement in men. Garg (2014) revealed a similar finding in his study which found that women were less engaged concerning the three variables: job security and career development, work-life balance and well-being. Although Kong (2009) also identified that male employees scored higher on two dimensions of engagement levels than their female counterparts, other studies have equally reported the opposite. Klusmann et al. (2008), found that female employees had higher levels of work engagement than their male counterparts. This finding was confirmed in Taipale et al. (2011) and Byrne and MacDonagh's (2017) study, where they found that women seemed to be more engaged in their work than their male counterparts. Byrne and MacDonagh (2017) also reported that male employees were more likely to experience lower levels of engagement than their female counterparts.

There is also evidence concerning one's educational level and work engagement. Higher education naturally corresponds to an upgrade in knowledge. Coetzee and Rothmann (2013) found that aside from the vigour dimension of work engagement, administrative staff and academic staff did not significantly differ on the other dimensions of work engagement. About the vigour sub-dimension, administrative staff had a statistically higher score than academic staff. However, Bindu and Muralidhar (2016) reported that one's educational qualification did not influence their level of engagement.

Organisational tenure captures an employee's duration of working in a particular organisation (Dongrey and Rokade, 2019). It can be argued that in the length of duration one works with a specific organisation, one acquires a wealth of experience. An employee's work experience can positively or inversely impact work engagement (Ferguson, 2007; Truss, Soane & Edwards, 2006). Similar findings have been reported by Coffman and Gonzalez-Molina (2002) and Swaminathan and Ananth (2009). Avery et al. (2007) also found a negative relationship between employee engagement and work tenure. Although there seems to be an established

relationship between organisational tenure and work engagement, Perrin (2003) suggested that organisational tenure had no impact on an employee's work engagement. Bindu and Muralidhar (2016) also reported that tenure of service did not impact the level of engagement in an organisation. The findings of Bakar (2013) seem to explain the inconsistencies in these findings. To Bakar (2013), those with a shorter duration of work were highly engaged than those with a longer duration of work. More specifically, Bakar (2013) reported that employee work tenure up to 5 years appears to be when they are highly engaged compared to other groups. Furthermore, the longer an employee works in a similar organisation, the lesser their engagement level. Similar findings have been reported by Coetzee and Rothmann (2013), who found that between employees with less than 5 years' experience and employees with more than 10 years' experience, the former scored higher on the vigour dimension of work engagement compared to the latter. Kong (2009) also found that employees with 0–5 years of experience had the highest level of engagement on all three dimensions while employees with 16–20 years of experience had the lowest level of engagement. Work engagement fosters organisational performance (Dongrey and Rokade, 2019), hence the relatedness of organisational tenure to organisational performance and other desirable organisational traits will invariably translate into one's work engagement level. While organisational tenure and work engagement have been found to moderate the relationship between job performance and burnout (Chen and Kao, 2013), other studies report that job satisfaction and work engagement were not moderated by organisational tenure (Rice, 2009).

Given the narrative synthesis of the empirical evidence, it is hypothesized that:

H1: There will be a significant relationship between individual factors (age, gender, educational level), organizational factors (one's position, organization tenure) occupational stress and work engagement.

H2: There will be differences in work engagement concerning individual characteristics (age, gender, educational level).

H3: There will be significant differences in work engagement levels concerning one's tenure in an organization.

H4: Individual (age, gender, educational level) and organizational factors (one's position, organization tenure) will significantly predict work engagement.

Occupational stress, individual and organisational factors

Few studies have found no significant impact of age on occupational stress in the banking industry, indicating that all employees across age groups had similar experiences of stress (Balakrishnamurthy and Shankar, 2009; Samartha, Lokesh & Karkakera, 2010). Concerning gender, some researchers revealed that gender is not a strong determinant of occupational stress in the banking industry, hence revealing similar stress perceptions and experiences (Ayyappan and SakthiVadivel, 2013; Dartey-Baah, Quartey & Osafo, 2020). Others have also indicated that gender influenced occupational stress such that

women in the banking sector experienced stress more than men (Samartha, Lokesh & Karkakera, 2010; Delima & Puspakaran, 2017). Notwithstanding, it has been established by several studies that the number of years of service is positively related to lower levels of stress due to their capability of handling stress as their experiences increase (Rajeshwari, 1992; Samartha, Lokesh & Karkakera 2010; Delima & Puspakaran, 2017). While studies such as that of Rajeshwari (1992) demonstrated that stress is unaffected by the position of responsibility of an employee, others such as Samartha et al. (2010), Paruk and Singh (2012), suggested that stress, for the most part, is subject to the employees' roles and responsibilities. In the same vein, Delima and Pushpakaran (2017) indicated that employees in junior positions experienced higher levels of stress as compared to those in senior positions. Further, stress differs depending on one's educational background (Michailidis and Georgiou, 2005; Samartha, Lokesh & Karkakera, 2010).

