Work stress, perceived organizational support, demographics, and burnout of registered nurses in Nigeria

Foluso Philip Adekanmbi and Wilfred Ukpere*

Department of Industrial Psychology and People Management, College of Business & Economics, University of Johannesburg, South Africa

***Correspondence to:** Wilfred Ukpere, Department of Industrial Psychology and People Management, College of Business & Economics, University of Johannesburg, South Africa, Email: wiukpere@uj.ac.za

Abstract

This paper intends to examine the work stress, perceived organizational support, demographics, and burnout of registered nurses in Nigeria. Therefore, this paper plans to advocate strategies for reducing burnout within the Nigerian health sector, especially among registered nurses across states in south-western Nigeria. The present paper quantitatively approached the study and adopted a cross-sectional research design. The empirical findings indicated that work stress and perceived organizational support jointly predict burnout, and both showed a substantial independent influence on the burnout of registered nurses across states in south-western Nigeria. This paper also showed that the nurses' demographics (age, marital status, work unit, and work experience) significantly exhibited the main influence on their burnout. Moreover, this paper established that nurses' burnout is a factor of their work stress, perceived organizational support, how old they are, their marital status, the unit in which they work, and their work experience. Nonetheless, this study is distinctive, as it further deduced significant relationships among the work stress, perceived organizational support, and demographics of registered nurses in Nigeria. It also significantly contributed to knowledge in terms of appropriate management strategies for reducing work stress and increased organizational support among nurses, reducing burnout in the health sector in Nigeria and precisely among the registered nurses across states in south-western Nigeria. Thus, this paper enumerated the importance of work stress, perceived organizational support, and demographics (age, marital status, work unit, and work experience) on burnout.

Keywords: Work Stress, perception, organizational support, demographics, burnout, registered nurses, Nigeria.

Introduction

Freudenberger (1974) introduced burnout to describe a state of mental and physical vigor exhaustion, which is a reaction to continuous contact with work stress (WS) elements. Besides, burnout is a psychological disorder resulting from interpersonal workplace stressors (Maslach *et al.,* 2001). Hence, it is a negative emotional experience, which is a long-lasting, constant emotional response. It remains a multidimensional construct that includes several parameters: depersonalization, emotional exhaustion, and lack of perceived personal accomplishment (Schaufeli *et al.*, 2009). Accurately, depersonalization (DP) signifies the condition's interpersonal facet, which is harmful and disconnected when communicating with other people. Emotional exhaustion (EE) is the burnouts' primary stress facet, and it is the feelings of being expressively overstretched, which comes from personal conflict and work overload in the workplace. The absence of observed personal accomplishment (PA) is a sense of little professional productivity and achievement, which signifies the burnouts' self-evaluation facet (Schaufeli *et al.,* 2009). Moreover, substantial evidence has indicated that burnout syndrome is a suitable anticipant of a decline in mental health (Chen & Kao, 2012). Burnout disease is a work-related disease comparatively shared among health experts. While burnout happens in any occupation, nursing is a fundamentally stressful occupation (Levert, Lucas & Ortlepp, 2000). Burnout remains a real certainty in the nursing occupation (Glass, McKnight & Valdimarsdottir, 1993; Tarolli-Jager, 1994; Schaufeli & Janczur, 1994; McKnight & Glass, 1995). Lasebikan and Oyetunde (2012) posited that burnout is significantly high amongst nurses in a Nigerian state hospital.

One of the effects of work is stress, which harmfully affects workers and their societies, with a robust financial influence on a business (Kortum, 2014). Following the value of work in this era, the volume of time expended at workplaces, and the present-day fluctuations that distress the nature of work, make stress seem increasing (Kortum, 2014). Some studies have reported that WS has more than a few adverse effects, for example, health problems, reduced productivity, absenteeism, decreased effectiveness, employee turnover, drug use, alcohol abuse, and suicide (Perrewé, 1991; Wright & Smye, 1996; Quick, Quick, Nelson & Hurrell, 1997; Happel, Pinikahana & Martin, 2003). It also leads to some specific damaging actions such as stealing, sabotage, fraud, among others. Stress is any action that places unique physical or psychological demands on an individual and anything capable of destabilizing their equilibrium (Wong, 2008). Also, a study has indicated an apparent correlation between WS and poor health, while poor health, in turn, reduces human efficiency as a result of absenteeism, lack of focus and alertness, and other problems alike (Kushal *et al.,* 2018). A steady and industrious health service remains essential to any nation, and the health service includes the nursing occupation, which undoubtedly includes the utmost element of the sector. Nursing is an emotionally demanding and stressful profession (Carson, Bartlett & Croucher 1991; Schaufeli & Janczur, 1994; Snelgrove, 1998; Coffey & Coleman, 2001). Emotionally, nurses feel the influence of stress as they help and empathize with people, in addition to working in an environment saturated with sadness and pain. In a nation such as Nigeria, nurses remain the mainstay of the health industry, as they grow a closer bond with the patient over any other healthcare workers, and are critical to the smooth running of any hospital in the nation (Ogundipe, Obinna, & Olawale, 2015). Hence, the atrociousness of work that nurses have to deal with within the country causes stress, which appears a foremost source of worry for several nurses (Ogundipe *et al.,*2015).

