Examining the Relationships between Job Resources and Burnout Symptoms: Evidence from Technology and Vocational Business Lecturers in Nigerian Public Universities

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ABSTRACT

On the bases of the theoretical underpinnings and the conceptual model, the central purpose of this study is twofold: (1) to explore the levels of job resources and burnout symptoms among technology and vocational business lecturers, and (2) to explore the specific interplay between job resources and burnout symptoms among technology and vocational business lecturers. A nonexperimental quantitative research design was adopted to

actualize the central purpose of this study. The population consisted of 288 technology and vocational business lecturers from public universities in Nigeria. The authors applied descriptive statistics (e.g. mean and standard deviation), inferential statistic (e.g. correlation) and regression statistics via 10000 resamples bootstrap with bias corrected and accelerated (BCa) estimates. The results showed that the level of job resources (e.g., use of various skills, support from HODs/colleagues, job autonomy, feedback on the job done and opportunities for career advancement) is generally low and the level of burnout symptoms (e.g., exhaustion, mental distance, cognitive impairment and emotional impairment) is generally high among technology and vocational business lecturers. The result suggested that technology and vocational business lecturers currently experienced absence of job resources and, in turn, suffer from burnout and its symptoms. The results further showed that job resources (e.g., use of various skills, support from HODs/colleagues, job autonomy, feedback on the job done and opportunities for career advancement) negatively predicted burnout and its symptoms (e.g., exhaustion, mental distance, cognitive impairment and emotional impairment). The result suggested that as job resources decreases, burnout and its symptoms increases. The result also suggested that the experiences of increased burnout symptoms is a function of the experiences of decreased job resources. The limitations and future research focus as well as theoretical and practical implications of the results are discussed in the study.

Keywords: Burnout symptoms, job resources, public universities, technology/technical lecturers, vocational business lecturers.

INTRODUCTION

Technology and vocational business education has been defined in the education policy document of the Federal Republic of Nigeria (FRN) as any education and training programme referring to the study of technologies and related sciences and the acquisition of practical skills and knowledge that relates to various occupations and professions in social and economic life (FRN, 2013). This definition implied that technology and vocational business education is an education and training programme encompassing learning and work experiences in schools or in the industries that are planned and organized to equip students with the practical skills and knowledge to pursue entrepreneurial and educational careers after graduation. The goals of technology and vocational business education as established in the literature is threefold: (1) to prepare students for career progression in different occupations and professions; (2) to equip students with proper skills to undertake gainful employment; and (3) to expose students to the knowledge about careers in different occupations and professions (Okoye & Edokpolor, 2021).

To achieve the above goals, university administrators and managers need to formulate and implement the policies to create the working environment characterized by some motivational factors that would assist technology and vocational business lecturers to perform job responsibilities in an effective and efficient manner. This implied that technology and vocational business lecturers can only perform job responsibilities in an effective and efficient manner through the working environment characterized by some motivational factors. Technology and vocational business lecturers are well-educated and trained to perform the job responsibilities of equipping students with practical skills and knowledge required to pursue entrepreneurial and educational

careers after graduation. Therefore, technology and vocational business lecturers have important roles to play in executing the job responsibilities of equipping students with the practical skills and knowledge required to pursue entrepreneurial and educational careers after graduation (Edopkolor, Chukwuemeke & Osifo, 2022b).

Studies have shown that technology and vocational business education sector of Nigeria is faced with underfunding, staff shortage, dearth of infrastructural facilities, and overcrowded classrooms (Edokpolor, Edokpolor & Olupayimo, 2016; Edokpolor & Owenvbuigie, 2017b). Studies have also revealed that technology and vocational business workforce is characterized by job demands (complex and multiple job responsibilities, work-family conflict and work pressure) and absence of job resources such as use of various skills, job autonomy, support from HODs/colleagues, feedback on the job done and opportunities for career advancement (Edokpolor, Imeokparia & Egbri, 2023, 2024). These challenges have exposed technology and vocational business lecturers, most especially, in public universities in South-South Nigeria to a working environment characterized by some risk factors leading to the experiences of core burnout symptoms (Edokpolor, Imeokparia & Ediagbonya, 2023; Edokpolor & Oviawe, 2022c). Unfortunately, the experiences of core burnout symptoms among technology and vocational business lecturers have not been sufficiently studied in Nigeria. Most studies on core burnout symptoms have been carried out in the European healthcare sector. For instance, a study by Schaufeli, De Witte, Hakanen, Kaltainen and Kok (2023) used samples of the Flemish (Belgium) and Dutch clinical staff. A study by Hellin, Rochel, Libert and Dehanne (2022) used samples of the physicians in Hessen (Germany) and three clinics in French-speaking Belgium. A study by Hagqvist *et al.,* (2022) used a sample of Swedish physicians. They specifically used samples of

anesthesiologists, emergency physicians, and junior physicians. These studies were conducted in the European healthcare sector, which suggest the need to empirically assess the level of burnout symptoms experienced by employees in other professional fields in Nigeria. With the use of the right assessment tool, practitioners and researchers can empirically assess the level of employees' experience and the prevalence of core burnout symptoms in the various professional fields from Nigeria, which further aims to inquire into their preventive measures.

Burnout syndrome (an indicator of employee ill-being) was first diagnosed in the 1970s among service employees suffering from energy depletion and therefore reducing their ability (exhaustion) to function or willingness (distancing themselves from emotional demands in their work) to properly regulate their cognitive and emotional processes, thereby leading to cognitive and emotional impairment (Van den Broeck *et al.,* 2017). In the 1990s, burnout syndrome was also diagnosed among professional employees (e.g., clerical staff members as well as computer specialists) who were equally fatigued, depersonalizing their clients, and distancing themselves from work (Maslach, Schaufeli & Leiter, 2001). Although, researchers and practitioners have highlighted some conceptual, technical, and practical flaws in the Maslach Burnout Inventory (MBI) (Schaufeli, De Witte & Desart, 2020) even when it has been regarded as golden standard for measuring burnout as it was used in almost 90% of all the studies on the subject (Boudreau, Boudreau & Mauthe-Kaddoura, 2015). One among the major flaws observed in the MBI is that the measurement scale does not include the elements of reduced cognitive performance, despite the fact that studies have supported the inclusion of these elements as the symptoms of burnout (Deligkaris, Panagopoulou, Montgomery & Masoura, 2014). These flaws raise questions about the ability of the MBI to collect reliable data (Schaufeli *et al.,* 2020;

Wheeler, Vassar, Worley & Barnes, 2011), and the practical utility of the MBI is limited because a total score for burnout cannot be calculated based on the nature of the current MBI (Schaufeli *et al.,* 2020). Based on the flaws observed in the MBI, Schaufeli *et al.,* (2020) developed the new Burnout Assessment Tool (BAT) as an alternative measurement scale for measuring specific symptoms of burnout that addresses the shortcomings of the previous burnout instruments, including that of the MBI.

