

**EXAMINING THE PREDICTIVE RELATIONSHIP BETWEEN
EMPLOYEE WORK MOTIVATION AND PERSONNEL
INDIVIDUAL WORK PERFORMANCE: THE ROLE OF JOB
SATISFACTION AND JOB STRESS**

Goodluck Ofobruku

Department of Business Administration, Faculty of the Social Sciences, Delta State
University, Abraka, Nigeria.

goodluckofobruku@gmail.com

ABSTRACT: The purpose of this study was to investigate the relationship between employee work motivation and individual work performance, as well as the impact of job satisfaction and job stress on this relationship. The design of this study was cross-sectional, and data were collected with self-report measures. One hundred and ninety-five employees were drawn from 23 public and private organizations in Delta State, Nigeria. The participants were made of 102 (52.31%) females and 93 (47.69%) males, with a mean age of 37.82 (SD = 6.71). Simple regression analysis revealed that employee work motivation positively and significantly predicted personnel's work performance. Mediation analysis revealed that job satisfaction partially mediates the relationship while job stress was a significant moderator of the relationship. It was concluded that the employee's work motivation influences their work performance partially through their satisfaction with their jobs and the relationship can be strengthened or weakened by feelings of stress. It was recommended that for the successful deployment of motivational strategies to enhance work performance, managers should select those strategies that have proven to be satisfying to employees as well as reduce work stressors.

Keywords: Work Motivation, Work Performance, Job Satisfaction, Job Stress

INTRODUCTION

Above all else, all organization desires to function optimally and effectively (Nwanzu & Babalola, 2019). However, the success of any organization is fundamentally hinged on the outputs of the personnel. Organizations have goals that can only be achieved by the efforts of personnel working therein. In the field of organizational and personnel studies, employee performance is gaining increased acceptance as a measure or index of organizational productiveness and efficiency (Pradhan & Jena, 2017). In the strictest sense, what is known as "organizational performance" is an aggregate and function of the performance of its personnel. Even as technology is being fast-tracked into the workplace and robots are now replacing humans in some job roles, it is still generally agreed that organizations and systems are people.

Thus, personnel work performance is a critical component of organizational performance. Personnel work performance is a key construct in organizational studies to such a great extent that staff recruitment is heavily reliant on the principle of choosing from a list of applicants those who are expected to have better performance on the job in comparison to those not chosen (Viswesvaran & Ones, 2000). They further observed that much of human resources practices

such as training, learning and development, job evaluation, performance appraisal, placement for job fit, and reward systems are either to the end of improving personnel work performance or utilize data personnel work performance data. Against this backdrop, the relevance of personnel's work performance and an appropriate understanding of the same – its antecedent, consequence, facets, and measurement – cannot be overemphasized as much of organizational theories and practices have it in its core either implicitly or explicitly.

Personnel work performance has been defined in many ways by varied authors with each definition informing the author's conceptualization and measurement of the construct. Personnel work performance refers to a set of behaviours exhibited by employees that are of probable value to the organizational goals and support the overall organizational climate (Motowildo & Kell, 2012; Nwanzu & Uche-Okolo, 2017). The concept of personnel work performance does not include nor is it restricted to the results of employee behaviour but only the behaviours themselves as there are other influencing factors in results (Motowildo & Kell, 2012; Aguinis, 2019). Koopmans et al. (2011) differentiated between productivity and performance as both have been used interchangeably as performance is a broader construct than productivity which has been conceptualized as input over output. In research, interest surrounding variables are usually to the end of establishing its predictors/antecedents/causes, and their effect on other constructs, or indicators. In the case of personnel work performance, because the construct is arguably in and of itself the desired "end-point" or a key factor in the fulfillment of organizational objectives, it is usually studied in a bid to prove its predictors/antecedents/causes and indicators. In this study, employee motivation is selected as an antecedent to personnel work performance.

Motivation, the drive either internal or external to the individual to behave in specific ways (Ek & Mukuru, 2013) has been linked to personnel work performance. Motivation refers to the degree an employee is willing to exert or expend energy on the job, to the extent that such action also meets some needs (Sesay, et al., 2017). It has been argued that motivation is just as important to individual work performance as the latter is to organizational performance (Zameer et al., 2014). This is reliant on the premise that human resource stands as the most vital asset in the organization and motivation, undisputedly is the key that unlocks all of the skills, traits, abilities, and characteristics of the individual in the workplace. This thought has been echoed by Osabiya (2015) who observed that the goal-attainment of any organization can be linked to the motivated personnel in that organization. The role of motivation in organizations has been largely documented in extant literature especially its relationship with job performance. However, the role of other relevant work constructs in this relationship has not been given adequate attention.

Factors have been identified that can influence employee motivation in organizations (see Ek & Mukuru, 2013; Aliyu, 2019). Particular amongst these are the work itself, work conditions, recognition, pay, and supervision which have also been implicated as influencing factors to two other work constructs – job satisfaction and occupational stress (see Ndulue & Ekechukwu, 2016). It thus remains to be empirically validated whether job satisfaction and occupational stress are influencing factors in the relationship between employee work motivation and their performance as the literature suggests. Consequently, this study investigated the relationship between employee motivation and job performance and the role of job satisfaction and occupational stress in this relationship.

Organizations attempt to maximize their human resources and improve individual worker performance in today's fiercely competitive business environment to stay competitive. While employee motivation has long been recognized as a critical element in fostering and maintaining high levels of performance, a thorough analysis of potential mediating and moderating elements, such as job satisfaction and job stress, is necessary to comprehend the complicated relationship between work motivation and individual work performance. Although the relationship between work motivation and individual work performance has been studied in the past, more research is still needed to fully understand the underlying mechanisms and environmental factors that affect this relationship. Particularly, there hasn't been much discussion in the literature up to this point on the functions of job satisfaction and job stress as potential mediators and moderators.