Perceived organizational support (POS) speaks of *"the extent to which the organization values employee's contribution and cares about their well-being"* (Eisenberger *et al.,* 1986, p. 74). Rhoades and Eisenberger (2002) also posited that POS indicates employees' belief about how much organizations support or care for them, their welfare,

and work. Moreover, POS is everything related to relationships and assistance amongst workers, which contains a feeling of need amid subordinates and superiors and helping each other. Moreover, POS represents the belief that employees get rewards for the efforts exercised for achieving the organizational goals; their well-being remains essential; and that their contributions will be valued (Rhoades & Eisenberger, 2002). Also, if the employees' contributions are valued, they significantly strengthen their commitment to the organization (Zagenczyk, 2006). However, nurses play a vital part in bringing model health care. For nurses to efficiently discharge their duties, they need to encounter high engagement, achievable by giving the essential organizational support and a suitable working environment (Gupta *et al.*, 2016). The WS level might differ amongst nurses, as it remains an individual encounter. Hence, the failure or success of facing chronic or new stressors exhibits the nurse's support system and its capacity to acclimate. Thus, organizations must support nurses in dealing with their chronic and or new stressors (Coffey, Higgon, & Kinnear, 2004). According to Jaiswal and Dhar (2016), good relationships between superiors and subordinates, the employees' autonomy in performing their jobs, andthe supportandguidance they receive from their managers increase their commitment levels, as a result, makes employees deliver high-quality services. Notably, nurses' motivation and retention have become the main concern for hospitals and policymakers (Munir *et al.*, 2016). A POS system plays a vital role in generating an equally healthy and comprehensive working environment, which eventually plays a substantial role in leading the nursing sector. Hence, the supportive work environment, which comprises human resource practices, gives skills development and participation opportunities, further improving nurses' motivation. Therefore, to enhance the skills among nurses, supervisors, and management can implement many human resources management practices associated with POS (Zaman, 2018).

Some of the forms of organizational support this paper is alluding to are organizational equity, leaders' supporting behaviors towards their followers, and employees' involvement in making a decision. Organizational equity refers to the employees' view about integrity and equity in organizations, which Nadiri and Tanova (2010) also specified the individual's feeling of fairness within the organization and the behavioral response to this feeling. Besides, organizational equity is concerned with services, well-being, rewards, benefits and compensations, task distribution, wages and punishments, and opportunities (Noruzy *et al.*, 2011). Also, leaders' behavior is subject to several variables, as studies guaranteed the necessity of concentrating on essential matters, for instance, the impact processes describing followers of the leaders (Lian *et al.*, 2012). Thus, leaders must uphold a comprehensive leadership method in enhancing their followers. Concerning participation in making a decision, employees join the managers to deal with problem-solving, information, and decision-making involvement. According to their works, this participation looks at the employees, not just as implementing the orders given out by the higher levels of the organization's administrative chain of command (Muindi, 2011).

Studies have indicated some significant influence of demographics in the prevalence of burnout among registered nurses (Thomas, 2004; Edwards *et al.*, 2006). Some studies suggested some demographic differences for gender, age, and marital status as influencers of burnout amongst registered nurses (Quatrrin *et al.*, 2006). Furthermore, the research conducted by Abdi *et al.* (2008) showed a significant association between burnout and the nurses' demographics, such as work experience, marital status, gender, and age. Also, Wu *et al.* (2014) indicated a significant influence on nurses' demographics on their experience of burnout. Also, in Nigeria, Lasebikan and Oyetunde (2012) indicated a substantial influence of nurses' demographic factors on Nigerian hospitals' burnout.

Registered nurses in Nigeria are registered nurses with the nursing and midwifery council of Nigeria (NAMCON), the only statutory, administrative, and corporate performing specific tasks in the best interests of the Federal Government of Nigeria, to guarantee the delivery of practical and safe nursing and midwifery care to the public through best practices and excellent education (Nursing and Midwifery Council of Nigeria).

Several studies have demonstrated various burnout components among registered nurses in developed countries globally (Stordeur, D'hoore, & Vandenberghe, 2001; AbuAlRub, 2004; Rosales *et al.*, 2013). Nevertheless, there are scanty studies conducted in a multi-ethnic, culturally loaded country like Nigeria. A dearth of information exists on the combination of WS, POS, demographics, and burnout among registered nurses in African nations, particularly Nigeria. Therefore, it is expedient to know the relationship that exists among WS, POS, demographics, and burnout; as well as predictors of burnout among registered nurses in Nigerian hospitals, particularly in various states in south-western Nigeria, places of increased patient/client hospital flow due to the government's free-health policy. Therefore, this paper has the following objectives:

- To determine the association between WS, POS, demographics, and burnout of registered nurses across states in south-western Nigeria;
- Investigate the joint and independent influence of WS, POS, and demographics on burnout of registered nurses across states in south-western Nigeria;
- Develop a model of reducing the burnout of registered nurses in Nigeria.

Literature Review

The job demands-resources theory (JD-R Theory) of WS

Professor Arnold Bakker and Evangelia Demerouti created this model in 2006. They posited that in reality, lots of occupations and work organizations are complicated. Having previous studies show a thrilling lack of resources and high job demands, Bakker and Evangelia suggested the adoption of more stringent measures; hence, they concluded coming up with this model, capable of catering for all everyone, occupations, and organizations in that way supporting the physical and emotional well-being of employees which produces improved work results (Halbesleben & Buckley, 2004; Bakker & Evangelia, 2007). This theory has two main parts: job demands (JDs) and job resources (JRs). The JDs represent the job's social, physical, and psychological organization facets, ranging from workload, time management issues, work pressures, work conflicts, and job uncertainty. On the other hand, JRs include the social or physical structures (Management, new-workers orientation, good working relationships, safe working environment, ethical leadership, working tools, employee education, and promotion possibilities) of the organization made available assisting employees to achieve better job performance. This theory proposes that high JDs and low JRs increase the stress and burnout of employees, but with high JRs and low JDs, there is a positive result: reduced WS and burnout, high motivation, and job satisfaction (Bakker & Evangelia, 2007).