The development of the new BAT gave birth to the reconceptualization or redefinition of burnout and its symptoms. In accordance with this development, the authors of this present study adopted the following definition of burnout (Schaufeli, De Witte & Desart, 2019, p. 30):

> *"Burnout is a work-related state of exhaustion that occurs among employees, which is characterized by extreme tiredness, reduced ability to regulate cognitive and emotional processes, and mental distancing. These four core dimensions of burnout are accompanied by depressed mood as well as by non-specific psychological and psychosomatic distress symptoms. It is caused by an imbalance between high job demands and insufficient job resources. In addition, problems outside the work domain and/or personal vulnerability may facilitate the development of burnout".*

This broad definition implied that burnout is a metaphor characterized by exhaustion naturally accompanied by the inability to regulate cognitive and emotional processes and mental distance that acts as a counterproductive and ineffective coping strategy (Desart & De Witte, 2019). The definition of burnout as a work-related strain meshes with the new BAT by covering its four

core interrelated symptoms (such as, exhaustion, mental distance, cognitive impairment, and emotional impairment). Exhaustion is defined as a severe loss of physical and mental energy; emotional impairment is defined as an overwhelming and intense emotions, including anger, frustration, sadness, and irritability; cognitive impairment is defined as a cognitive deficits of memory, attention, and concentration; and mental distance is defined as the detachment from work due to strong reluctance or aversion (Schaufeli *et al.*, 2020; Schaufeli *et al.,* 2020a&b).

Since scholars and practitioners redefined burnout as a syndrome with four core related symptoms, it therefore means that the present study should produce both a composite (overall) Mean score that refers to burnout syndrome, and the different subscale Mean scores that refer to each of the four major burnout symptom dimensions. From this perspective, the composite (overall) Mean score requires a unidimensionality, while the different subscale Mean scores require the distinction between different facets representing the construct. Indeed, it appears that the BAT can be considered as a unidimensional scale, consisting four major contributing facets, that is, the subscales (Schaufeli & De Witte, 2023). Using the representative samples of Flemish and Dutch employees, Hadžibajramović, Schaufeli and De Witte (2021) confirmed that the data fitted the unidimensional Rasch model, implying that the BAT can be considered a unidimensional scale. The specific analysis by Edokpolor and Oviawe (2022c) revealed that this unidimensionality has been applied in a sample of technology and business lecturers from the Public Universities in South-South Nigeria. Therefore, the composite (overall) Mean score and different subscale Mean scores can be used as a single indicator of the level of burnout and its four core symptoms experienced by technology and business educators, using each

subscale score, including exhaustion, mental distance, emotional impairment and cognitive impairment.

More recently, researchers and practitioners investigated the prevalence of burnout in employees, indicating that about 13.6% of the Dutch working population, 7.6% of the Flemish working population, and 6.6% of the Finnish working population experienced high levels of burnout (Schaufeli *et al.,* 2023). In a similar vein, about 4.7% of the Swedish working population had experienced high level of burnout (Hagqvist *et al.,* 2022). More specifically, about 14.5% of the emergency physicians and 13% of the junior physicians experienced high levels of burnout. Another study also revealed that about 26% hospital staff and 19% of physicians experienced high levels of burnout (Hellin *et al.,* 2022). These studies revealed that workforce sector across Europe experienced high burnout.

According to the Job Demands-Resources (JD-R) theory (Bakker & Demerouti, 2017), burnout is predicted by the presence of job demands, considered as the direct opposite of the availability of job resources. Job demands, such as work overload and work-home conflict, are those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological efforts that influences exhaustion, mental distance, cognitive impairment, and emotional impairment. This definition implied that work overload and work-home conflict are the core risk factors that develop into burnout (Demerouti, Bakker, De Jonge, Janssen & Schaufeli, 2001; Fragoso *et al.,* 2016). Job resources, such as job autonomy and colleagues support, are the physical, psychological, social, or organizational aspects of the job that are functional in achieving work goals; reducing job demands and its related physiological, or psychological costs; as well as stimulating personal growth, learning, and development. This definition implied that colleagues support and job autonomy are

intrinsically and extrinsically motivating and, are therefore considered as the core antecedents of work engagement, although colleagues support and job autonomy could also serve as the antecedents of burnout, especially when employees experience their nonexistence (Demerouti *et al.,* 2001; Fragoso *et al.,* 2016).

Using representative samples of Japanese employees, Yokoyama *et al.,* (2022) found that work engagement negatively and independently associated with burnout syndrome, both directly and indirectly through self-endangering behaviour. This result attested to the fact that burnout syndrome can be differentiated from work engagement. Therefore, burnout syndrome can be distinguished from other aspects of employees well-being, including work engagement.

The interplay between job resources and burnout symptoms have received quite some empirical support. For instance, the study by De Beer, Schaufeli and Bakker (2022b) revealed that burnout syndrome mediated the interplay between absence of job resources (role clarity and colleagues support) and turnover intention. Specific studies by Oprea, Iliescu and De Witte (2021); Mazzetti *et al.,* (2022); Innstrand (2022); Sjöblom, Juutinen and Mäkikangas (2022) showed negative interplay between job resources (such as, role clarity, colleagues support, job control, performance feedback, psychological safety, meaningful work, and opportunities for learning) and burnout symptoms. Yet, in another study, Guthier, Dormann and Voelkle (2020) found a negative effect, where burnout strongly effects employee's perception on job resources.