This research seeks to close these research gaps by investigating the mediating effects of job satisfaction and the moderating effect of job stress on the predicted link between employee work motivation and personnel individual work performance. This study aims to shed light on the intricate interactions between these variables and offer insightful recommendations for firms to improve worker motivation and output. Additionally, knowing the precise mechanisms by which job satisfaction and job stress play a role in the link between individual work performance and work motivation can help in the creation and application of successful interventions and strategies to enhance employee performance in organizations.

LITERATURE REVIEW

Personnel Work Performance

In understanding and measuring the performance of employees, their actions and inactions are taken into consideration (Shahzadi, et al., 2015). The very conceptual meaning of performance rests on its measurement hence there is variety in the former. However, a review of literature dating back a few years shows a consistent pattern of measurement as performance is measured as constituting four dimensions – task performance, contextual performance, adaptive performance, and counterproductive work behaviour (Koopmans et al., 2011; Yusoff et al, 2014; Nwanzu & Uche-Okolo, 2017). Task performance refers to the competence with which a worker carries out the central significant or specialized aspects of their job (Koopmans, 2014). These behaviours include mastery of the facts and procedures of the job, aptness, and competence in the technical, administrative and leadership aspects of the job (Yusoff et al., 2014). Contextual performance refers to prosocial behaviour or extra-role behaviours displayed by employees in the workplace that benefits the organization and its overall goals (Pradhan & Jena, 2016). They are extra-role behaviours because though they are required of workers, they do not form part of his/her job description like job-specific functions. These behaviours include mentoring new employees, volunteering for extra work or overtime, teamwork and collaboration on tasks, supporting management decisions, altruism, and showing initiative. Adaptive performance refers to personnel's ability to adjust their behaviour to cope with changing work situations, conditions or work roles (Koopmans et al., 2011; Pradhan & Jena, 2016).

The work environment is constantly changing as policies both internal and external to the organization are dynamic. An organization's internal policy can change in response to changes

in government policies, market demands, or the activities of its competitors. Whichever way, for the organization to persist in its survival and thriving, certain changes must be made that will affect its personnel as they are the “end-effectors” of these changes. Adaptive performance, therefore, forms a crucial dimension of personnel work performance as the inability to respond to the dynamism of the work environment can ultimately affect individual and organizational performance. Koopmans et al. (2011) argued that although some authors have fixed adaptive performance under contextual performance, it does not seamlessly suit the dimension and previous research has provided evidence of it being a separate independent dimension. Workplace deviant behaviours also termed counterproductive work behaviours are behaviours with the potentiality of being destructive to the organizations and its members (Koopmans et al., 2011). Absenteeism, lack of punctuality, taking more breaks than necessary, using working hours for leisure, theft, quarrelling, and speaking ill of the organization and its members to outsiders, and theft are a variety of behaviours that are counterproductive to organizational goals.

Employee Motivation

The unwavering interest surrounding motivation is premised on the fact that it provides an answer to the “why” of behaviour; it attempts to explain the reason behind human behaviour. Sesay et al. (2017) observed that an exact definition of the concept is problematic due to its multitudinous features and the influences of the subjectivity of the individual and their interaction with the environment. All given definitions of the concepts are at best an attempt to describe what it is – its process, state, and determinant – and this pursuit has birthed many theories and frameworks integrating two or more of these theories. Employee motivation is referred to as “a set of energetic forces that originates both within as well as beyond an individual’s being, to initiate work-related behaviour, and to determine its form, direction, intensity and duration” (Pinder, 1998, p. 11).

It is seen from the aforementioned that motivation does not only actuate behaviours in the workplace but also defines its form, energizes it, directs it, and sustains it. The directional aspect of motivation implies that both negative and positive work behaviour have a motivational basis. Tremblay et al. (2010) noted that the extent to which workers are motivated is seen in how attentive they are to work-related tasks, the effort expended on same, and their continuance and measuring factors that can influence these are critical for appropriating motivation as well as initiating mechanisms that increases it and its outcomes in the organizations.

Breaugh et al. (2018) noted that personnel motivation can be of two types such as extrinsic and intrinsic motivation. Extrinsic motivation comes from things or factors that are outside the individual e.g., promotion, social recognition, money, fame materials, achievements, salary, fringe benefits, security, contract of service, the work environment and conditions of service. Armstrong (2016) noted that extrinsic motivation can have an immediate and powerful effect on the personnel, but will not necessarily last long. When an employee is motivated by the items above, productivity and personnel performance will be increased. This will potently enable management to achieve designed goals. Intrinsic motivation comes from within; it comes from personal enjoyment and educational achievement that drives an individual to do a particular thing.

Intrinsic motivation is related to self-generated and psychological factors that influence people to behave in a certain way. These include an opportunity to use one's ability at work, challenging work opportunities and being treated fairly. Jacoby (2018) noted that people with intrinsic motivation are internally motivated or self-motivated people, and for performing their job well, they just don't need other rewards. They enjoy doing challenging jobs and completing their targets efficiently. Intrinsic motivators are concerned with the quality of work life and are more likely to have a deeper, stronger and long-term effect because they are not imposed from outside. (Mullins, 2015; Vanek, 2017).

Employee Motivation and Personnel Performance

Research has asserted and continually so, a positive relationship between employee motivation and job performance (Robescu & Iancu, 2016). For instance, Risambessy et al. (2012) found a significant effect of motivation on employee performance among health workers in Indonesia. Owusu (2012) studied motivation as a bi-dimensional construct and found both intrinsic and extrinsic motivation to affect the personnel performance of librarians in public universities in Ghana Ek and Mukuru (2013) also found motivation to be a positive correlate of job performance among staff of a technical training institute in Kenya.