It is noteworthy to acknowledge the fact that several studies have proven the influence of individual (age, gender and educational qualification) and organisational factors (position and tenure) on work engagement and occupational stress (Jaworek, 2018; Marcus and Gopinath, 2017; Baker, 2010; Coffman and Gonzalez-Molina (2002); Dartey-Baah, Quartey & Osafo, 2020), however, few studies have confirmed the mediating role of these factors, explaining the process through which the independent variable and the dependent variables are related.

Based on the forgoing, it is hypothesized that:

H5: Individual factors (age, educational level) and organizational factors (organization tenure, one's position) will mediate the relationship between work engagement and occupational stress.

Design, sampling procedure and sample size

This study was conducted using a cross-sectional survey design with a quantitative approach employed to gather responses from employees. Since generalisation was necessary for this study, a quantitative approach that places value on large respondents was most appropriate. The respondents included all employees, be it junior, mid-level and senior staff members and weekday and weekend banking employees. A sample size of 348 respondents was used for the study. However, 305 responses, representing a response rate of 87%, were returned. Upon an assessment, 17 unusable questionnaires were identified and deducted from the returned questionnaires. This reduced the response rate to 82%, representing 288 useable questionnaires.

Data collection and instrumentation

Data was gathered from banking employees in the Greater Accra Region, the capital of Ghana. This was prudent because all banks are headquartered in the capital city and so there is less likely to be variation in their responses. The purposive and convenience sampling techniques were employed to sample the organisations and respondents. While the purposive approach helped select banks, the convenience approach allowed the selection of willing, able, and available

respondents to complete the questionnaires during the survey administration. Participants in the study should have worked in the organisation for not less than 6 months, implying that those not meeting this criterion were excluded. The questionnaire was the major instrumentation used for the primary data collection. The questionnaire adopted two scales (ie Organisational Role Stress Scale and Utrecht Work Engagement Scale) divided into three main sections – Sections A, B and C. The Section-A of the questionnaire sought to obtain data on respondents' demographics. These included respondents' educational attainment, age, position level, organisational tenure, and gender. Section B – Organisational Role Stress Scale (ORSS) contained the adopted 12-item scale developed by Pareek (1993) which sought to obtain data on the stressful experiences of employees. The responses to the scale were measured on a five-point Likert scale ranging from 'Never = 0 to Frequently = 4'. Sample items on this scale are 'My role tends to interfere with my family life; I do not have adequate knowledge to handle the responsibility in my role'. Finally, Section C – Utrecht Work Engagement Scale (UWES) adopted a 17-item scale. This scale is made up of three subscales – vigour, absorption and dedication developed by Schaufeli and Bakker (2004) and it sought to obtain data on employee engagement levels. The responses were measured on a seven-point Likert Scale ranging from 'Never = 0 to Always = 6'. Sample items on this scale were 'At my work, I feel bursting with energy' and 'I find the work that I do full of meaning and purpose'.

Data analysis

The data analysis for the study was conducted in four different stages guided by the objectives. A preliminary analysis was conducted to ensure no violation of assumptions underlying statistical tools. The assumption of data homogeneity was violated; hence, figures were quoted from the alternative tables offered in the analysis. Data were analysed using the Pearson product-moment correlation, an independent t-test and one-way analysis of variance. Exploratory factor analysis (EFA) was conducted through maximum estimates and rotated through the orthogonal rotation, and Promax to display the factor loadings after the Cronbach Alphas of the various constructs had been checked and approved. From here, the researcher used structural equation modelling (SEM) based on the two-step approach proposed by Kline (2016) – measurement model and the structural model with the help of Amos 21. The Goodness of Fit test was conducted in Amos using model fit indices as determined by Hu and Bentler (1999) such as CMIN/DF (χ^2/df) (Chi-Square degrees of freedom), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA) and Incremental Fit Index (IFI). For a model to have a good model fit, CMIN/DF (χ^2/df) must be ≤ 3 , GFI and CFI > 0.95 , RMSEA > 0.06 and finally, SRMR < 0.08 (Hu and Bentler, 1999). Finally, mediational analysis was conducted using the procedure of Baron and Kenny (1986) to test the mediation influence of the individual and organisational factors on

organisational stress (OS) and work engagement (WE). Bootstrapping was conducted in Amos at a 95% confidence interval using a 2000-bootstrapping resampling procedure to access the regression weights of the mediational relationships among all the constructs in the study.