Social exchange theory (SET) of POS

Employees give notable worth to POS as it supports meeting their needs for approval, affiliation, and respect. It also gives relief in times

of WS. Thus, they feel more closely related to the organization, more pleased with their jobs, and experience reduced burnout and WS with high POS. Hence, social exchange theory (SET) remains a theoretical foundation of POS, which proposes that employees will experience reduced stress and burnout and will be devoted and contribute towards an organization's success as they receive positive, fair, and caring treatment from the organization (Blau, 1964; Levinson, 1965; Eisenberger *et al.*, 2001). In line with the exchange norm characterizing the SET, perceived organizational support generates perceived commitments among employees and reduces burnout, influencing their keenness about the organization's well-being and job satisfaction (Eisenberger *et al.*, 2001). In addition, the social exchange theory sees POS as originating from the relationship between employers and their employees. Employees could then perceive more organizational support, which reduces their stress and burnout, following their organizations' provisions (Brinkmann & Stapf, 2005).

Organizational support theory (OST) of POS

Rhoades and Eisenberger's (2002) *OST* proposes that what forms the employees' POS is their predisposition to assign the humanlike organization features. Hence, employees would value POS for suggesting an organization's willingness to recompense improved work effort, meeting socio-economic needs, and signifying the organization's predisposition to provide aid when carrying out an active job is needed (Eisenberger *et al.*, 1986). An enormous volume of support that the employees receive from their organizations suggestively reduces the amount of burnout they experience (Rhoades & Eisenberger, 2002).

The above-stated theories were selected as they hypothesize the impact of nurses' demanding and stressful profession on their well-being and organizational support levels that influence their burnout. Hence, this paper sets out to either validate these propositions or otherwise.

Work stress and burnout

Nurses working in the care environment face highly emotional and stressful situations (Meyer *et al.*, 2008). Besides, nurses' work stress is critical as it can decrease quality patient care, hence reducing patient satisfaction and job satisfaction, which strongly links with burnout among them (Meyer *et al.*, 2008). Natukunda (2008) noted that Nigeria has below 150,000 registered nurses to take care of a projected 160 million population, resulting in an average of 1 nurse to 1066 Nigerians, which is far above the 1 to 2 or 1 to 5 ratio suggested by the World Health Organization (WHO) for deadly problems and common diseases. This fact, consequently, has increased WS levels amongst Nigerian nurses (Ojoatre, 2008). Young, Schieman, and Milkie (2014) indicated that WS affects job satisfaction, burnout, and nurses' health consequences through physiological, emotional, cognitive, and behavioral events. Graham *et al.* (2011) noted that WS adds to increased burnout levels amongst nurses. Khamisa *et al.* (2016) also posited that prolonged work stress adds to high burnout, leading to lesser job satisfaction. WS gives rise to a substantial monetary cost for healthcare systems, resulting from a lack of productivity caused by burnout, staff conflicts, rapid employee turnover, recruitment and retention problems, and absenteeism (Azagba & Sharaf, 2011). More than a handful of nursing investigations have looked into the association between work stressors and burnout (Kilfedder *et al.*, 2001). Moreover, Gandi *et al.* (2011) noted a moderate burnout level among Nigerian nurses due to work-home and home-work interference. Khamisa *et al.* (2015) concluded that WS is the most vital determinant of job satisfaction and burnout among nurses and other health professionals. Furthermore, Lu (2008) found that WS caused burnout among nurses in the Philippines. The following hypothesis stems from this literature:

H_1: There is a substantial correlation between registered nurses' work stress and burnout across states in south-western Nigeria.

POS and burnout

The study of Walters and Raybould (2007) showed a substantial negative correlation between POS and burnout. This finding infers that higher employees' POS reduces burnout within the work organization. The results of their study aligned with that of Yamazaki *et al.* (2000), Hamwi *et al.* (2011), Bobbio *et al.* (2012), and Chang (2013), who indicated a negative relationship between POS and burnout within work organizations. Furthermore, Rhoades *et al.* (2001) indicated a negative association between the POS and employees' burnout. Karacaoğlu and Arslan (2013) concluded that there was a negative relationship between POS and burnout. Also, Özyer *et al.* (2016) indicated that employee's POS negatively influenced burnout. Moreover, Goldberg (2007) posited that POS significantly influences burnout in the health sector, together with Aykan (2007), who indicated a significant POS influence on employees' burnout. These pieces of information have inspired the following proposition:

H_2: There is a significant correlation between the POS and burnout of registered nurses in south-western Nigeria.

Demographics and burnout

Several studies have indicated that demographics significantly influence burnout, while some studies have suggested that no relationship exists between some demographic factors and burnout. For instance, in Nigeria's and Portugal's contexts, age and experience are significant and consistent factors influencing burnout among registered nurses. Hence, the older and more skilled nurses are, the higher their scores on burnout (Lasebikan & Oyetunde, 2012; Queiros *et al.*, 2013); whereas, the study of Zahiri *et al.* (2014) indicates no significant link between age, marital status, and burnout. In Italy, Quatrrin *et al.* (2006) found that older nurses significantly reported high burnout. Besides, many studies indicated that younger nurses score higher in burnout than older groups, for instance, in Saudi Arabia, Japan, and China (Al-Turki *et al.*, 2010; Ohue *et al.*, 2011; Li *et al.*, 2014). In contrast, an investigation in Nigeria reported a more significant percentage of older registered nurses experiencing burnout than younger ones (Lasebikan & Oyetunde, 2012). Across several studies, older nurses tend to score higher in burnout (Xie *et al.*, 2011; Lasebikan & Oyetunde, 2012). However, just like Ohue *et al.* (2011) and Li *et al.* (2014) did indicate a finding, Queiros *et al.* (2013) opined that younger registered nurses scored higher in burnout. Furthermore, many studies indicated that marital status influences burnout, as quite a number of these studies found that married registered nurses were more prone to burnout (Xie *et al.*, 2011; Yao *et al.*, 2013), while other investigations suggested that single registered nurses scored significantly higher in burnout than the married registered nurses (Ohue *et al.*, 2011; Lasebikan & Oyetunde, 2012). Also, some studies showed that registered females nurses suffer more burnout than their male counterparts (Lasebikan & Oyetunde, 2012; Li *et al.*, 2014), whereas another study indicated that the male gender positively related to burnout among registered nurses (Yao *et al.*, 2013). A study suggests a significant relationship between burnout and sex, indicating that male nurses' burnout levels are significantly lower than that of female nurses (Zahiri *et al.*, 2014). An investigation concluded that more experienced nurses were more disposed to burnout than those who are less experienced (Li *et al.*, 2014), while some