Shahzadi et al. (2014) found employee motivation to be a significant predictor of employee performance using a sample of teachers in Pakistan. Zameer et al. (2014) also in a study in Pakistan showed employee motivation to significantly predict personnel individual work performance using workers in the beverage industry. Kahungya (2016) study revealed a positive relationship between certain motivational strategies – salary, allowances/benefits, recognition, promotion, and perceived organizational support – and personnel performance in Tanzania. Girdwichai and Sriviboon (2020) using a sample of academic staff of business schools in Indonesia observed that employee motivation is positively related to their job performance and this relationship is mediated by employee training.

Owotutu (2010) also observed a positive relationship between motivation and employee performance among mid-level staff in a manufacturing company in Nigeria. Kuvaas et al. (2017) explored how the types of motivation influence performance in three separate studies using employees across different industries in Norway and found that intrinsic motivation positively correlates with job performance while extrinsic motivation negatively correlates with job performance. They explained taking cues from previous empirical outcomes (see Jenkins et al., 1998; Lazear, 2000; Weibel et al., 2010; Bareket-Bojmel et al., 2014) that using money or the like to incentivize performance does not necessarily lead to performance as their effect is mostly felt in jobs that involved uncomplicated, routine, uninspiring, and quantitative tasks.

In jobs involving tasks that are opposed to the aforementioned, it is either unrelated or negatively related to extrinsic motivation. This is not very shocking as the dynamism of the workplace and human needs have decreased the potency of money as a motivator as employees continually realized that money cannot do much for their psychological well-being past satisfying their fundamental needs (Seligman, 2002). However, it is expected that motivation as a composite whole will positively relate to employee job performance as past research has suggested. Consequently, it is hypothesized that:

H1: Employee motivation significantly predicts employee job performance

Job Satisfaction as a Mediator of the Relationship Between Motivation and Work Performance

The importance of job satisfaction in organizational studies is derived from the relevance of the employee's feelings about the job and the significance of the same (Efficiency, 2020). Locke (1969, p. 316) defined job satisfaction as "the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values". It is simply the extent to which individuals are pleased with their job or some aspects of it. Karodia et al., (2016) pointed out some factors repeatedly observed in extant literature to influence the satisfaction of employees: organizational policies and culture, bureaucratic procedures and communication, working conditions, job security, promotions, and leadership/management style.

Efficiency (2020) asserted that a significant number of studies examining job satisfaction is due to its relationship with desired work outcomes including job performance and the same has been found to mediate the relationships between job characteristics and individual/organizational outcomes. Accordingly, the mediating role of job satisfaction has been investigated in work literature. For instance, Olcer (2015) observed that job satisfaction mediated the relationship between dimensions of psychological empowerment – a construct closely linked to intrinsic motivation – and job performance. Bashir et al. (2020) also observed that job satisfaction mediated the relationship between working conditions and job performance. Rukayah et al. (2019) also found job satisfaction to mediate the effects of compensation and organizational culture on employee performance. However, the mediating effects of job satisfaction on the relationship between motivation and employee job performance have not been given the needed attention. Related studies have found motivation as a significant correlate/predictor/antecedent to job satisfaction (e.g., Ali et al., 2016; Harinoto & Iman, 2018; Idiegbeyan-Ose et al., 2019; Paais & Pattiruhu, 2020; Carvalho et al., 2020).

The effect of job satisfaction on job performance has been largely documented in the literature also and it is fitting to hypothesize this effect might be a mediatory role between motivation and job performance. For example, an employee is only motivated to the extent that the work or aspects/characteristics of it satisfy a need. Thus, an employee who is not satisfied with the motivational schemes or the work itself might not expend effort on work-related tasks. Buford et al. (1995) corroborate this further when they observed that motivation results in job satisfaction which in turn impacts performance. Herzberg's (1966) two-factor theory posits that certain motivating factors inherent in the job can prove highly satisfying and produce good work performance. Against this backdrop, the following is hypothesized:

H2: Job satisfaction will mediate the relationship between employee motivation and job performance

Job Stress as a Moderator of the Relationship Between Motivation and Work Performance

Job stress refers to strain or discomforting feelings felt by employees as a result of perceiving work demands to exceed one's ability to cope (Jamal, 1985; Noermijati & Primasari, 2015). Job stress can result in varied psychophysiological and behavioural muddles and consequently affect the psychological and physical health of employees (Wani, 2013). Li et al. (2014) noted that arduous workload, inadequate resources, relationships with coworkers and superiors, lack of opportunities for growth and promotion, and professional contempt are significant sources of stressors. These can be grouped into core work-related tasks, job roles, professional advancement, organizational structure and climate, and work relationships and further grouped into work-task stress and work-role stress (Cooper & Marshall, 1976; Riggio, 2003).

Job stress is not always negative as some level of stress (mild to moderate) can be positive as it stimulates employees towards improved performance. Nonetheless, high levels of stress have been observed to have a negative and debilitating effect on employee job performance (see Olaniyi, 2013; Noermijati & Primasari, 2015; Zeb et al., 2015; Murali et al., 2017; Fonkeng, 2018; Deng et al., 2019; Harini et al., 2020). Its role in moderating the relationship between motivation and employee job performance has not been studied even though significant negative relationships have been found between motivation and job stress.