Results and findings

Details on the respondents recruited for the study showed that 44.4% of respondents were males, and 55.6% were females. About 12.5% of the respondents were junior high school certificate holders, 20.8% had senior high school certificates, 17.4% had diploma certificates, 26.4% had first-degree certificates, 13.5% had second-degree certificates and 9.4% had doctoral certificates. According to age categories, respondents below the age of 20 years were 13.2%, those from age 21–30 years were 31.3%, those from age 31–40 years were 33.3%, and those from age 41–50 years were 14.9%, while those from age 51–60 years were 7.9%.

Hypotheses testing

A preliminary analysis was conducted to ensure no violation of the assumptions of normality, linearity and homoscedasticity assumptions, using the Pearson Product-Moment Correlation. Analysis revealed a significant and negative correlation between job engagement and gender [$r = -0.137$, $n = 288$, $p < 0.05$]. Among the sub-dimension of job engagement, gender significantly and negatively correlated with vigour [$r = -0.143$, $n = 288$, $p < 0.05$] and absorption [$r = -0.136$, $n = 288$, $p < 0.05$], but did not significantly correlate with dedication [$r = -0.056$, $n = 288$, $p > 0.05$]. Further, age had a significant positive relationship with job engagement [$r = 0.318$, $n = 288$, $p < 0.01$]. Equally, age had a positive significant relationship with the sub-dimensions of job engagement, vigour [$r = 0.299$, $n = 288$, $p < 0.01$], dedication [$r = 0.272$, $n = 288$, $p < 0.01$] and absorption [$r = 0.245$, $n = 288$, $p < 0.01$]. Also, educational level had a significant positive relationship with job engagement [$r = 0.429$, $n = 288$, $p < 0.01$], and the various dimensions of job engagement as well, vigour [$r = 0.465$, $n = 288$, $p < 0.01$], dedication [$r = 0.356$, $n = 288$, $p < 0.01$], and absorption [$r = 0.280$, $n = 288$, $p < 0.01$]. There was a significant positive relationship between one's position in an organisation and job engagement [$r = 0.429$, $n = 288$, $p < 0.01$], as well as the sub-dimensions of job engagement, vigour [$r = 0.420$, $n = 288$, $p < 0.01$], dedication [$r = 0.267$, $n = 288$, $p < 0.01$] and absorption [$r = 0.389$, $n = 288$, $p < 0.01$]. One's tenure in an organisation had a significant positive relationship with job engagement [$r = 0.279$, $n = 288$, $p < 0.01$] and the dimensions of job engagement, vigour [$r = 0.256$, $n = 288$, $p < 0.01$], dedication [$r = 0.173$, $n = 288$, $p < 0.01$] and absorption [$r = 0.269$, $n = 288$, $p < 0.01$]. Occupational stress has a significant negative relationship with job engagement [$r = -0.400$, $n = 288$, $p < 0.01$], as well as the dimensions of job engagement, vigour [$r = -0.405$, $n = 288$, $p < 0.01$], dedication [$r = -0.303$, $n = 288$, $p < 0.01$] and absorption [$r = -0.311$, $n = 288$, $p < 0.01$]. Table 1

Table 1. Means, standard deviations and Pearson correlation and probability estimates for the study variables.