The above studies reported negative effects, implying that the absence of job resources positively predicts burnout. All in all, the results of the above studies align with the predictions of the JD-R theory, such that the lack of job resources positively predicts burnout. Furthermore, burnout mediated the link between absence

of job resources and turnover intention. Taken this cue, the present study expect that job resources would negatively influence burnout symptoms. However, the present study assessed the levels of job resources and burnout symptoms as well as the specific relationships between job resources (e.g., use of various skills, support from HODs/colleagues, job autonomy, feedback on the job done and opportunities for career advancement) and burnout symptoms (e.g., exhaustion, mental distance, cognitive impairment and emotional impairment) among technology and vocational business lecturers. On the basis of this broad objective, the present study provided answers to the following research questions:

1. What is the levels of job resources and burnout symptoms among technology and business lecturers?
2. Does specific interplay exist between job resources and burnout symptoms?

In the following section, the authors developed a conceptual model that explains the interplay between job demands and burnout symptoms. An explanation of JD-R and COR theories that depicts how the interplay between job demands and burnout symptoms can inform and further contribute to existing literature on health impairment process and burnout symptoms are then provided. Testable hypotheses based on JD-R theory, COR theory, and the conceptual model are also provided. Implications of the findings and limitations of the study are further discussed.

THEORETICAL FRAMEWORK

Job Demands-Resources (JD-R) Theory

An earlier version of the JD-R theory (Demerouti, Bakker, Nachreiner & Schaufeli, 2001; Schaufeli & Bakker, 2004) was used as a theoretical framework for this present study. The idea behind the earlier version of the JD-R theory was influenced by the

dominant demand-control theory (Karasek, 1979). JD-R theory proposes that the health impairment process (e.g., burnout) is largely independent of the motivational process (e.g., job resources). However, some JD-R theorists proposed direct associations between variables involved in both processes, which questions their independence. For example, JD-R theorists proposed that job resources may negatively associate with burnout (e.g., Schaufeli & Bakker, 2004) and between burnout and motivational outcomes (e.g., Bakker & Demerouti, 2017). Others proposed that several job resources (e.g., job autonomy, support from colleagues, feedback on job the done, and opportunities for career advancement) reduce the strength of interplay between several job demands (e.g., emotional demands, patient harassment, workload, and physical demands) and burnout (Xanthopoulou, *et al.,* 2007b). This assumption implied that several job resources may have direct opposite relationships with burnout symptoms (e.g., exhaustion, mental distance, cognitive impairment and emotional impairment). Therefore, burnout symptoms can be seen as syndromes that could be associated with the absence of job resources. Moreover, JD-R theory proposes that job vulnerability factors are positively associated with burnout symptoms. More specifically, JD-R theory proposed that burnout mediates the links between job characteristics (presence of job demands and absence of resources), on the one hand, and behavioural outcomes, on the other.

According to Schaufeli and De Witte (2023), burnout is a syndrome, which refers to a prolonged response to chronic emotional and interpersonal job stressors that is characterized by four-dimensional symptoms, such as exhaustion, mental distance, cognitive impairment and emotional impairment. JD-R theory also proposed a psychological process, which refers to as health-impairment process in which absence of job resources could lead to burnout symptoms. This implied that health-impairment is a

process that exist due to absence of job resources, and later develop into burnout syndrome and ill-health specifically and burnout symptoms broadly. In addition to the core assumptions, the JD-R theory proposes that job resources reduce the strength of interplay between job demands and burnout. Under demanding work circumstances, employees who hold high levels of resources dispose more supplies and, thus, are more capable of dealing with these demands (Xanthopoulou, *et al.,* 2007a). They can experience lower levels of burnout because they hold high levels of resources (Bakker, Demerouti, & Euwema, 2005).

Conservation of Resources (COR) Theory

The COR theory (Hobfall, 1988, 1989) was also used as a framework for this present study to understand the processes involved in the experiences of burnout. The basic tenets of the COR theory (Hobfall, 1988, 1998) is that people devote serious effort or energy to absorb and continue to hold, preserve and create resources and that what is threatening to them is the potential or actual loss of these things they value (i.e., resources). The COR theory have been supported by empirical studies in different areas including burnout (e.g., Gorgievski & Hobfoll, 2008; Xanthopoulou *et al.,* 2007a). The COR theory rests on the assumption that success is more likely if people seek to build and maintain resources that would increase the likelihood of motivation to possess and avoid loss of these resources.

On the basis of the above assumptions, the authors of this present study observe some similarities between the JD-R theory and the COR theory. First, both theories (JD-R and COR) assume an interplay between absence of job resources and negative outcomes. Furthermore, if the authors of this present study take into account the assumption of COR theory in the health impairment process of the JD-R theory, the authors of this present

study would expect that the absence of job resources may lead to a depletion of resources, and thus leading to more negative outcomes. Indeed, Edokpolor and Oviawe (2022c) found that low levels of occupational self-efficacy, which play a similar role as job resources foster high levels of occupational burnout.

Research Framework

The authors of this present study developed a research model (Figure 1) that is clearly testable. On the basis of this research model, some underlying assumptions were formed. A major assumption derived from the research model is that when technology and vocational business lecturers experience decrease in job resources, they may be drained energetically on the job. Another assumption derived from the conceptual model is that when technology and vocational business lecturers experience decrease in job resources, they may be reluctant towards their job. Another assumption derived from the research model is that when technology and vocational business lecturers experience decrease in job resources, they may be impaired cognitively on the job. Another assumption derived from the conceptual model is that when technology and vocational business lecturers experience decrease in job resources, they may be impaired emotionally on the job. Finally, when technology and vocational business lecturers experience decrease in job resources, they may experience overall burnout symptoms on the job. These assumptions aligned with JD-R and COR theoretical perspectives.