studies (Lasebikan & Oyetunde, 2012) suggested that less experienced nurses were more at risk of burnout than their more experienced counterparts. Also, Firth-Cozens (1990); Quatrrin *et al.* (2006), and Estryn-Behar *et al.* (2007) found that less experienced nurses in Europe significantly reported high burnout than the more experienced ones, which seems paradoxical as the more experienced nurses reported more burnout compared with the less experienced ones. Nowacka *et al.* (2018) indicated a unique relationship between the work unit and burnout and similarly noted that managerial functions within the nursing subsystem and the work unit significantly influenced burnout. Also, Ifeagwazi (2006), Tunc and Kutanis (2009), and Leka and Jain (2010) noted that among the factors responsible for developing a burnout syndrome, socio-demographics, such as work experience, age, marital status, sex, education, and employees' work unit played a vital role. However, in their study, Shafaghat, Rahimi-Zarchi, and Kavosi (2016) suggested no significant relationship existed between burnout and nurses' various job wards. Therefore, this information stimulated the following assumption:

H_3: There is a substantial correlation between registered nurses' demographics and burnout across states in south-western Nigeria.

This information mentioned above about WS, POS, and demographics of registered nurses has spurred the following hypothesis within the Nigerian medical/nursing job:

H_4: WS, POS, and demographics of registered nurses jointly and independently predict burnout of registered nurses across states in south-western Nigeria.

Research methodology

This paper adopted a cross-sectional survey research design and utilized a quantitative research approach to investigate the WS, POS, demographics, and burnout of registered nurses in Nigeria. Besides, this paper exploited a survey research method in gathering data. Furthermore, an official list of questions for prompting responses from participants on a particular investigation topic (Babbie & Mouton, 2001) was self-administered and floated in the current paper. Moreover, the study participants were 600 registered nurses across six states in south-western, for instance, Oyo, Osun, Ogun, Lagos, Ondo, and Ekiti.

Research instruments

The questionnaire administered had four (4) sections: sections A, B, C, and D.

Section A- Demographic questions: This section deals with the respondents' demographic data (for instance, work unit, gender, marital status, age, hospital, State, and year of working experience.

Section B- Work stress-NOSS (WSQ-N): The 21-item Nurses' Occupational Stressor Scale (NOSS) used by Huang *et al.* (2019) was adapted in measuring WS among several groups of the population. The authors stated an adequate reliability co-efficient of 0.84 for the instrument. WSQ-N has a four-point Likert scale of strongly disagree (1), disagree (2), agree (3), and strongly agree (4). A higher score indicates a higher WS level, whereas a lower score suggests a lower WS level. Nonetheless, the current investigation derived a reliability coefficient of 0.89.

Section C- Perceived organizational support scale (POSS): This section comprised the 16-item scale developed by Eisenberger *et al.* (1986), having a Cronbach's alpha of 0.95. The response format for the scale consisted of a 7-point Likert type ranging from strongly disagree (0), moderately disagree (1), slightly disagree (2), neither agree nor disagree (3), slightly agree (4), moderately agree (5), and strongly agree (6). In this paper, the Cronbach's alpha coefficient for the reliability of this scale is 0.93.

Section D- Burnout scale- MBIHSS (BS- MBIHSS): This Maslach Burnout Inventory-Human Services Survey (MBIHSS) is a 22-item scale developed by Maslach *et al.* (1986) to assess burnout among registered nurses. The three subscales of the MBI-HSS consist of nine EE items, five DP items, and eight PA items. The Cronbach's alpha of these 22 items was 0.70, while the response format for the scale consisted of a 7-point Likert-type scale ranging from never (0) to every day (6) to which the respondents expressed their degree of support received from their organization. A high score on the scale shows a high burnout level, whereas a low score suggests a low burnout level. In the current investigation, the Cronbach's alpha coefficient for the reliability of this scale is 0.83.

Research procedure

In the direction of administering questionnaires, the current researcher sought permission from the management of the selected departments and the participants' informed consent. Respondents indicated their interests by signing the agreement form on the front page of the questionnaire. One non-probability sampling method and one probability sampling methods were used in the present study, namely purposive and simple random sampling, respectively. Purposive sampling focuses totally on the author's conclusion about some features of a specific group of chosen individuals for the study. Therefore, the present researcher chose a sample from amongst registered nurses in Nigeria. Following this was simple random sampling, which determined the study's respondents. This sampling was to make each selection autonomous of other selections and ensure that all possible combinations of the sampling units have an equivalent and the autonomous chance of being chosen. In addition, preliminary studies are reasonable inquiries, which scholars adopted to examine their surveys' efficiency and detect likely hitches early enough (Denscombe, 2010). The present researcher conducted a pilot study to establish the questionnaire's contextual relevance, as research experts were involved in examining these questionnaires' content specificity. This piloting was to revalidate the questionnaires and check whether they would suit the Nigerian health industry's culture. The current researcher conducted a pilot study among twenty (20) registered nurses at different hospitals and departments before distributing the questionnaires.