	M	SD	1	2	3	4	5	6	7	8	9	10
1. Overall job engagement	84.08	10.49	1	—	—	—	—	—	—	—	—	—
2. Vigour	28.87	4.42	0.904 ^a (0.000)	1	—	—	—	—	—	—	—	—
3. Dedication	27.03	3.27	0.733 ^a (0.000)	0.507 ^a (0.000)	1	—	—	—	—	—	—	—
4. Absorption	28.18	4.56	0.898 ^a (0.000)	0.747 ^a (0.000)	0.475 ^a (0.000)	1	—	—	—	—	—	—
5. Gender	1.56	0.49	-0.137 ^b (0.020)	-0.143 ^b (0.015)	-0.056 (0.348)	-0.136 ^b (0.021)	1	—	—	—	—	—
6. Age	2.72	1.09	0.318 ^a (0.000)	0.299 ^a (0.000)	0.272 ^a (0.000)	0.245 ^a (0.000)	-0.189 (0.131)	1	—	—	—	—
7. Educational level	3.36	1.49	0.429 ^a (0.000)	0.465 ^a (0.000)	0.356 ^a (0.000)	0.280 ^a (0.000)	0.013 (0.826)	0.706 ^a (0.000)	1	—	—	—
8. One's position	1.72	0.76	0.429 ^a (0.000)	0.420 ^a (0.000)	0.267 ^a (0.000)	0.389 ^a (0.000)	0.051 (0.388)	0.520 ^a (0.000)	0.701 ^a (0.000)	1	—	—
9. Organisational tenure	1.97	0.86	0.279 ^a (0.000)	0.256 ^a (0.000)	0.173 ^a (0.003)	0.269 ^a (0.000)	-0.130 ^b (0.027)	0.709 ^a (0.000)	0.539 ^a (0.000)	0.544 ^a (0.000)	1	—
10. Occupational stress	31.36	9.98	-0.400 ^a (0.000)	-0.405 ^a (0.000)	-0.303 ^a (0.000)	-0.311 ^a (0.000)	0.171 ^a (0.000)	-0.370 ^a (0.000)	-0.464 ^a (0.000)	-0.471 ^a (0.000)	-0.334 ^a (0.000)	1

Notes: Significant levels (2-tailed) are estimated in brackets.

N = 288.

^aPearson correlation is significant at the 0.01 level (2-tailed).

^bPearson correlation is significant at the 0.05 level (2-tailed).

Measurement and structural model

There were two latent variables (Organisational stress and Work engagement) in the measurement model. After modifying the model, the model fit indices showed an excellent fit to the data as shown in Table 2 below. It can be observed that CMIN/DF = 2.307; CFI = 0.957; SRMR = 0.064 and RMSEA = 0.067 are all above the threshold proposed by Hu and Bentler (1999). The retained observed variables on the final measurement model were used to carry out the path analysis between the various constructs. Assessing the overall fit of the structural model indicated an excellent fit with the data. The CMIN/DF (= 2.031; CFI = 0.964; SRMR = 0.056 and RMSEA = 0.045.), being non-significant, is an indicator of good fit (Jöreskog and Sörbom, 1993). This model had a satisfactory RMSEA of 0.045, especially in tandem with other fit indices (Browne and Cudeck, 1989; Hu and Bentler, 1999). Similarly, the SRMR for the study fell within the level of acceptability (0.056) suggested by Bollen (1989) and Hu and Bentler (1999).

Discriminant validity and reliability

The factor loadings of the observed variables of the latent variables studied exceeded the 0.40 threshold proposed by Hair et al. (2014) because the factor loadings range from 0.525 to 0.857, showing a significant representation of all the indicators of the latent variables studied. To measure convergent and discriminant validity, outer loadings, Cronbach's alpha, t-values, composite reliability (CR) and the average variance extracted (AVE) were determined. It can be observed from Table 3 that the Cronbach alpha of the two constructs is above the 0.7 thresholds proposed by Hair et al. (2014). Also, the factor loadings are all above 0.50 since any loadings below 0.5 were deleted, resulting in the final AVE and CR being above the standard value of 0.5 and 0.7, respectively.

The path coefficients of the model indicate a significant relationship between Organisational tenure (OrgTenure) and the Age of the respondents (Age) ($\beta = 0.641$, $t = 10.890$, $p = 0.01$) as well as the Position and the Educational Level (EduLevel) of the respondents ($\beta = 0.651$, $t = 10.926$, $p = 0.01$). Tables 4–8

An independent samples t-test was conducted to compare the scores of males and females on their job engagement and its sub-dimensions (vigour, dedication, absorption). The assumptions of equal variances were violated for overall job engagement and two sub-dimension of job engagement namely, vigour and dedication. There was a significant difference in overall job engagement scores for males ($M = 85.68$, $SD = 9.47$) and females [$M = 82.80$, $SD = 11.11$; $t_{(288)} = 2.379$, $p = 0.018$]. Further, there was a significant difference in vigour sub-dimension scores for males ($M = 29.57$, $SD = 3.91$) and females [$M = 28.30$, $SD = 4.72$; $t_{(288)} = 2.498$, $p = 0.013$]. Also, there was a significant difference in absorption sub-dimension scores for males ($M = 28.87$, $SD = 4.45$) and females [$M = 27.62$, $SD = 4.58$; $t_{(288)} = 2.328$, $p = 0.021$]. Males and females did not differ in the dedication sub-dimension of job engagement.