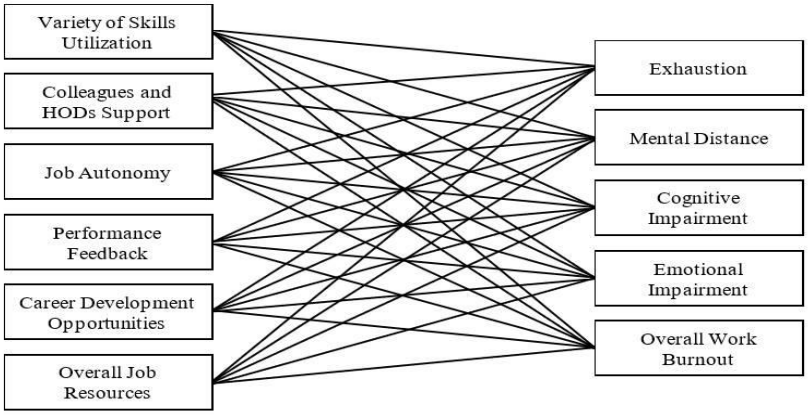

Figure 1. The Hypothesized Model of the Study.

Hypotheses Development

Hypotheses were proposed as follows:

H1. Job resources (e.g., use of various skills, job autonomy, support from HODs/colleagues, feedback on the job done, and opportunities for career advancement) does not significantly predict exhaustion.

H2. Job resources (e.g., use of various skills, job autonomy, support from HODs/colleagues, feedback on the job done, and opportunities for career advancement) does not significantly predict mental distance.

H3. Job resources (e.g., use of various skills, job autonomy, support from HODs/colleagues, feedback on the job done, and opportunities for career advancement) does not significantly predict cognitive impairment.

H4. Job resources (e.g., use of various skills, job autonomy, support from HODs/colleagues, feedback on the job done,

and opportunities for career advancement) does not significantly predict emotional impairment.

H5. Job resources (e.g., use of various skills, job autonomy, support from HODs/colleagues, feedback on the job done, and opportunities for career advancement) does not significantly predict overall burnout symptoms.

METHODOLOGY

The authors of this present study used a nonexperimental quantitative survey research design (i.e., a *cross-sectional type of survey research design)* to test the five hypotheses. A nonexperimental quantitative survey research designs are useful in the recent developments of research, such as this present study, in order to empirically text the strength and direction of the relationships between and among the variables of research (Johnson, 2001). As such, both correlation coefficient value (r) and significant or probability value (p) were used to determine the strength and direction of relationships between the predictor variable(s) (i.e., job resources) and the outcome variable(s) (i.e., burnout symptoms). Therefore, this present study might serve as the pillar upon which future studies on experimental and quasi-experimental are to be built.

Participants in this study were 288 technology and vocational business lecturers, selected from 12 public universities in Nigeria. Five of these universities are managed by the Federal Government and seven are managed by the State Government. The first category of lecturers from these universities teach technology courses at different levels of education. These lecturers are trained from the fields of technology and engineering education to teach various courses such as electrical/electronics, automobile, wood work, etc., as one of the area that equips university graduates with

relevant skills in technology education. The second category of lecturers teach vocational business courses at various levels of education. These lecturers are trained from the fields of vocational business education to teach various courses such as office management, accounting, entrepreneurship, marketing, etc., as one of the area that equips university graduates with useful skills in vocational business education.

The authors of this study measured technology and vocational business lecturers gender, age, highest academic qualification, job tenure, and marital status as their demographic characteristics. Gender was categorized into male (172, 60%) and female (116, 40%). Age was categorized into below 26 years (42, 15%), 26 to 35 years (61, 21%), 36 to 45 years (69, 23%), 46 to 55 years (71, 25%), 56 to 65 years (25, 9%), and above 65 years (20, 7%). Academic qualification was categorized into first degree (24, 8%), master's degree (168, 58%), and doctorate degree (96, 34%). Job tenure was categorized into below 10 years (180, 63%), 10 to 20 years (66, 23%), 21 to 30 years (34, 11%), and above 30 years (8, 3%). Finally, marital status was categorized into single (32, 11%), married (238, 83%), widowed (11, 4%), divorced (3, 1%), and separated (5, 2%).

Use of various skills was measured with a four-item scale developed by the authors of this study (e.g., "My work requires me to utilize collaboration/teamwork skills"). Support from HODs/colleagues was assessed with a six-item scale constructed by Bakker (2014), e.g., "I rely on my colleagues to support me where I encounter difficulties in my job". Job autonomy was assessed with a three-item scale developed by Bakker, Demerouti and Verbeke (2004), e.g., "I can independently manage available resources for my work". Feedback on the job done was assessed with a three-item scale developed by Bakker (2014), e.g., "My departmental head always informed me whether he/she is satisfied with my performance". Finally, opportunities for career advancement were

assessed with a three-items scale constructed by Bakker, Demerouti, Taris, Schaufeli and Schreurs (2003b), e.g., "My work provides opportunity for me to continually upgrade myself". All job resources items were rated on a four-point scale, ranging from (1) never to (5) always. Cronbach's alpha reliabilities of job resources and the overall 23 items showed that the Cronbach's alpha reliability is adequate (see Table 1).

Burnout symptoms was measured by the English and work-related version of Burnout Assessment Tool (BAT), which consisted of 23 items developed by Schaufeli, *et al.,* (2019), covering four subscales, namely: exhaustion (8 items), mental distance (5 items), cognitive impairment (5 items), and emotional impairment (5 items). Example of the items for exhaustion is "At work, I feel physically exhausted". Example of the items for mental distance is "At work, I don't really care what happens to people". Example of the items for cognitive impairment is "I make mistakes in my work because I have my mind on other things". Example of the items for emotional impairment is "At work, I may overreact unintentionally". All burnout subscales were rated on a four-point scale, ranging from (1) never to (4) always. Cronbach's alpha reliabilities of the validated BAT subscales and the total (overall) 23 items showed that the Cronbach's alpha reliability is adequate (see Table 1).

In order to answer the questions on what is the levels of job resources and burnout symptoms among technology and business lecturers? and does specific interplay exist between job resources and burnout symptoms? The authors of this study performed a descriptive (Mean and Standard Deviation) analysis and inferential (i.e., correlation) analyses in a single model. To test the relationship between job resources and exhaustion (*Hypothesis 1)*, mental distance (*Hypothesis 2)*, cognitive impairment (*Hypothesis 3)*, emotional impairment (*Hypothesis 4)*, and overall burnout

symptoms (*Hypothesis 5),* the authors of this study performed a regression analyses in a single model. The authors of this study tested a model that included five predictor variables (e.g., use of various skills, job autonomy, support from HODs/colleagues, feedback on the job done, and opportunities for career advancement) and four outcome variables (e.g., exhaustion, mental distance, cognitive impairment, and emotional impairment).