Questionnaires were handed out to 600 registered nurses across six states in south-western Nigeria, having 100 registered nurses per State. The current researcher provided an introduction letter/cover note describing the study's aim and the confidentiality of responses. The current researcher also considered ethical issues related to collecting, assessing, and storing confidential data. Altogether, 580 questionnaires were retrieved and considered as perfect for use. Therefore, the data retrieved from the participants were cleaned and analyzed using the statistical package for social sciences (SPSS version 26). Inferential statistics such as a correlation and a multiple regression were adopted when authenticating the stated propositions. Nonetheless, the current researcher performed reliability analyses to analyze the local reliability of the research instrument.

Results

Descriptive Summary

Table 1 above shows the demographics of the registered nurses across states in south-western Nigeria, in conjunction with the frequency and percentage of responses to the questionnaire.

Table 1: Demographic variables

Characteristics	Category	Frequency	Percent (%)
Gender	Male	147	25.3
	Female	433	74.7
	Total	**580**	**100**
Age	20-29	113	19.5
	30-39	196	33.8
	40-49	157	27.1
	50 and Above	114	19.7
	Total	**580**	**100**
Marital Status	Single	266	45.9
	Married	314	54.1
	Total	**580**	**100**
Unit	Hospital ward	120	20.7
	Intensive care	62	10.7
	Surgery	55	9.5
	Psychiatric ward	41	7.1
	Casualties	75	12.9
	Outpatients/paediatrics	65	11.2
	Community Services (Primary health care)	80	13.8
	Obstetrics	26	4.5
	Management	40	6.9
	Others	16	2.8
	Total	**580**	**100**
Hospital	Private	406	70
	Public	174	30
	Total	**580**	**100**
State	Oyo	98	16.9
	Ogun	97	16.7
	Osun	97	16.7
	Lagos	98	16.9
	Ondo	94	16.2
	Ekiti	96	16.6
	Total	**580**	**100**
Years of work exp in the Nursing Profession	1-5	80	13.8
	6-10	103	17.8
	11-15	111	19.1
	16-20	144	24.8
	21-25	83	14.3
	26 and above	59	10.2
	Total	**580**	**100**

Source: Author's fieldwork

Inferential Statistics (Hypothesis testing).

Table 2 above displays a robust positive association between registered nurses' WS and burnout across states in south-western Nigeria ($r=0.96$, $p<0.01$). This result signifies that an increase in registered nurses' WS will significantly increase their burnout level. The results also show a substantial negative relationship between registered nurses' POS and burnout across states in south-western Nigeria ($r=0.81$, $p<0.01$). Furthermore, table 2 above shows that out of the nurses' demographics, only gender, age, work unit, State, and years of work experience have a significant relationship with the burnout of registered nurses across states in south-western Nigeria at ($r=0.146$, $p<0.01$; $r=0.089$, $p<0.01$; $r=0.103$, $p<0.01$; $r=-.097$, $p<0.01$; and $r=-.177$, $p<0.01$ respectively). The table also shows that the nurses' marital status and the hospital they work do not have a significant relationship with their burnout level ($r=0.59$, $p>0.01$ and $r=0.32$, $p>0.01$, respectively). However, these results suggest that the burnout of registered nurses across south-west Nigeria increases in proportion to being males or females, their age, the unit/department of work, and decreases in proportion to which State they work and their years of work experience.

Further analysis expresses other relationships amongst the variables of investigation. For instance, table 2 above puts forward a significant positive association between the WS and demographics (gender, age, and hospital) of registered nurses at ($r=0.119$, $p<0.01$; $r=0.188$, $p<0.01$; $r=0.09$, $p<0.01$ respectively), but a significant negative relationship between the WS and the POS as well as the demographics (the State and work experience) of nurses at ($r=-.792$, $p<0.01$; $r=-.109$, $p<0.01$; $r=-.153$, $p<0.01$ respectively). Moreover, the results express a significant positive relationship between the POS and the demographic factor (the State where the nurses work) of the registered nurses at ($r=0.115$, $p<0.01$); and a significant negative relationship between the POS and the demographics (gender and marital status) at ($r=-.176$, $p<0.01$ and $r=-.127$, $p<0.01$ respectively).

Table 3 above displays the joint and independent influence of WS, POS, and demographics on registered nurses' burnout across south-west Nigeria. The results indicate that WS, POS, and demographics have a significant joint influence on registered nurses' burnout across states in south-western Nigeria at {$R=.972$, $R^2 = .946$, $F(9, 570)= 1104.189$; $p<.01$}. These results infer that WS, POS, and demographics (for instance, gender, age, marital status, work unit, hospital, State, and years of work experience) collectively account for about 95% of the change experienced in the burnout of registered nurses across states in south-western Nigeria. Whereas the other 5% could be other factors not considered in this paper. Besides, the continuous analysis disclosed that only WS, POS, and demographics (age, marital status, work unit, and years of work experience) had a significant main influence on the burnout of registered nurses at ($\beta = .886$; $t = 51.82$; $p<.01$, $\beta = -.106$; $t = -6.252$; $p<.01$, $\beta = -.074$; $t = -6.891$; $p<.01$, $\beta = .090$; $t = 7.268$; $p<.01$, $\beta = .041$; $t = 4.109$; $p<.01$, and $\beta = -.049$; $t = -4.803$; $p<.01$ respectively).