A one-way between-groups analysis of variance was conducted to explore the impact of one's age on job

Table 2. Goodness of fit indices results.

The goodness of fit indices	CMIN/DF	CFI	SRMR	RMSEA
Measurement model	2.307	0.957	0.064	0.067
Structural model	2.031	0.964	0.056	0.045

engagement. Since the data violated the assumption of homogeneity of variances, a report on the significance of results was reported from the Robust tests of equality of means. Subjects were divided according to age categories; thus, there are five groupings (Group 1: under 20 years; Group 2: 21–30 years; Group 3: 31–40 years; Group 4: 41–50 years and Group 5: 51–60 years). There was a statistically significant difference at the $p < 0.05$ level in job engagement scores for the five groups [$F_{(4, 287)} = 14.89$, $p = 0.000$]. Post hoc comparisons using Tukey HSD test indicated that the mean score for Group 1 ($M = 74.23$, $SD = 7.14$) was significantly different from Group 2 ($M = 82.71$, $SD = 8.59$), Group 3 ($M = 87.66$, $SD = 9.73$), Group 4 ($M = 87.06$, $SD = 10.86$), and Group 5 ($M = 85.28$, $SD = 13.59$). Group 2 was significantly different from Group 3 but not significantly different from Groups 4 and 5. Group 3 was significantly different from Group 4 and 5. Group 4 was not significantly different from Group 5.

A one-way between-groups analysis of variance was conducted to explore the impact of one's educational level on job engagement. There was no violation of the assumption of homogeneity of variance. Subjects were divided according to their educational level; thus, there are six groupings (Group 1: Junior High School; Group 2: Senior High School; Group 3: Diploma; Group 4: first degree, Group 5: second degree and Group 6: doctorate). There was a statistically significant difference at the $p < 0.05$ level in job engagement scores for the six groups [$F_{(5, 287)} = 20.57$, $p = 0.000$]. Post hoc comparisons using Tukey HSD test indicated that the mean score for Group 1 ($M = 75.22$, $SD = 6.67$) was significantly different from that of Group 2 ($M = 82.35$, $SD = 10.51$), Group 4 ($M = 89.26$, $SD = 8.50$), Group 5 ($M = 85.07$, $SD = 10.02$) and Group 6 ($M = 92.96$, $SD = 6.52$) but was not significantly different from Group 3 ($M = 79.10$, $SD = 9.83$). Group 2 was significantly different from Group 4 and 6 but not significantly different from Group 3 and 5. Group 3 was significantly different from Groups 4, 5 and 6. Group 4 was not significantly different from Groups 5 and 6. Group 5 was significantly different from Group 6.

A one-way between-groups analysis of variance was conducted to explore the impact of one's tenure in an organisation on job engagement. Since the data violated the assumption of homogeneity of variances, reports on the significance of results were reported from the Robust tests of equality of means. Subjects were divided according to their tenure in an organisation; thus, there were four groupings (Group 1: 1–5 years; Group 2: 6–10 years; Group 3: 11–20 years; Group 4: 21 years and above). There was a statistically significant difference at the $p < 0.05$ level in job engagement scores for the four groups [$F_{(3, 287)} = 27.03$, $p = 0.000$]. Post hoc comparisons using Tukey HSD test indicated that the mean score for Group 1 ($M = 78.25$, $SD = 8.74$) was significantly different from Group 2 ($M = 88.93$, $SD = 8.56$), Group 3 ($M = 83.03$, $SD = 11.49$) and Group 4 ($M = 93.08$, $SD = 6.52$). Group 2 was significantly different from

Table 3. Discriminant validity and reliability.

Variables	Items	Loadings	t-values
Occupational stress	<i>Cronbach Alpha = 0.833</i>	—	—
	<i>Composite Reliability (CR) = 0.836</i>		
	<i>Average Variance Explained (AVE) = 0.561</i>		
	My role has recently been reduced in importance	0.798	0.735
	I Do not have adequate knowledge to handle the responsibilities in my role	0.857	0.829
Work engagement	I am not clear on the scope and responsibilities	0.809	0.727
	I Do not get the information needed to carry out the responsibilities assigned to me	0.790	0.698
	<i>Cronbach Alpha = 0.820</i>	—	—
	<i>Composite reliability (CR) = 0.832</i>		
	<i>Average variance explained (AVE) = 0.545</i>		
	I am enthusiastic about my job	0.774	0.826
	When I am working, I forget everything else around me	0.697	0.701
	I am immersed in my work	0.823	0.640
	I Can continue working for very long periods at a time	0.786	0.814
	To me, my job is challenging	0.525	0.751
	It is difficult to detach myself from my job	0.768	0.411

Table 4. Relationship between individual and organisational factors.