However, reference can be made to Vroom's (1964) expectancy theory of motivation which posits that people are motivated by how much they want something and how likely they think they are to get it. That is, individuals will be motivated to achieve a desired goal as long as they expect their actions will achieve the goal. He suggested that motivation leads to efforts and the efforts combined with employees' ability together with environmental factors will interplay resulting in performance. Thus, environmental factors, stressors such as role overload and heavy workload in this context, can impact an employee's perception of goal attainment and self-efficacy beliefs thereby resulting in decreased motivation, lowered effort, and ultimately poor work performance. Thus, the following is hypothesized:

H3: Job stress will moderate the relationship between motivation and employee performance

METHODS

Participants

One hundred and ninety-five participants ($M = 37.82$, $SD = 6.71$) purposely sampled from 23 public-owned and private organizations furnished this study with the data for analysis. The sampled organizations include 7 financial institutions, 8 secondary educational institutions, 5 hotels, and 3 logistics and transport companies, all in Delta State. This was informed by Dennis and Fey's (2000) submission that using a higher number of sampled organizations and relatively fewer respondents in each organization produces outcomes that can be better generalized to other situational contexts. The choice of the sample was further influenced by extant literature showing the variables under study to be a source of concern and research effort in the above-listed profession. The respondent sample comprises 48% males and 52% females; 61% married and 39% unmarried; 11% Senior School Certificate Examinations, 41% Ordinary Level Diplomas/ National Certificate of Education, and 48% Bachelor of Sciences and its equivalents. Ages ranged from 18-59 years with a significant number of the participants being in the 25-38 years category. About 74% of the sampled organizations were private-owned while

the other 26% were government establishments. The participants were nonmanagerial staff members of the various sampled organizations.

The survey was carried out in two ways. Firstly, an onsite visit was paid to the secondary schools and transport and logistics company and with permission granted by the managers/principals depending on the organizations, the paper questionnaire was then distributed. Secondly, an onsite visit was paid to the remaining organizations and the researcher spoke with the human resource manager or administrative manager who then collected an online copy of the questionnaire created using Google Forms. The link to the questionnaire was then sent by the managers to the participants via their work WhatsApp platform and work e-mail. The questionnaire began with a section on participants' demography, and then questions on employee motivation, job satisfaction, job stress, and job performance followed in that exact order. Participation was voluntary and no incentive was used.

Measures

Motivation was measured using the multidimensional Motivation at Work Scale (MAWS) developed by Gagne et al. (2010). The scale was developed based on Deci and Ryan's (1985) self-determination theory of motivation. Gagne et al. (2010) emphasize that the scale is intended to measure the two types of motivation – intrinsic and extrinsic. Extrinsic motivation is further subdivided into three classes; identified, introjected, and external regulation. Extrinsic motivation as understood within the context of the workplace refers to working a job as a means to an end. The subjective nature of this "end" infers that it is not the same for every worker. Thus, the further subdivision of extrinsic motivation represents an attempt to have a basic grouping of these "ends". Thus, MAWS had 12 structured items measuring each of these four subscales with 3 items per scale. The scale has a reliability of 0.89 (O'Driscoll et al., 2004) in the authors' original research and obtains responses on a point Likert-type scale ranging from 5 = exactly to 1 = not at all. A Cronbach alpha of .85 was obtained in this study.

Job satisfaction was measured in this study as a unidimensional construct using the Brayfield and Rothe (1951) Index of Job Satisfaction. The scale is a self-report structured and standardized instrument originally composed of 18 items. However, the shorter version with five items (SIJS) was used for this study. Sinval and Maroco (2020) remarked that the scale had some advantages such as its good psychometric properties and its cross-cultural applicability which have both been tested over time and across cultures. The scale elicits responses on a five-point Likert-type form (1 – "Strongly Disagree", 2 – "Disagree", 3 – "Undecided", 4 – "Agree", 5 – "Strongly Agree") two of those items are reversed. Some sample items are: "I feel fairly satisfied with my present job"; and "I find real enjoyment in my work". Many authors have affirmed the validity of evidence based on the internal structure in terms of internal consistency; Judge, Bono, and Locke (2000) reported a coefficient of .89 while Judge, Erez, Bono, and Thoresen (2003) reported an α of .82 to .83 in another study. In this study, A Cronbach alpha of .87 was obtained in this study.

Job stress was measured using the Workplace Stress Scale (WSS) developed by the Marlin Company and the American Institute of Stress and published in 2009. As a self-report measure assessing the degree to which employees experience stress at the workplace, it consists of eight items which measure workplace stress at low, mild, moderate, severe, and very severe levels.

Examples of items in the scale include: “conditions at work are unpleasant or sometimes even unsafe”; and “I have too much work to do and/or too many unreasonable deadlines”. The scale is in the five-point Likert response format, ranging from never (scored 1) to very often (scored 5). High scores are suggestive of higher degrees of job stress. Soltan, Al-Hassanin, Soliman, and Gohar (2020) reported a Cronbach’s alpha reliability coefficient of 0.80 for the scale. In this study, a Cronbach alpha of .79 was obtained.

Personnel performance was measured in this study using the tri-dimensional Pradhan and Jena (2017) Employee Performance at Workplace (EPW) scale. The scale was developed based on their conceptual framework of what constitutes personnel performance. They built their framework on reviewed literature and interviews with leading academicians and industry professionals. The EPW measures personnel performance on three dimensions: task performance, adaptive performance, and contextual performance. Using 23 structured items, it measures each of these dimensions; 6 items for task performance, 7 for adaptive performance, and 10 for contextual performance. The full model has attained an acceptable model fit at $\chi^2 = 362.128$, $df = 225$, $p = 0.00$, (Comparative Fit Index) $CFI = 0.964$, and $RMSEA = 0.041$. The authors in their research also reported a reliability coefficient of 0.80 on the total scale along with the three subscales (α ranging from 0.80 to 0.91). A Cronbach alpha of .83 was obtained in this study. Responses are obtained on a 5-point Likert-type scale ranging from 5 = strongly agree to 1 = strongly disagree. Some examples of items on the scales are: “I am capable of handling my assignments without much supervision”; “I could manage change in my job very well whenever the situation demands”; “I actively participate in group discussions and work meetings”.

RESULTS

Descriptive statistics revealed high levels of employee motivation, job satisfaction, personnel work performance, and moderate job stress. With a five-point Likert summated rating scale, $x = 3.67$ ($SD = .86$), $x = 3.93$ ($SD = .89$), $x = 3.78$ ($SD = .95$), and $x = 2.98$ ($SD = .49$) were observed for the variables. The statistics, as shown in Table 1, showed a significant correlation between the variables except for job satisfaction and job stress. The degree of correlation between the variables was modest, indicating the absence of multicollinearity in the model. Preliminary analyses were carried out on the data to ensure that the assumptions of linearity and normality were met.