The levels of job resources and burnout symptoms are considered to be experienced always or sometimes by technology and vocational business lecturers when a mean score is equal to or higher than 2.50, and are considered to be experienced rarely or never by technology and vocational business lecturers when a mean score is lower than 2.50. A standard deviation score between .00 and .96 are indications that the responses of technology and vocational business lecturers are very close. A correlation coefficient value between ± .8 and ± 1.0 is considered a very high correlation; between ± .6 and ± .8 is considered a high correlation; between ± .4 and ± .6 is considered a moderate correlation; between ± .2 and ± .4 is considered a low correlation; between ± .0 and ± .2 is considered a very low correlation; between ± 1.0 is considered a perfect correlation; and a correlation coefficient value of 0 is considered a no correlation. When a correlation coefficient value is negative, it is considered a negative correlation; implying that as a predictor variable decreases, the outcome variable increases. When a correlation coefficient value is positive, it is considered a positive correlation; implying that as a predictor variable increases, the outcome variable increases. Finally, a predictor variable is said to positively predict an outcome variable when a probability or a significant value is less than or equal to .05, which implied that the hypothesis is upheld. In contrast, a predictor variable is said to negatively predict an

outcome variable when a probability or a significant value is greater than .05, which implied that the hypothesis is not upheld.

RESULTS AND DISCUSSION

Descriptive and Correlation Analyses

Table 1 showed the mean and standard deviation values of all the study variables. The aggregated mean responses of all the study variables ranges from 1.685 to 3.678, and SD values ranges from 0.287 to 0.356. The mean responses showed that the level of job resources among technology and vocational business lecturers is generally low and SD values indicated that the responses of technology and vocational business lecturers are very close. Furthermore, the mean responses indicated that the level of burnout symptoms among technology and vocational business lecturers is generally high and SD values showed that the responses of technology and vocational business lecturers are very close. Table 1 also showed that Cronbach's alpha values were relatively high in all the study variables, which include use of various skills (α = .726), support from HODs/colleagues (α = .840), job autonomy (α = .844), feedback on the job done (α = .753), opportunities for career advancement (α = .768), overall job resources (α = .706), exhaustion (α = .812), mental distance (α = .744), cognitive impairment (α = .734), emotional impairment (α = .822), and overall burnout symptoms (α = .8277). Table 1 also showed that use of various skills (r = -.147, p < .01), support from HODs/colleagues (r = -.136, p < .01), job autonomy (r = -.136, p < .01), feedback on the job done (r = -.091, p < .01), opportunities for career advancement (r = -.136, p < .01), and overall job resources (r = -.132, p < .01) were negatively correlated with exhaustion.

Table 1: Descriptive and Correlation Analyses Between Job Resources and Burnout Symptoms.

Var.	1	2	3	4	5	6	7	8	9	10	11
UVS	(.726)										
SHODC	.961**	(.840)									
JOBA	.961**	1.000**	(.844)								
FJD	.585**	.766**	.766**	(.753)							
OCA	.961**	1.000**	1.000**	.766**	(.768)						
OJR	.950**	.998**	.998**	.802**	.998**	(.706)					
EXH	-.147	-.136	-.136	-.091	-.136	-.132	(.812)				
MED	-.098	-.100	-.100	-.086	-.100	-.102	.651**	(.744)			
COI	-.027	-.018	-.018	.027	-.018	-.013	.786**	.583**	(.734)		
EMI	-.106	-.118*	-.118*	-.086	-.118*	-.115	.750**	.821**	.705**	(.822)	
OWB	-.069	-.067	-.067	-.025	-.067	-.063	922.**	.843**	.866**	.912**	(.827)
M	1.685	1.713	1.713	1.792	1.713	1.719	3.615	3.624	3.613	3.678	3.630
SD	0.318	0.287	0.574	0.321	0.287	0.285	0.335	0.346	0.352	0.356	0.308

Note. $N = 288$, M=Mean, SD=Standard Deviation, Cronbach's alpha values are in diagonal, UVS = use of various skills, SHODC = support from HODs/colleagues, JA = Job Autonomy, FJD = feedback on the job done, OCA = opportunities for career advancement, OJR = Overall Job Resources, EXH = Exhaustion, MED = Mental Distance, COI = Cognitive Impairment, EMI = Emotional Impairment, and OBS = Overall Burnout Symptoms.

Table 1 also showed that use of various skills ($r = -.098$, $p < .01$), support from HODs/colleagues ($r = -.100$, $p < .01$), job autonomy ($r = -.100$, $p < .01$), feedback on the job done ($r = -.086$, $p < .01$), opportunities for career advancement ($r = -.100$, $p < .01$), and overall job resources ($r = -.102$, $p < .01$) were negatively correlated with mental distance. Table 1 also showed that use of various skills ($r = -.027$, $p < .01$), support from HODs/colleagues ($r = -.018$, $p < .01$), job autonomy ($r = -.018$, $p < .01$), feedback on the job done ($r = -.027$, $p < .01$), opportunities for career advancement ($r = -.018$, $p < .01$), and overall job resources ($r = -.013$, $p < .01$) were negatively correlated with cognitive impairment. Table 1 also showed that use of various skills ($r = -.106$, $p < .01$), support from HODs/colleagues

(r = -.118, p < .01), job autonomy (r = -.118, p < .01), feedback on the job done (r = -.086, p < .01), opportunities for career advancement (r = -.118, p < .01), and overall job resources (r = -.115, p < .01) were negatively correlated with emotional impairment. Table 1 further showed that use of various skills (r = -.069, p < .01), support from HODs/colleagues (r = -.067, p < .01), job autonomy (r = -.067, p < .01), feedback on the job done (r = -.025, p < .01), opportunities for career advancement (r = -.067, p < .01), and overall job resources (r = -.063, p < .01) were negatively correlated with overall burnout symptoms.

Table 2. Model Summary of Regression Analyses on Job Resources Predicting Exhaustion.