	Estimate	SE.	C.R.	P	Label
OrgTenure ← Gender	-0.074	0.072	-1.777	0.076	par_1
Position ← Gender	0.045	0.064	1.064	0.287	par_2
Position ← Age	0.069	0.041	1.146	0.252	par_3
OrgTenure ← Age	0.641	0.046	10.890	***	par_4
Position ← EduLevel	0.651	0.030	10.926	***	par_5
OrgTenure ← EduLevel	0.087	0.034	1.491	0.136	par_6

*** $p < 0.001$

Table 5. Summary of the differences between males and females in job engagement.

Job	Engagement	Men (A) n=128	Women (B) n=160	Mean diff (A-B)	SE	p-value
Overall job engagement		85.68	82.80	2.88	1.213	0.018
Vigour		29.57	28.30	1.27	0.509	0.013
Dedication		27.23	26.86	0.365	0.383	0.341
Absorption		28.87	27.62	1.25	0.537	0.021

Notes: * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$; N for each variable may vary slightly from the total n.

Group 3 but not significantly different from Group 4. Group 3 was significantly different from Group 4.

A standard multiple regression was conducted to ascertain if gender, age, educational level, position and organisational tenure would predict job engagement. Table 9 summarises the findings of the analysis. The model as a whole explained 24.0% in job engagement (0.240×100). The Anova table showed that this was statistically significant [$F_{(5, 287)} = 17.857$, $p = 0.000$]. Of all the predictor variables, one's position made the most significant unique contribution to explaining job engagement ($\beta = 0.276$, $p = 0.000$). This is followed by educational level ($\beta = 0.251$, $p = 0.005$). The next variable that made a significant unique contribution in explaining the variance in job engagement is gender ($\beta = -0.158$, $p = 0.003$). Age and organisational tenure did not make a significant unique contribution in explaining the variance in job engagement.

Baron and Kenny's (1986) procedure was adopted to test the mediating effect of individual and organisational factors on

organisational stress and work engagement. The direct effect shows a significant relationship between the two constructs. Since this satisfied the first requirement for mediation according to Baron and Kenny (1986) the researcher further tested the mediational relationships. Bootstrapping was conducted on the mediational relationships, and the bootstrapping results from the analysis conducted indicated an insignificant indirect relationship between the independent and the dependent constructs (See Table 10) after the introduction of the mediators (Gender, Age, Education, Position and Organisational Tenure), depicting a full mediation.

Discussion

The analysis of the hypotheses revealed a significant positive relationship between work engagement and age, educational level, one's position in an organisation and organisational tenure, and a significant negative relationship between work engagement and gender and occupational stress. There were

Table 6. Summary of one-way analysis of variance of the impact of one's age on job engagement.

Variable	df	SS	MS	F	P
Age	4	5500.23	1375.05	14.893	0.000

$p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 7. Summary of one-way analysis of variance of the impact of one's educational level on job engagement.

Variable	df	SS	MS	F	P
Educational level	5	8455.15	1691.03	20.577	0.000

$p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 8. Summary of one-way analysis of variance of the impact of one's tenure in an organisation on job engagement.

Variable	df	SS	MS	F	P
Organisational tenure	3	7025.89	2341.96	27.033	0.000

$p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

age, educational level, and gender differences in work engagement. Furthermore, there were differences in the level of work engagement concerning organisational tenure. One's position, educational level and gender significantly predicted work engagement, but age and organisational tenure did not. Individual factors (educational level and age) and organisational tenure (position and organisational tenure) mediated the relationship between occupational stress and job engagement.