Table 1. Means, standard deviations, and correlation coefficient of research variables.

		<i>M</i>	<i>SD</i>	1	2	3
1	Employee motivation	3.67	.86	1		
2	Job Satisfaction	3.93	.89	.52*	1	
3	Job Stress	2.98	.49	-.19*	-.08	1
4	Personnel work performance	3.78	.95	.54*	.43*	-.17*

* $p < 0.05$

The first hypothesis of the study predicts that motivation will significantly predict personnel work performance. This hypothesis was tested with simple linear regression and results as shown in Table 2, indicate that employee motivation significantly predicts personnel performance, $B = .59$, $t(193) = 8.81$, $p < .001$. The analysis of variance (ANOVA) test shows

that the regression is statistically significant ($F(1,193) = 77.67, p < .001$) with an R^2 of .29. The r value of .54 suggests that the relationship between employee motivation and personnel work performance was modest, positive and significant. The R^2 reveals that employee motivation accounts for a 29% variance in personnel work performance and the B value of .59 indicates that for every unit increase in employee motivation, a .59 change increase in personnel work performance is expected. The small difference between R^2 of .287 and adjusted R^2 of .283 which is .004 indicates a good cross validity; that is this model can be generalized to other samples from the same population.

Table 2. Simple regression analysis predicting employee performance from employee motivation

Variable	B	95%CI	β	t	p
Employee motivation	.59	[.46, .72]	.54	8.81	.000

The second hypothesis of the study predicts that job satisfaction will mediate the relationship between employee motivation and personnel work performance. Results indicated that employee motivation was a significant predictor of job satisfaction, $B = .53, SE = .06, 95\%CI [.41, .66], \beta = .52, p < .001$, and that job satisfaction was a significant predictor of personnel work performance, $B = .22, SE = .07, 95\%CI [.07, .37], \beta = .21, p = .004$. These results support the mediational hypothesis. Employee motivation was still a significant predictor of personnel work performance after controlling for the mediator, job satisfaction, $B = .58, SE = .07, 95\%CI [.46, .72], \beta = .54, p < .001$, suggesting a partial mediation. Approximately 32% of the variance in personnel work performance was accounted for by the predictors ($R^2 = .32$). The indirect effect was tested using a percentile bootstrap estimation approach with 5000 samples implemented with the PROCESS macro-Version 3.3 (Hayes, 2017). These results indicated the indirect coefficient was significant, $B = .12, SE = .05, 95\%CI [.02, .23]$, partially standardized $\beta = .12$. Employee motivation was associated with personnel work performance scores that were approximately .12 points higher as mediated by job satisfaction and the proportion of the total effect of employee motivation on personnel work performance that is mediated by personnel work performance is 20.34%.

Table 3. The indirect effect of job satisfaction on paths from employee motivation to personnel work performance

Mediator	Effect	Boot Standard Error	Boot Confidence Interval	
			$BLLCI$	$BULCI$
Job Satisfaction	.12	.05	.02	.23

Note: $BLLCI$ = Boot Lower Limit Confidence Interval; $BULCI$ = Boot Upper Limit Confidence Interval

The third hypothesis predicted that job stress would moderate the relationship between employee motivation and personnel work performance. A multiple regression analysis was conducted before testing the hypothesis with employee motivation and job stress as the predictor and personnel work performance as the outcome variable. The overall model was significant, $R^2 = .29, F(2, 192) = 39.39, p < .001$. While employee motivation contributed significantly to the model ($B = -.57, SE = .07$), job stress did not ($B = -.13, SE = .12, p < .01$), and

$p=.299$ respectively. The adjusted R^2 of .29 shows that only 29% of the variance in personnel work performance can be explained by employee motivation and job stress. To examine the moderating effect of job stress on the relationship between employee motivation and personnel work performance, a moderation analysis was performed using PROCESS macro-Version 3 (Hayes, 2017). As seen in Figure 1, the interaction between employee motivation and job stress accounted for a significant proportion of the variance in personnel work performance, $\Delta R^2 = .02$, $\Delta F(1,191) = 5.89$, $p = .016$, $B = .29$, $t(191) = 2.43$, $p = .016$. the change in R^2 indicates that only 2% of the variance between employee motivation and personnel work performance can be explained by job stress a p statistic of .016 shows this to be statistically significant.

DISCUSSION

This study examined the predictive relationship between employee motivation and employee individual work performance taking into account the mediating role of job satisfaction as well as the moderating role of job stress within the context of this relationship. The model that employee motivation positively and significantly employee individual work performance was good and offered support for the first hypothesis. The result was consistent with extant studies (e.g., Ek & Mukuru, 2013; Shahzadi et al., 2014; Zameer et al., 2014; Kahungya, 2016; and Girdwichai & Sriviboon, 2020) denoting that higher levels of motivation will likely lead to increased performance on employees' end. This is not surprising as human behaviour is motive and need-driven. As people are motivated by their desires to meet their needs and there is the belief that expending effort at work will likely result in satisfying the said need, the motive to work is thus activated leading to work performance.

The result from the mediation analysis also supports the second hypothesis predicting job satisfaction mediating the predictive relationship between employee motivation and employee individual work performance as a partial mediation was observed. This finding is in tandem with Buford et al. (1995) observation that motivated personnel find their job satisfying and exert more effort thus resulting in greater work performance. Also, Herzberg's (1966) two-factor theory which proposed that certain job contents intrinsic to the job may be motivating to staff and also satisfying thereby leading to improved work performance supported the outcome of the second tested hypothesis. The motivating factors in a job can also be a source of satisfaction which is a psychological state that propels effort and increased performance.