Discussions

The results indicated a significant positive correlation between WS and registered nurses' burnout across states in south-western Nigeria. This fact is in table 2 above, which suggests that the more the registered nurses go through WS, the more they experience burnout and vice versa. The job demands-resources theory of WS, as explained above, further proposes that when there are high JDs and low JRs, it increases the stress and burnout of employees; but with great JRs and low JDs, there is a positive result such as reduced WS and burnout, high motivation and job satisfaction (Bakker & Evangelia, 2007). Thus, this paper confirms the job demands-resources theory of WS regarding the relationship between nurses' WS and burnout. Furthermore, the current findings sustain the viewpoints of Graham *et al.* (2011), who opined that WS had a positive relationship with and contributed to a higher burnout level among nurses. The findings also relate to Kilfedder *et al.*'s (2001)'s findings, who specified a strong positive link between work stressors and burnout.

The current findings suggest an essential negative correlation between POS and registered nurses' burnout in Nigeria. Hence, this result indicates that the more the registered nurses across states in south-western Nigeria perceive support from their organizations, the less their level of burnout and vice versa. The social exchange theory of organizational support, as specified earlier, explained that the POS as originating from the relationship between employers and their employees reduces their stress and burnout, following the provisions their organizations provide for them (Brinkmann & Stapf, 2005). Also, as stated earlier, the organizational support theory explained that an enormous volume of support that the employees receive from their organizations suggestively reduces the amount of burnout they experience (Rhoades & Eisenberger, 2002). This paper confirms the *SET*'s and *OST*'s positions on the Correlation between the POS and

Table 2: Correlation Matrix showing the relationship among work stress, perceived organizational support, demographics, and registered nurses' burnout.

		Work Stress	**Perceived Organisational Support**	**Gender**	**Age**	**Marital Status**	**Unit**	**Hospital**	**State**	**Years of work exp**	**Burnout**
Work Stress	Pearson Correlation	1									
	Sig. (2-tailed)										
	N	580									
Perceived Organisational Support	Pearson Correlation	-.792**	1								
	Sig. (2-tailed)	.000									
	N	580	580								
Gender	Pearson Correlation	.119**	-.176**	1							
	Sig. (2-tailed)	.004	.000								
	N	580	580	580							
Age	**Pearson Correlation**	.188**	-.064	.004	1						
	Sig. (2-tailed)	.000	.126	.930							
	N	580	580	580	580						
Marital Status	Pearson Correlation	-.059	-.127**	.227**	-.301**	1					
	Sig. (2-tailed)	.154	.002	.000	.000						
	N	580	580	580	580	580					
Unit	Pearson Correlation	.072	-.024	.147**	.042	-.014	1				
	Sig. (2-tailed)	.085	.556	.000	.310	.744					
	N	580	580	580	580	580	580				
Hospital	Pearson Correlation	.090*	.043	-.051	.224**	-.523**	-.084*	1			
	Sig. (2-tailed)	.031	.302	.220	.000	.000	.042				
	N	580	580	580	580	580	580	580			
State	Pearson Correlation	-.109**	.115**	-.051	.149**	-.002	.002	.010	1		
	Sig. (2-tailed)	.008	.005	.224	.000	.956	.959	.803			
	N	580	580	580	580	580	580	580	580		
Years of work exp	Pearson Correlation	-.153**	.047	-.154**	-.170**	.056	-.053	-.132**	-.116**	1	
	Sig. (2-tailed)	.000	.255	.000	.000	.176	.202	.002	.005		
	N	580	580	580	580	580	580	580	580	580	
Burnout	Pearson Correlation	.960**	-.813**	.146**	.089*	.059	.103*	.032	-.097*	-.177**	1
	Sig. (2-tailed)	**.000**	**.000**	**.000**	**.031**	.159	**.014**	.443	**.019**	**.000**	
	N	580	580	580	580	580	580	580	580	580	580

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table 3: Coefficients

Coefficients										
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	-1.059	3.129		-.338	.735	-7.205	5.088		
	Work Stress	1.645	.032	.886	51.819	.000	1.583	1.707	.325	3.075
	Perceived Organisational Support	-.187	.030	-.106	-6.252	.000	-.246	-.128	.333	3.005
	Gender	-.234	.226	-.011	-1.035	.301	-.678	.210	.872	1.147
	Age	-.682	.099	-.074	-6.891	.000	-.876	-.487	.834	1.199
	Marital Status	1.698	.234	.090	7.268	.000	1.239	2.157	.621	1.609
	Unit	.142	.035	.041	4.109	.000	.074	.211	.952	1.050
	Hospital	.341	.240	.017	1.423	.155	-.130	.812	.697	1.435
	State	.093	.055	.017	1.672	.095	-.016	.202	.939	1.064
	Years of work experience	-.305	.064	-.049	-4.803	.000	-.430	-.180	.901	1.109
a. Dependent Variable: Burnout										
b. Independent Variables: Work Stress and Perceived Organizational Support										

Source: Author's results

registered nurses' burnout. This paper also reaffirms Walters and Raybould's (2007) assertion, which indicated a significant negative link between POS and burnout. This paper corroborates the results (Yamazaki *et al.,* 2000; Hamwi *et al.,* 2011; Bobbio *et al.,* 2012; and Chang, 2013), who noted an essential negative link between the POS and burnout within work organizations. Similarly, the current investigation affirms Rhoades *et al.*'s (2001) position, who found a negative correlation between the POS and employees' burnout. Karacaoğlu and Arslan's (2013) study suggested a negative connection between POS and burnout, corroborating the current finding. Hence, the results show a significant negative connection between the POS and registered nurses' burnout in Nigeria.