	10000 Resample Bootstrap with BCa Estimates						
Variables	*B*	*SE*	*β*	R^2	*Adj* R^2	*t*	*p*
UVS → EXH	-.065	.126	-.031	.001	-.003	-.524	.596
SHODC → EXH	-.035	.092	-.022	.000	-.003	-.375	.707
JA → EXH	-.069	.185	-.022	.000	-.003	-.375	.710
FJD → EXH	.079	.169	.028	.001	-.003	.480	.642
OCA → EXH	-.069	.185	-.022	.000	-.003	-.375	.711
OJR → EXH	-.008	.030	-.016	.000	-.003	-.276	.785

Note. N = 288, a.) UVS = Use of Various Skills → EXH = Exhaustion (*F*=.274), b.) SHODC = Support from HODs/Colleagues → EXH = Exhaustion (*F*=.141), c.) JA = Job Autonomy → EXH = Exhaustion (*F*=.141), d.) FJD = Feedback on the Job Done → EXH = Exhaustion (*F*=.231), e.) OCA = opportunities for career advancement → EXH = Exhaustion (*F*=.141), f.) OJR = Overall Job Resources → EXH = Exhaustion (*F*=.076).

Results of data presented in Table 2 showed the model summary of regression analysis on job resources predicting exhaustion. The Table showed the significant coefficients for use of variety of skills (F = .274, β = -.031, t = -.524, p < .01), support from HODs/colleagues (F = -.035, β = -.022, t = -.375, p < .01), job autonomy (F = -.069, β = -.022, t = -.375, p < .01), feedback on the

job done (F = .079, β = .028, t = .480, p < .01), opportunities for career advancement (F = -.069, β = -.022, t = -.375, p < .01), and overall job resources (F = -.008, β = -.016, t = -.276, p < .01), which is also a confirmation of the results obtained in Table 2. The adjusted r-square (-.003, -.003, -.003, -.003, -.003, and -.003) reveals that less than 3% from all the predictor variables of variances in exhaustion were brought about by the job resources. All in all, job resources were found to negatively predict exhaustion.

Table 3. Model Summary of Regression Analyses on Job Resources Predicting Mental Distance.

	10000 Resample Bootstrap with BCa Estimates						
Variables	*B*	*SE*	*β*	R^2	*Adj* R^2	*t*	*p*
UVS →MED	-.134	.007	-.098	.010	.006	-1.669	.083
SHODC → MED	-.101	.057	-.100	.010	.007	-1.708	.078
JA→ MED	-.202	.113	-.100	.010	.007	-1.708	.075
FJD→ MED	-.155	.101	-.086	.007	.004	-1.464	.122
OCA→ MED	-.202	.113	-.100	.010	.007	-1.708	.077
OJR→ MED	-.033	.018	-.102	.010	.007	-1.739	.065

Note. N = 288, a.) UVS = Use of Various Skills → MED = Mental Distance (F=2.785), b.) SHODC = Support from HODs/Colleagues → MED = Mental Distance (F=2.916), c.) JA = Job Autonomy → MED = Mental Distance (F=2.916, d.) FJD = Feedback on the Job Done → MED = Mental Distance (F=2.142), e.) OCA = opportunities for career advancement → MED = Mental Distance (F=2.916), f.) OJR = Overall Job Resources → MED = Mental Distance (F=3.023).

Results of data presented in Table 3 showed the model summary of regression analysis on job resources predicting mental distance. The Table showed the significant coefficients for use of variety of skills (F = 2.785, β = -.098, t = -1.669, p < .01), support from HODs/colleagues (F = 2.916, β = -.100, t = -1.708, p < .01), job autonomy (F = -.202, β = -.100, t = -1.708, p < .01), feedback on the job done (F = 2.142, β = -.086, t = -1.464, p < .01), opportunities for career advancement (F = 2.916, β = -.100, t = -1.708, p < .01), and

overall job resources (F= 3.023, β= -.102, t= -1.739, p< .01), which is also a confirmation of the results obtained in Table 3. The adjusted r-square (.006, .007, .007, .004, .007, and .007) reveals that less than 7% from all the predictor variables of variances in mental distance were brought about by the job resources. All in all, job resources were found to negatively predict mental distance.

Table 4. Model Summary of Regression Analyses on Job Resources Predicting Cognitive Impairment

	10000 Resample Bootstrap with BCa Estimates						
Variables	*B*	*SE*	*β*	R^2	*Adj* R^2	*t*	*p*
UVS → COI	-.037	.082	-.027	.001	-.003	-.450	.657
COI → COI	-.018	.061	-.018	.000	-.003	-.298	.770
JA → COI	-.036	.120	-.018	.000	-.003	-.298	.757
FJD → COI	.048	.103	.027	.001	-.003	.449	.645
OCA → COI	-.036	.120	-.018	.000	-.003	-.298	.768
OJR → COI	-.004	.019	-.013	.000	-.003	-.215	.831

Note. N = 288, a.) UVS = Use of Various Skills → COI = Cognitive Impairment (*F*=.202), b.) SHODC = Support from HODs/Colleagues → COI = Cognitive Impairment (*F*=.089), c.) JA = Job Autonomy → COI = Cognitive Impairment (*F*=.089, d.) FJD = Feedback on the Job Done → COI = Cognitive Impairment (*F*=.201), e.) OCA = opportunities for career advancement → COI = Cognitive Impairment (*F*=.089), f.) OJR = Overall Job Resources → COI = Cognitive Impairment (*F*=.046).

Results of data presented in Table 4 showed the model summary of regression analysis on job resources predicting cognitive impairment. The Table showed the significant coefficients for use of variety of skills (F= .202, β= -.027, t= -.450, p< .01), support from HODs/colleagues (F= .089, β= -.018, t= -.298, p < .01), job autonomy (F = -.089, β = -.018, t = -.298, p < .01), feedback on the job done (F = .201, β = .027, t = .449, p < .01), opportunities for career advancement (F= .089, β= -.018, t= -.298, p< .01), and overall job resources (F= -.046, β= -.013, t= -.215, p

< .01), which is also a confirmation of the results obtained in Table 2. The adjusted *r*-square (-.003, -.003, -.003, -.003, -.003, and -.003) reveals that less than 3% from all the predictor variables of variances in exhaustion were brought about by the job resources. All in all, job resources were found to negatively predict cognitive impairment.