The moderating effect of job stress on employee work motivation and work performance which was the third and final hypothesis of the study was also confirmed. This further affirms Vroom's (1964) expectancy theory that within the relationship between work motivation and work performance, is the interaction between individual and environmental factors. This thus sheds light on certain environmental factors influencing the identified main effect. At a low level of stress, high levels of motivation result in increased performance and as stress level increases as seen in Figure 1, the effect is reduced. In speculating on causative factors, it is proposed that this may not necessarily be a result of decreased motivation but stress as it is known leads to the depletion of individuals resources, both physical and mental. Therefore, a motivated employee may want to exert more effort on the job but the psychophysiological distress accompanying stress may leave him/her too powerless and helpless to do so.

Theoretical and Practical Implications

From the findings of this study, a few implications are observed. Employee work motivation significantly predicts personnel individual work performance and this predictive relationship is mediated by job satisfaction and moderated by job stress. When employees are motivated, they are likely to expend effort on the job, however, such effort is partly contingent on whether the job is satisfying and the effort is stronger when the job is less stressful. In seeking to engage motivational strategies that will impact performance, it is necessary to select those that are satisfying to employees and attention should also be given to the working conditions and job characteristics to the end that job stress is kept at a low level as such can be stimulating to employees. A high level of stress for a sustained period may defeat the purpose of any motivational strategies employed by management.

Limitations and Suggestions for Further Studies

This study is bugged by a few limitations. Firstly, the study was cross-sectional making the drawing of causal inferences impossible. The use of self-report measures in measuring all variables might introduce bias thereby confounding the data. Future studies should incorporate managers' and coworkers' ratings of staff alongside self-rating to get a more holistic measure of performance. The constraint of the quantitative method left the researcher speculating on the specifics regarding motivational schemes, job characteristics, and organizational climate that are detrimental to officers' motivation and pointers to environmental stressors. Future studies should adopt a mixed-method approach to get a composite grip on the understudied relationship. Interviews and focus group discussions can be adopted in addition to structured questionnaires in data collection.

References

- Aguinis, H. (2019). *Performance management* (4th ed.). Chicago Business Press.
- Ali, A., Bin, L. Z., & Piang, H. J. (2016). The impact of motivation on the employee performance and job satisfaction in IT park (software house) sector of Peshawar, Pakistan. *International Journal of Academic Research in Business and Social Sciences*, 6(9), 297-310.
- Ali, A., Bin, L., Piang, H. J., & Ali, Z. (2016). The impact of motivation on employee performance and job satisfaction in IT park (software house) sector of Peshawar, Pakistan. *The International Journal of Academic Research in Business and Social Sciences*, 6, 297-310.
- Aliyu, U. M. (2019). Impact of motivation on worker's productivity in an organization: A study of Luluco Nigeria Limited. *International Journal of Scientific Research in Multidisciplinary Studies*, 5(1), 78-116
- Armstrong, M. (2016). *Armstrong's Handbook of human resource management practice* (11th ed.). Kogan Page
- Bakker, A., Demerouti, E., & Schaufeli, W. (2003). Dual processes at work in a call centre: An application of the job demands-resources model. *European Journal of Work and Organizational Psychology*, 12(4), 393-417.
<https://doi.org/10.1080/13594320344000165>

- Bareket-Bojmel, L., Hochman, G., & Ariely, D. (2017). It's (not) all about the Jacksons: Testing different types of short-term bonuses in the field. *Journal of Management*, 43(2), 534-554.
- Bashir, A., Amir, A., Jawaad, M., & Hasan, T. (2020). Work conditions and job performance: An indirect conditional effect of motivation. *Cogent Business and Management*, 7(1). <https://doi.org/10.1080/23311975.2020.1801961>
- Brayfield, A. H., & Rothe, H. F. (1951). An index of job satisfaction. *Journal of Applied Psychology*, 35(5), 307–311. <https://doi.org/10.1037/h0055617>
- Breaugh, J., Ritz, A., & Alfes, K. (2018). Work motivation and public service motivation: Disentangling varieties of motivation and job satisfaction. *Public Management Review*, 20(10), 1423-1443. <https://doi.org/10.1080/14719037.2017.1400580>
- Buford, J. A., Jr., Bedeian, A. G., & Lindner, J. R. (1995). *Management in Extension* (3rd ed.). Ohio State University Extension.
- Carvalho, A. C., Riana, I. G. & Soares, A. C. (2020). Motivation on job satisfaction and employee performance. *International Research Journal of Management, IT & Social Sciences*, 7(5), 13-23. <https://doi.org/10.21744/irjmis.v7n5.960>
- Cooper, C. L., & Marshall, J. (1976). Occupational sources of stress: A review of the literature relating to coronary heart disease and mental ill health. *Journal of Occupational Psychology*, 49(1), 11–28. <https://doi.org/10.1111/j.2044-8325.1976.tb00325.x>
- Deng, J., Guo, Y., Ma, T., Yang, T., & Tian, X. (2019). How job stress influences job performance among Chinese healthcare workers: A cross-sectional study. *Environmental Health and Preventive Medicine*, 24(2). <https://doi.org/10.1186/s12199-018-0758-4>
- Efficiency, O. O. (2020). The role of perceived coworker loafing and gender on job satisfaction and burnout. *FULafia Journal of Social Sciences*, 3(4), 125-141
- Ek, K., & Mukuru, E. (2018). Effect of motivation on employee performance in public middle-level technical training institutions in Kenya. *International Journal of Advances in Management and Economics* 2(4),73-82
- Fonkeng, C. (2018). *Effects of job stress on employee performance in an enterprise (a microfinance institution in Cameroon)* [masters' thesis]. Centria University of Applied Sciences
- Gagné, M., Forest, J., Gilbert, M., Aubé, C., Morin, E.M., & Malorni, A. (2010). The motivation at work scale: Validation evidence in two languages. *Educational and Psychological Measurement*, 70, 628 - 646.
- Girdwichai, L., & Sriviboon, C. (2020). Employee motivation and performance: Do the work environment and the training matter? *Journal of Security and Sustainability Issues*, 9, 42-54.
- Harini, S., Maulana, L. H. Sudarijati, & Juniarti, D. (2020). Performance, job stress and human capital motivation: A study on employee perspective. *International Journal of Scientific & Technology Research*, 9(04), 2295-2300