Studies have reported a non-significant relationship between gender and work engagement (Coetzee and Rothmann, 2013; Marcus and Gopinath, 2017; Pocnet et al., 2015). However, this was not affirmed in this present study. The findings revealed that aside gender predicting work engagement, an increase in gender roles led to a significant decrease in work engagement levels. This relationship was evident in the sub-dimension of work engagement, specifically vigour and absorption. Also, a non-significant relationship was found between gender and dedication, a finding contrary to Bindu and Muralidhar's (2016) study where gender differences in work engagement were found. Results on gender differences in work engagement are inconclusive. Consistently, several studies have reported that females have higher work engagement than their male counterparts (Byrne and MacDonagh, 2017; Klusmann et al., 2008; Marcus and Gopinath, 2017; Taipale et al., 2011). Even in the sub-dimensions of work engagement, females have been reported to have higher levels. For instance, females have higher absorption and dedication dimensions of work engagement, but there were no gender differences in the vigour dimension of work engagement (Jaworek, 2018). Instead, this study found that males had higher levels of work engagement and higher levels of vigour and absorption than their female counterparts. Still, there were no gender differences in the dedication sub-dimension of job engagement. This supports the finding of Garg (2014), Kong (2009),

Schaufeli and Bakker (2003) and Steyn and Grobler (2016) who found that males had higher levels of work engagement than their female counterparts. The findings of this study may reflect the culturally assigned gender roles assigned in the Ghanaian community. An attempt to execute these roles impedes one's work engagement. Males may have had a higher level of work engagement because, in the Ghanaian cultural setting, the roles assigned to men are quite defined and flexible. As such, they can channel their energy to other activities like work. This is contextual.

Further, the analysis revealed that an increase in age led to a significant increase in work engagement levels. This relationship was consistent for the sub-dimensions (vigour, dedication and absorptions) as well. A rather exciting observation was that as age increased, there was a steady increment in work engagement levels right up to the peak levels; however, as employees approach retirement, work engagement levels drop slightly. The findings of this study confirm the results of Taipale et al. (2011) and Van den Broeck et al. (2009) who also found that an increase in age led to a significant increase in work engagement levels. Also, the findings of Haley et al. (2013) and Schaufeli and Bakker (2003) showed that older employees had higher levels of work engagement than younger employees. This was affirmed in this study but not that of Jaworek (2018) and Robinson et al. (2004). These researchers found that employees 50 years and above had higher levels of work engagement, however, analysis of this present study revealed that employees 51 years and above had a slight drop in levels of work engagement. Klusmann et al. (2008) found that an increase in age was associated with a decrease in work engagement levels. Age did not predict work engagement in this present study, suggesting that an employee at the initial level of employment may seek to advance in their career and life and may be highly engaged in work activities. However, as the employee nears retirement, the focus is diverted from work to other social life activities of interest because the employee's focus is on life after retirement. Thus, the employee is likely to be less engaged in their work after considering that career advancement may be of little or no interest to them at this point in their time.

There is little evidence to suggest a relationship exists between one's educational level and work engagement. However, a few studies have found a non-significant association between work engagement and one's educational level (Bindu and Muralidhar, 2016; Coetzee and Rothmann, 2013). Further, Coetzee and Rothmann (2013) submitted that employees with various educational levels did not differ on the various dimensions of work engagement except for the vigour dimension of work engagement levels. The findings of Coetzee & Rathmann (2013) contradict the results of this study. Aside from the educational level predicting work engagement levels, an increase in one's educational level significantly increases one's work engagement levels. This relationship was the same for the sub-dimensions of work engagement levels as well. There were significant differences observed in work engagement levels among the varying educational levels of the employees as well. This finding may reflect the theoretical component of the job demand-resource theory (Bakker and Demerouti, 2007, 2014). This is because an increase in educational level means an increase in a wealth

Table 9. Summary of standard multiple regressions of the contributions of individual and organisational factors to one's job engagement.

Variables	B	Beta	p-value
Gender	-3.326	-0.158	0.003
Age	0.037	0.004	0.965
Educational level	1.759	0.251	0.005
One's position	3.798	0.276	0.000
Organisational tenure	-0.358	-0.029	0.707

Notes: * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$.

Table 10. Mediation results.

Relationships	Direct effect	Indirect effect	Finding
OS→Gender→WE	-0.180**	-0.043	Full mediation
OS→Age→WE	-0.180**	-0.053	Full mediation
OS→Position→WE	-0.180**	-0.032	Full mediation
OS→EduLev→WE	-0.180**	-0.062	Full mediation
OS→tenure→WE	-0.180**	-0.078	Full mediation

*** $p < 0.010$

of knowledge. Consequently, the individual may have technicalities in handling job demands, thereby making the employee highly engaged in work activities because, at this level, work activity is considered less stressful.