Table 5. Model Summary of Regression Analyses on Job Resources Predicting Emotional Impairment

	10000 Resample Bootstrap with BCa Estimates						
Variables	*B*	*SE*	*β*	R^2	*Adj* R^2	*t*	*p*
UVS → EMI	-.148	.085	-.106	.011	.008	-1.795	.085
SHODC → EMI	-.122	.062	-.118	.014	-.010	-2.001	.049
JA → EMI	-.243	.122	-.118	.014	-.010	-2.001	.048
FJD → EMI	-.160	.113	-.086	.007	.004	-1.463	.156
OCA → EMI	-.243	.124	-.118	.014	.010	-2.001	.051
OJR → EMI	-.038	.019	-.115	.013	.010	-1.955	.052

Note. N = 288, a.) UVS = Use of Various Skills → EMI = Emotional Impairment (*F*=3.222), b.) SHODC = Support from HODs/Colleagues → EMI = Emotional Impairment (*F*=4.006), c.) JA = Job Autonomy → EMI = Emotional Impairment (*F*=4.006, d.) FJD = Feedback on the Job Done → EMI = Emotional Impairment (*F*=2.140), e.) OCA = opportunities for career advancement → EMI = Emotional Impairment (*F*=.4.006), f.) OJR = Overall Job Resources → EMI = Emotional Impairment (*F*=3.822).

Results of data presented in Table 5 showed the model summary of regression analysis on job resources predicting emotional impairment. The Table showed the significant coefficients for use of variety of skills (F = 3.222, β = -.106, t = -1.795, p < .01), support from HODs/colleagues (F = 4.006, β = -.118, t = -2.001, p < .01), job autonomy (F = 4.006, β = -.118, t = -2.001, p < .01), feedback on the job done (F = 2.140, β = -.086, t = -1.463, p < .01), opportunities for career advancement (F = 4.006, β = -.118, t = -2.001, p < .01), and overall job resources (F = 3.822, β = -.115, t = -1.955, p < .01), which is also a confirmation of the results

obtained in Table 5. The adjusted *r*-square (.008, -.010, -.010, .004, .010, and .010) reveals that less than 10% from all the predictor variables of variances in emotional impairment were brought about by the job resources. All in all, job resources were found to negatively predict emotional impairment.

Table 6. Model Summary of Regression Analyses on Job Resources Predicting Overall Burnout Symptoms

	10000 Resample Bootstrap with BCa Estimates						
Variables	*B*	*SE*	*β*	R^2	*Adj* R^2	*t*	*p*
UVS → OBS	-.384	.335	-.069	.005	.001	-1.168	.251
CHODC → OBS	-.275	.248	-.067	.004	-.001	-1.134	.266
JA → OBS	-.550	.495	-.067	.004	-.001	-1.134	.267
FJD → OBS	-.187	.439	-.025	.001	-.003	-.430	.670
OCA → OBS	-.550	.496	-.067	.004	.001	-1.134	.269
OJR → OBS	-.083	.078	-.063	.004	.001	-1.071	.286

Note. N = 288, a.) UVS = Use of Various Skills → OBS = Overall Burnout Symptoms (F=1.364), b.) SHODC = Support from HODs/Colleagues → OBS = Overall Burnout Symptoms (F=1.285), c.) JA = Job Autonomy → OBS = Overall Burnout Symptoms (F=1.285, d.) FJD = Feedback on the Job Done → OBS = Overall Burnout Symptoms (F=0.185), e.) OCA = opportunities for career advancement → OBS = Overall Burnout Symptoms (F=1.285), f.) OJR = Overall Job Resources → OBS = Overall Burnout Symptoms (F=1.148).

Results of data presented in Table 6 showed the model summary of regression analysis on job resources predicting emotional impairment. The Table showed the significant coefficients for use of variety of skills (F = 1.364, β = -.069, t = -1.168, p < .01), support from HODs/colleagues (F= 1.285, β = -.067, t = -1.134, p < .01), job autonomy (F= 1.285, β = -.067, t = -1.134, p < .01), feedback on the job done (F = -.430, β = -.025, t = -.430, p < .01), opportunities for career advancement (F= 1.285, β = -.067, t = -1.134, p < .01), and overall job resources (F= 1.148, β = -.063, t = -1.071, p < .01), which is also a confirmation of the results

obtained in Table 6. The adjusted *r*-square (.001, -.001, -.001, -.003, .001, and .001) reveals that less than 1% from all the predictor variables of variances in overall burnout symptoms were brought about by the job resources. All in all, job resources were found to negatively predict overall burnout symptoms.

DISCUSSION

The goal of this study is twofold. The first was to examine the levels of job resources (e.g., use of various skills, support from HODs/colleagues, job autonomy, feedback on the job done and opportunities for career advancement) and burnout symptoms (e.g., exhaustion, mental distance, cognitive impairment and emotional impairment) among technology and vocational business lecturers. The result indicated that the level of job resources is generally low among technology and vocational business lecturers. This result implied that technology and vocational business lecturers experienced absence of job resources. This result supported the propositions of the JD-R theory by Bakker and Demerouti (2017) who found that absence of job resources positively related to burnout among employees. The authors further found that burnout mediated the relationship between job resources and health outcomes. These findings implied that representative sample of employees in the study experienced lack of job resources.

The result also indicated that the level of burnout symptoms is generally high among technology and vocational business lecturers. The result implied that technology and vocational business lecturers suffered from severe burnout symptoms. This result supported the study by De Beer *et al.,* (2020) who found high burnout symptoms among representative sample of employees in Japan. The result also supported the study by Schaufeli *et al.* (2023) who found that representative sample of Dutch working population

suffer from severe clinical burnout symptoms. Similarly, the result also supported the study by Hagqvist *et al.* (2022) who found that representative sample of Swedish physicians suffer from severe clinical burnout symptoms. The result also supported two other studies by Hellin *et al.* (2022) who found a much higher burnout prevalence among physicians in Hessen (Germany) and staff of three hospitals in French-speaking Belgium. The result also supported the study by Haar (2022) who found that representative sample of managers experienced a higher level of burnout symptoms.