- Harinoto, H., & Iman, H. (2018). *The role of job satisfaction mediation of compensation and work motivation for employee performance*. In Proceedings of the Annual Conference on Social Sciences and Humanities (ANCOSH 2018) - Revitalization of Local Wisdom in Global and Competitive Era, 531-536
- Hayes, A. F., & Rockwood, N. J. (2017). Regression-based statistical mediation and moderation analysis in clinical research: Observations, recommendations, and implementation. *Behaviour research and therapy*, 98, 39-57.
- Herzberg, F. (1966). *Work and nature of man*. Word Publishing
- Idiegbeyan-Ose, J., Aregbesola, A., Owolabi, S. E., & Eyiolorunshe, T. (2019). Relationship between motivation and job satisfaction of staff in private University Libraries, Nigeria. *Academy of Strategic Management Journal*, 18(1), 1544-1458.
- Jacoby, S. M. (2018). *The embedded corporation: Corporate governance and employment relations in Japan and the United States*. Princeton University Press. <https://doi.org/10.1080/13563460701303016>
- Jamal, M. (1985). Relationship of job stress to job performance: A study of managers and blue-collar workers. *Human Relations*, 38(5), 409-424. <https://doi.org/10.1177/001872678503800502>
- Jenkins, G. D., Mitra, A., Gupta, N., & Shaw, J. D. (1998). Are financial incentives related to performance? A meta-analytic review of empirical research. *Journal of Applied Psychology*, 83(5), 777-787.
- Judge, T. A., Bono, J. E., Locke, E. A. (2000). Personality and job satisfaction: The mediating role of job characteristics. *Journal of Applied Psychology*, 85, 237-249. <https://doi.org/10.1037/0021-9010.85.2.237> PMID:10783540
- Judge, T. A., Erez A, Bono, J. E, & Thoresen, C. J. (2003). The core self-evaluations scale: Development of a measure. *Personality Psychology*, 56, 303-331. <https://doi.org/10.1111/j.1744-6570.2003.tb00152.x>
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological Bulletin*, 127(3), 376–407. <https://doi.org/10.1037/0033-2909.127.3.376>
- Karodia, A., Motlou, R. G., & Singh, S. (2016). An evaluation of the impact of job satisfaction on employee retention at Lonmin Rowland Shaft North West Province. *Kuwait Chapter of Arabian Journal of Business & Management Review*, 5, 15-49.
- Kell, H. J., & Motowidlo, S. J. (2012). Deconstructing organizational commitment: Associations among its affective and cognitive components, personality antecedents, and behavioural outcomes. *Journal of Applied Social Psychology*, 42(1), 213-251. <https://doi.org/10.1111/j.1559-1816.2011.00874.x>
- Koopmans L, Bernaards, C. M., Hildebrandt, V. H., Schaufeli, W. B., De Vet, H. C. W., & Van der Beek, A. J. (2011). Conceptual frameworks of individual work performance – A systematic review. *Journal of Occupational and Environmental Medicine*, 53(8), 856-866.
- Koopmans, L. (2014). *Measuring Individual Work Performance*. The Netherlands

- Kuvaas, B., Buch, R., Weibel, A., Dysvik, A., & Nerstad, C. G. L. (2017). Do intrinsic and extrinsic motivation relate differently to employee outcomes? *Journal of Economic Psychology*, 61(3), 244-258
- Lazear, E. P. (2000). Performance, pay and productivity. *The American Economic Review*, 90(5), 1346-1361.
- Li, L., Hu, H., Zhou, H., He, C., Fan, L., Liu, X., ... & Sun, T. (2014). Work stress, work motivation and their effects on job satisfaction in community health workers: A cross-sectional survey in China. *BMJ open*, 4(6), e004897.
- Locke, E. A. (1969). What is job satisfaction? *Organizational Behaviour & Human Performance*, 4(4), 309–336. [https://doi.org/10.1016/0030-5073\(69\)90013-0](https://doi.org/10.1016/0030-5073(69)90013-0)
- Marlin Company and the American Institute of Stress. (2009). *The Workplace Stress Scale: Attitudes in the American workplace VII*. <http://americaninstituteofstress.org/wp-content/uploads/2011/08/2001Attitude-in-the-Workplace-Harris.pdf>
- Mullins, L. (2015). *Management and organizational behaviour* (7th ed.). Pearson.
- Murali, S. B., Basit, A., & Hassan, Z. (2017). Impact of job stress on employee performance. *International Journal of Accounting & Business Management*, 5(2), 13–33.
- Ndulue, T. I. & Ekechukwu, H. C. (2016). Impact of job satisfaction on employees' performance: A study of Nigerian Breweries Plc Kaduna State branch, Nigeria. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 5(11), 13-23.
- Noermijati, N., & Primasari, D. (2015). The effect of job stress and job motivation on employees' performance through job satisfaction (A study at PT. Jasa Marga (Persero) Tbk. Surabaya - Gempol branch). *Journal of Economics, Business, and Accountancy*, 18, 231-240.
- Nwanzu, C. L. & Uche-Okolo, O. C. (2017). Influence of training and development on job performance among non-academic staff of Delta State Polytechnic, Ogwashi-Uku, Nigeria. *African Journal for the Psychological Study of Social Issues*, 20(2), 177-187
- Nwanzu, C. L., & Babalola, S. S. (2019). Examining psychological capital of optimism, self-efficacy and self-monitoring as predictors of attitude towards organizational change. *International Journal of Engineering Business Management*, 11. <https://doi.org/10.1177/1847979019827149>
- O'Driscoll, M. P, Brough, P., & Kalliath, T. (2004). Work-family conflict, psychological well-being, satisfaction and social support: A longitudinal study in New Zealand. *Equal Employment Opportunities International*, 23(1–2), 36–56
- Olaniyi, A. A. (2013). *Effects of job stress and motivation on performance of employees in hotel industry (hotels at Dublin airport)* [masters' thesis]. National College of Ireland.
- Ölçer, F. (2015). Mediating effect of job satisfaction in the relationship between psychological empowerment and job performance. *Theoretical and Applied Economics*, 22(3), 111-136.