Moreover, the current results show that nurses' demographics (such as work unit, age, gender, State, and years of work experience) have a significant relationship with burnout in Nigeria. These results show that the nurses' gender, age, and work unit positively correlate with burnout, which suggests that their burnout increases in proportion to males or females, their age, and the unit/department of work. Furthermore, the present results suggest that the State where the nurses work and their years of work experience have a negative relationship with burnout, which is an indication that the burnout of registered nurses in Nigeria decreases in proportion to which State they work and their years of work experience. However, these results indicate that the nurses' marital status and the hospital they work in do not have a significant relationship with burnout across states in south-western Nigeria. The present results reaffirm the conclusion of Zahiri *et al.* (2014), who stated a significant connection between burnout and gender. Besides, these results support the positions of Quatrrin *et al.* (2006), who found that older nurses significantly reported high burnout; and Lasebikan and Oyetunde (2012) found that a more significant percentage of older registered nurses have more burnout than the younger ones. On the other hand, the present results failed to corroborate the position of (Al-Turki *et al.,* 2010; Ohue *et al.,* 2011; Li *et al.,* 2014) as they indicated that younger nurses score higher in burnout than the older groups. This paper also supports Lasebikan and Oyetunde's (2012) study, which indicated that more experienced nurses were less at risk of burnout than their less experienced counterparts. As well, the current results corroborate the positions of Firth-Cozens (1990); Quatrrin *et al.* (2006); and Estryn-Behar *et al.* (2007), who found that less experienced nurses significantly reported high burnout than the more experienced ones. Furthermore, the present study was not able to corroborate earlier positions of (Ohue *et al.,* 2011; Lasebikan & Oyetunde, 2012) regarding a significant link between the burnout of registered nurses and their marital status, as it indicates that the nurses' marital status and the hospital they work do not have a significant relationship with their burnout across south-west Nigeria. However, the present findings support Nowacka *et al.* (2018), establishing a significant link between the work unit and burnout. Hence, this paper establishes a significant association between the registered nurses' demographics and burnout across states in south-western Nigeria.

Therefore, the discussion paragraphs above indicated that the present paper had achieved its first objective, which is to determine the Correlation between WS, POS, demographics, and burnout of registered nurses across states in south-western Nigeria. Moreover, this paper has also responded to the first three hypotheses of this paper.

Furthermore, the current results established that WS significantly predicts the burnout of registered nurses in Nigeria. This result indicates that registered nurses across states in south-western Nigeria will have more burnout as they experience WS. This fact confirms the position of Azagba and Sharaf (2011). They indicated that WS gives rise to a high monetary cost for healthcare systems, resulting from a lack of productivity caused by burnout, staff conflicts, rapid employee turnover, recruitment and retention problems, and absenteeism. These current results also confirm the position of Young, Schieman, and Milkie (2014), who indicated that WS predicts job satisfaction, burnout, and health consequences of nurses through physiological, cognitive, emotional, and behavioral processes. Also, the present findings corroborate Khamisa *et al.* (2015), who concluded that WS is the most vital influencer of job satisfaction and burnout among nurses and possibly other health professionals.

Furthermore, this paper suggests that POS significantly and negatively predicts the burnout of registered nurses in Nigeria, which indicates that nurses across south-west Nigeria will experience a lower level of burnout as they perceive more organizational support within their workplace. This finding ratifies the assertions of Özyer *et al.* (2016), who indicated that employee's POS had a negative influence on burnout, and of Goldberg (2007), who posited that POS significantly and negatively influences burnout in the health sector. This finding supports the assertion of Çivilidağ (2014), who indicated that POS negatively influences burnout.

Additionally, this paper asserts that age significantly and negatively predicts the burnout of registered nurses in Nigeria, demonstrating that the older the nurses, the lower their possibilities of experiencing burnout and vice versa. This fact supports the findings of Queiros *et al.* (2013), which concludes that younger registered nurses scored higher in burnout, but did not support the findings of Xie *et al.* (2011), which suggested that the older a nurse is, the higher his/her scores would be on burnout. The present results established that the registered nurses' marital status across states in south-western Nigeria significantly and positively predicts their level of burnout, which is an indication that being a married nurse will increase the possibilities of encountering burnout across south-west Nigeria and vice versa. This information supports the findings (Al-Turki *et al.,* 2010; Xie *et al.,* 2011; Yao *et al.,* 2013), who opined that marital status influences burnout. They indicated that married registered nurses were more prone to burnout than their single counterparts. Moreover, this paper notes that nurses' work unit or ward significantly and positively predicts the burnout of registered nurses in Nigeria, signifying that the unit nurses work in influences their level of burnout. This result confirms the discoveries of Nowacka *et al.* (2018), who noted that managerial functions within the nursing subsystem and the work unit were factors that significantly influenced burnout. The result also confirms the assertion of (Ifeagwazi, 2006; Tunc & Kutanis, 2009; and Leka & Jain, 2010) who suggested that among the factors responsible for developing a burnout syndrome, socio-demographics, such as age, work experience, sex, education, marital status, and employees' work unit played a vital role. However, in contrast to this result, the finding of Shafaghat, Rahimi-Zarchi, and Kavosi (2016) suggested that there was no substantial connection between burnout and the various job wards of nurses.

This paper also found that nurses' work experience significantly and negatively predicts burnout in Nigeria, which infers that more experienced nurses are less likely to experience burnout than the less experienced nurses across states in south-western Nigeria. This position confirms the result of Lasebikan and Oyetunde (2012), who noted that less experienced nurses were more at risk of burnout than their more experienced counterparts, but could not confirm the assertion of Li *et al.* (2014), who opined that more experienced nurses were more susceptible to burnout than those who are less experienced.