The second goal of this study was to find out if specific interplay exists between job resources and burnout symptoms among technology and vocational business lecturers. The results indicated that job resources negatively predict burnout symptoms. Therefore, burnout symptoms are found to be associated with the absence of job resources. Furthermore, this result implied that as job resources decreases, burnout symptoms increases among technology and vocational business lecturers. The result supported the JD-R theory by Bakker and Demerouti (2017) who maintained that job resources are negatively related to burnout symptoms. Moreover, the JD-R theory assumed that job vulnerability factors are positively related to burnout symptoms. More specifically, the JD-R theory posited that burnout syndrome mediates the interplay between job resources and work outcomes on the one hand, and health outcomes, on the other. Furthermore, De Beer *et al.* (2022b) successfully integrated burnout variable into the JD-R theory. More specifically, the burnout syndrome mediated the relationship between absence of job resources (support from colleagues/supervisors) and turnover intention. Other studies by Oprea *et al.* (2021), Mazzetti *et al.* (2022), Innstrand (2022), and Sjöblom *et al.* (2022) reported negative correlations between burnout syndrome and job resources (i.e., role clarity,

coworkers/supervisors support, job control, performance feedback, psychological safety, meaningful work and opportunities for career advancement). All these studies assumed a stressor effect, in that absence of job resources have a positive impact on burnout symptoms.

Theoretical Implications of Findings

Results of the present study provided some theoretical implications. For instance, the present study investigated the relationships between job resources and burnout symptoms among technology and vocational business lecturers, which is relatively an area that is rarely and uncommonly explored. The present study contributed to both JD-R theory and COR theory by providing frameworks that established the relationships between job resources and burnout symptoms among technology and vocational business lecturers. For instance, the JD-R theory (e.g., Demerouti *et al.,* 2001; Schaufeli & Bakker, 2004; Bakker & Demerouti, 2017) proposes that when employees experience a negative work environment characteristic, namely absence of job resources, they might suffer from burnout and its symptoms. This implied that absence of job resources is dependent on the health impairment process which develops into burnout. As a result, future studies should focus deeply on exploring the relationships between absence or lack of job resources and burnout among employees.

Practical Implications of Findings

Results of the present study provide several theoretical implications, as the results revealed how technology and vocational business lecturers suffer from burnout because they are expose to a negative work environment characteristic, namely absence of job resources. In other words, the results revealed how a negative (i.e., unresourceful and unmotivated) working environment provide the

opportunity for technology and vocational business lecturers to suffer from burnout. Therefore, a positive (i.e., resourceful and motivating) work environment should be put in place to surmount low job resources and reduce high burnout among technology and vocational business lecturers to the barest minimum. Putting in place some strategies to reduce high burnout and surmount low job resources should be one of the major goals of technology and vocational business programmes in Nigerian universities.

CONCLUSION

The results of the study revealed that job resources (e.g., use of various skills, support from HODs/colleagues, job autonomy, feedback on the job done and opportunities for career advancement) negatively predicted burnout symptoms (e.g., exhaustion, emotional distance, cognitive impairment, emotional impairment, and overall burnout symptoms) on the job among technology and vocational business lecturers. As such, it was concluded that the experiences of burnout symptoms by technology and vocational business lecturers is a function of their experiences of decreased or absence of job resources. The results further implied that whenever technology and vocational business lecturers experience decrease or absence in job resources, they will equally experience burnout and its symptoms on the job.

Limitation and Future Research Focus

Limitations exist virtually in every research. First, the study which examined the levels of job resources and burnout symptoms and the specific interplay between job resources and burnout symptoms are both cross-sectional (i.e., descriptive and correlational) in nature, strictly speaking, will not allow causal inferences to be made. In addition, because some longitudinal

studies (e.g., Otto *et al.,* 2020; De Vries & Bakker, 2022; Fleuren *et al.,* 2022; Sørengaard & Langvik, 2022) and an intervention study (e.g., Daniels *et al.,* 2022) have been conducted, caution should be exercised when interpreting the result of the present study because of its cross-sectional nature. Second, because the sample size of the participants (i.e., technology and vocational business lecturers) was drawn from the university setting alone, caution should be exercised in generalizing the result of the present study. As a result, future research focus on burnout and its symptoms should endeavour to include proportionate representative samples covering a wider range of participants (e.g., industrial technology/technical, home economics and agricultural science lecturers). Third, because the present study developed a hypothesized model and was cross-sectional in nature, strongly supported by theories and prior study, future research on burnout and its symptoms should focus on longitudinal and experimental studies. This would help to further confirm the strength and direction of relationships and associations found among variables of the present study over time. For instance, a longitudinal study should be designed to test an intervention relating to how surmount low job resources and high burnout symptoms and determining each variable's effect on turnover intentions. If coping strategies are put in place to surmount low job resources and high burnout symptoms, turnover intentions will be reduced to the benefit of all. Perhaps a resourceful and motivating work environment where staff members perform and execute their job responsibilities can be put in place to surmount low job resources and high burnout symptoms. Fourth, because the present study was strictly on a direct relationship (i.e., unmoderated and unmediated study) which seem to unveil the outcome of the study without subjecting data collection to any form of empirical analyses. As such, future studies focusing on the interplay between job

resources and burnout symptoms should endeavour to adopt mediation or moderation variables or both variables simultaneously. For instance, personal resources could be employed as moderators while well-being could be employed as mediators of the relationships between job resources and burnout symptoms. The hypothesized model should be tested with mediating or moderating variables or moderated-mediation variables (i.e., testing both moderation and mediation variables at the same time), as job resources has been shown in recent studies (e.g., Bakker & Demerouti, 2017; Mohd Zin, 2017; De Beer *et al.*, 2022b; Oprea *et al.*, 2021; Mazzetti *et al.*, 2022; Innstrand, 2022; Sjöblom *et al.,* 2022) to negatively associate with burnout symptoms. Finally, this present study used a self-reported measurement procedure for assessing job resources and burnout symptoms, which may provide a biased outcome. A self-reported measurement procedure raises pertinent issues concerning about the consistency of participants' perceptions of their behaviours, dimensions, emotions and cognitions (Dreer, Jackson & Elliott, 2005). Therefore, future research should focus on the use of multisource workplace environment rating systems, measuring the interrater agreement as well as measuring internal construct validity of the ratings.

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