Coetzee and Rothmann (2013), Jaworski (2018), and Mishra and Mohanty (2016) found that one's position significantly impacts one's level of work engagement. For instance, Jaworek (2018) and Kim et al. (2009) found that managers were more engaged than non-managers. This finding has been observed in this study and analysis revealed that an increase in one's position significantly increased one's work engagement levels. This relationship was the same for the sub-dimensions of work engagement (vigour, dedication, absorption). Just as Mishra and Mohanty (2016) found in their study, this study also found that one's position predicted one's level of work engagement. For the respondents (workers in the banking sector) recruited for this study, a job promotion or one's level of position in an organisation is intrinsic motivation. Employees strive to work harder to gain a better job promotion. This consequently leads to a high level of work engagement.

Bindu and Muralidhar (2016) and Perrin (2003) suggested that tenure in an organisation was unrelated to work engagement levels. Other researchers have also reported that an increase in one's organisational tenure decreases one's level of work engagement (Avery, et al., 2007; Coffman and Gonzalez-Molina, 2002; Swaminathan & Ananth, 2009; Truss et al., 2006), indicating that some form of relationship exists between organisational tenure and one's work engagement levels. However, there was variation in the findings as observed in the analysis. Despite organisational tenure not predicting work engagement levels, it was observed that an increase in one's tenure in an organisation led to a significant increase in one's work engagement levels. This relationship was consistent for the sub-dimensions of work engagement (vigour, dedication, absorption) as well. Results also revealed that employees who have worked for 6 years and beyond had a

higher level of work engagement than those who have worked from 1 to 5 years. This contradicts the findings of Bakar (2013), Coetzee and Rothmann (2013) and Kong (2009) who found otherwise. This disparity in results may be because the sect of respondents recruited for the study captures employees who engaged in menial jobs in the banking sector right through to employees who occupied positions that demanded more intellectual effort. Therefore, for those who engage in the menial job, the target may be to get a better job considering the stress associated with their work and the few resources available to them to deal with their job demands as reflected in the job demand-resource model (Bakker and Demerouti, 2007, 2014). These sects of employees may be disengaged from their work at the initial stages of employment. However, as they get acquainted with the system in the subsequent years, they may learn to be more engaged in their work to make a demand and keep the job for survival.

Additionally, an increase in occupational stress has been observed to lead to a decrease in levels of work engagement (Chen and Kao, 2013; Cordioli et al., 2019; Pocnet et al., 2015). This relationship was supported by the findings of this present study as the analysis revealed that an increase in occupational stress significantly decreased work engagement. This significant negative relationship was observed along the work engagement sub-dimensions (vigour, dedication, absorption). Also, occupational stress predicted work engagement.

Finally, although the mediational role of educational level, age, one's position and organisational tenure on the relationship between occupational stress and work engagement has least been explored, exciting findings were discovered in this present study. Age, educational level, organisational tenure, and one's position, explained the significant relationship between occupational stress and work engagement. According to the job demands-resource model, employees are either intrinsically or extrinsically motivated to engage more when they perceive they have enough resources to handle the demands of the job (Bakker and Demerouti, 2007, 2014). It can be argued that promotion from one's former position to a higher status is an extrinsic form of motivation for an employee. Aside from this, an employee is more likely to have enough resources to handle job demands at a higher rank. Further, the longer one stays committed to a particular job and matures age-wise, over time, that individual gathers a wealth of knowledge and experience that serves as a resource for handling challenges that may arise from one's work. Finally, education exposes one to a different wealth of knowledge. This is equally beneficial in managing occupational stress. For instance, an employee is more likely to adequately handle occupational stress with available techniques acquired through education. This process subtly inflates the level of work engagement among employees.

Limitation

One weakness in this study is that quantitative research cannot provide in-depth explanations for findings. As a cross-sectional study, a causal relationship cannot be established.

Contribution, implication and conclusion

Work engagement is essential for organisational growth and constant development in the dynamics of the business world. The findings of this study have provided evidence for the relevance of the job demand and resource model in a developing country with particular consideration to factors that may impact this model. This study suggests that to ensure organisational success by increasing productivity, management should consider intrinsically and extrinsically motivating employees and, equip them through training, promotional opportunities and opportunities for career advancements to handle better occupational stress and increase employee satisfaction. To obtain a high level of work engagement among employees, it is essential for the organisation to critically consider factors that may promote work engagement while reducing the impact of occupational stress to improve employees' well-being. Also, the findings of this study have implications as firms need to enhance the levels of employee engagement (empowerment, training, etc.) by recognising different levels of employees' occupational stress across groups.

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