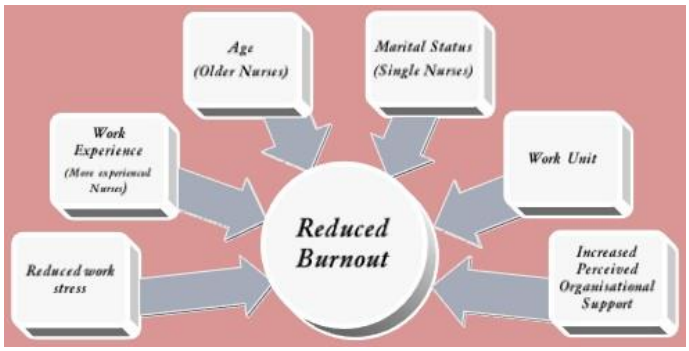

Figure 1. Empirical model for reducing the burnout of registered nurses in Nigeria
Source: author's findings

The above-specified results have responded to this paper's second objective. It has also responded to the fourth hypothesis of the current study. The current results have also met the paper's third objective, which is to develop a model for reducing the burnout of registered nurses in Nigeria. Hence, this empirical model is in figure 1 below.

Practical implications

It is expedient that the health industry's management in Nigeria promotes more detailed tactics to significantly reduce the nurses' WS, increase organizational support, and consider their demographics. These tactics would help achieve a significant reduction in the burnout of nurses in Nigeria.

Study's limitations

This study had certain limitations that need consideration. This paper sampled some registered nurses across states in south-western Nigeria; hence, the conclusions may not represent registered nurses across other regions. Moreover, it was not conclusive whether respondents that returned incomplete questionnaires diverged in any unique way from those who completed them. Moreover, investigations on this paper's topic are not carried out frequently in Nigeria's work setting. Therefore, reception to such studies remains low in such a society. Also, a few nurses were unwilling to cooperate, and data-gathering was challenging as many nurses were on duties in various units and shifts, attending the patients. Furthermore, the study showed an imbalance in sex ratio as the study's significant gender was female. Also, there was a limited resource, such as the time factor. The possible economic hardship (individual yearly income) which may influence the burnout of registered nurses in Nigeria (especially those who earn less money per annum) was not considered in the present study. However, these limitations did not affect the objectivity of this paper in any way.

Conclusion and Recommendation

This paper concludes that a substantial relationship exists among the WS, POS, and registered nurses' demographics in Nigeria. Therefore, this paper suggests that registered nurses across states in south-western Nigeria will have more burnout as much as they experience WS and that the more they perceive organizational support within their workplace, the less they experience burnout.

Hence, this paper has contributed significantly to leaders and health managers' psycho-social roles in addressing work, organizational, and demographic issues, such as reducing WS, achieving organizational support, and considering the demographic variables among registered nurses within the health sector growing economy. Thus, the following recommendations are valuable for future inferences:

- Skills training for conflict resolution, assertiveness training, and education in stress management skills are all required by health professionals (nurses in particular) in protecting them against WS and its negative performance. Hence, the managers' psycho-social roles in Nigeria's health sector are to organize these programs periodically.
- Management should also improve the health sector's work environment by addressing work conditions such as improved working relationships, reduced long working hours, increased essential services, and improved ventilation.
- Also, the policymakers and management of the health sector in Nigeria should lead some management-skills workshops and courses for nursing managers and supervisors to develop their communication skills, and tactics of encouraging the nurses to take part in relaxation and stress-reducing therapies, which could be in the form of medications, stamina exercises, and social support therapies.
- The hospital health sector's work environment recreational activities for the nurses to improve the nurses' and management's communication.
- Moreover, the hospital management should reduce the nurses' work-overload by ensuring an adequate workforce. Ensuring nurses' ratio contrasts with patients should be sufficiently addressed within the hospitals across states in south-western Nigeria and the Nigerian health sector.
- Furthermore, this paper recommends that hospitals' management in Nigeria focus on developing a healthy exchange and energetically using various organizational support mechanisms that reduce stress and burnout.
- Management should target developing a favorable team climate through interventions designed to reduce staff burnout. It would be more useful to focus on individual-work environment mismatch. This suggestion exemplifies that people may bear with more assignments as they value their work, feel well compensated for their hard work, and perceived support from their work organization.
- Managers in health organizations should appreciate their employees, enhance their working conditions, ensure that employees work in a comfortable environment, feel proud of their successes, and value their employees' opinions. In addition, in ensuring a supportive perception among employees, their creative ideas, recommendations, and criticisms should be recognized; as they ensure objectivity in adopting this participatory management system. Notably, helpful work settings help reduce and prevent burnout occurrences.
- Moreover, healthcare managers need to shift from a general tactic to their organizational support policies and practices to tailor the support to the variances that may occur among the nurses and their work units.
- Also, as aforementioned, skill training for conflict resolution, assertiveness training, education in stress management skills, and organizational support mechanisms that reduce stress and burnout, which are required by health professionals (nurses in particular), need to be intensified among young, married, and more experienced registered nurses in Nigeria. Therefore, this paper suggests that programs for preventing burnout should target younger, married, and more experienced nurses. Besides, as suggested earlier, the organizational support policies and practices should focus more

on fitting the support to the variances that may happen within the nurses' work units.

Moreover, while this paper has offered some conclusions and suggestions based on the empirical findings to significantly reduce the burnout of registered nurses across states in south-western Nigeria, future research may focus on registered nurses from different states and regions by enlarging the size of the sample. Although this study has added knowledge concerning WS, POS, demographics, and the burnout of registered nurses, as suggested earlier, there is a need to conduct the same in another Nigerian sector.

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