- Organ, D. W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behaviour. *Personnel Psychology*, 48(4), 775–802. <https://doi.org/10.1111/j.1744-6570.1995.tb01781.x>
- Osabiya, B. J. (2015). The effect of employees' motivation on organizational performance. *Journal of Public Administration and Policy Research*, 7(4), 62-75.
- Owotutu, S.O. (2020) Effect of motivation on employee performance in Unilever Nigeria PLC, Agbara Ogun State. *International Journal of Trend in Scientific Research and Development*, 4(2), 981-989
- Paais, M. & Pattiruhu, J. R. (2020). Effect of motivation, leadership, and organizational culture on satisfaction and employee performance. *Journal of Asian Finance, Economics and Business*, 7(8), 577–588.
- Pinder, C. C. (1998). *Work motivation in organizational behaviour*. Prentice Hall
- Podsakoff, N. P., Lepine, J. A., & Lepine, M. A. (2007). Differential challenge stressor-hindrance stressor relationships with job attitudes, turnover intentions, turnover, and withdrawal behaviour: A meta-analysis. *Journal of Applied Psychology*, 92(2), 438–454. <https://doi.org/10.1037/0021-9010.92.2.438>
- Pradhan, R.K., & Jena, L.K. (2017). Employee performance at workplace: Conceptual model and empirical validation. *Business Perspectives and Research*, 5, 69 - 85.
- Riggio, R. E. (2003). *Introduction to industrial/organizational psychology* (4th ed.). Pearson
- Risambessy, A., Swasto, B., Thoyib, A., & Astuti, E. S. (2012). The influence of transformational leadership style, motivation, burnout towards job satisfaction and employee performance. *Journal of Basic and Applied Scientific Research*, 2(9), 8833-8842.
- Risambessy, A., Swasto, B., Thoyib, A., & Astuti, E. S. (2012). The influence of transformational leadership style, motivation, burnout towards job satisfaction and employee performance. *Journal of Basic and Applied Science Research*, 2(9), 8833-8842.
- Robescu, O., & Iancu, A. (2016). The effects of motivation on employees' performance in organizations. *Valahian Journal of Economic Studies*, 7, 49-56.
- Rukayah, Musnadi, S., & Majid, M. S. A. (2019). How important are motivation and job satisfaction in mediating the effects of compensation and organizational culture on employee performance? *East African Scholars Journal of Economics, Business and Management*, 2(6), 318-325
- Seligman, M. E. P. (2002). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment*. Free Press.
- Sesay, A.K., Seisay, I. G., Kamara, C. M., Bangura, A. & Mansaray- Pearce, E. A. (2017). Using motivation as a conceptual framework for institutional capacity building and development. *International Journal for Research in Social Science and Humanities*, 3(12), 42-64

- Shahzadi, I., Javed, A., Pirzada, S.S., Nasreen, S., & Khanam, F. (2014). Impact of employee motivation on employee performance. *European Journal of Business and Management*, 6(23), 159-166.
- Sinval, J., & Maroco, J. (2020). Short index of job satisfaction: Validity evidence from Portugal and Brazil. *PLoS ONE* 15(4): e0231474. <https://doi.org/10.1371/journal.pone.0231474>
- Soltan, M. R., Al-Hassanin, S. A., Soliman, S. S., & Gohar, S. F. (2020). Workplace-related stress among oncologists: Egyptian single-centred observational study. *Middle East Current Psychiatry*, 27, 19. <https://doi.org/10.1186/s43045-020-00026-z>
- Tremblay, M. A., Blanchard, C. M., Taylor, S., Pelletier, L. G., & Villeneuve, M. (2010). Work extrinsic and intrinsic motivation scale: Its value for organizational psychology research: Correction to Tremblay et al (2009). *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, 42(1), 70. <https://doi.org/10.1037/a0018176>
- Vanek, J. (2017). *The economics of workers' management: A Yugoslav case study*. Routledge. <https://doi.org/10.4324/9781315143590>
- Viswesvaran, C., & Ones, D. S. (2000). Perspectives on models of job performance. *International Journal of Selection and Assessment*, 8(4), 216-226. <https://doi.org/10.1111/1468-2389.00151>
- Vroom, V. H. (1964). *Work and motivation*. Wiley
- Wani, D.S. (2013). Job stress and its impact on employee motivation: a study of a select commercial bank. *International Journal of Business and Management Invention*, 2(3), 13-18.
- Weibel, A., Rost, K., & Osterloh, M. (2010). Pay for performance in the public sector: Benefits and (hidden) costs. *Journal of Public Administration Research and Theory*, 20(2), 387–412.
- Yusoff, R. B. D., Ali, A. D., & Khan, A. (2014). Assessing reliability and validity of job performance scale among university teachers. *Journal of Basic and Applied Scientific Research*, 4(1), 35-41
- Zameer, H., Ali, S., Nisar, W. & Amir, M. (2014). The impact of the motivation on the employee's performance in beverage industry of Pakistan. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 4(1), 293-298.
- Zeb, A., Saeed, G., & ur Rehman, S. (2015). The impact of job stress on employee's performance: Investigating the moderating effect of employees' motivation. *City University Research Journal*, 5(1), 120-129