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ROLE OVERLOAD AND WORK ENGAGEMENT AMONG NURSES: MODERATING ROLE OF RESILIENCE

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Abstract

As healthcare institutions are challenged to consistently achieve superior patient outcomes, the key to success of such high-quality performance may be engaged workforce in healthcare professionals who exhibit high level of vigor, dedication and absorption at work necessary for organizational effectiveness. Based on Job Demands-Resources (JD-R) model which assumes that prolonged exposure to high job demands without commensurate resources will lead to employees who become chronically exhausted and distance themselves psychologically from their work, the study therefore investigated the relationship between role overload and work engagement; and moderating role of resilience in the relationships. A cross-sectional survey involving 250 nurses randomly drawn from 4 public hospitals in Enugu, Enugu State, Nigeria participated in the study by completing questionnaire measures of role overload, resilience, and work engagement. Results of Hayes PROCESS macro for SPSS testing the relationships and the moderation effect of resilience revealed that role overload significantly predicted work engagement; resilience did not moderate the relationships between role overload and work engagement. Implications of the findings for practice concerning hospital managements targeting individuals with high level of resilience at the initial stage of recruitment and selection process was highlighted as well as adopting proactive measures to train and develop the trait in the nurses for effective work performance and success of healthcare institutions.

Keywords: Role overload, work engagement, resilience, nurses.

1. Introduction

Work engagement, an emerging issue in organizational psychology, has grown and attracted the attention of researchers in recent times following the advent of positive psychology which places emphasis on human flourishing and optimal functioning. Positive psychology, the scientific study of human strength and optimal functioning, shifted emphasis of organizational research from identifying poor performers and pathological organizational issues to studying how to optimize the performance of both individuals and organizations (Seligman & Csikzentmihalyi, 2000).

Work engagement has been defined in several ways. However, the most often cited definition is offered by Schaufeli *et al* (2006) describing it as "a positive, fulfilling work-related state of mind that is characterized by vigor, dedication, and absorption" (p.702). Vigor refers to high level of energy and mental resilience while working, readiness to spend effort in one's work,

and perseverance even in the face of difficulties. Dedication refers to being strongly involved in one's work, and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge. On the other hand, absorption refers to a state of being fully concentrated and happily engrossed in one's work whereby time passes quickly without noticing it thereby making it difficult detaching from work.

Organizations such as healthcare institutions need employees who are actively and cognitively connected to their work roles in order to survive and compete effectively in today's world of work. As hospitals are challenged to consistently achieve superior patient outcomes and expect their employees to be proactive and show initiative, collaborate smoothly with others in teams, and be committed to high quality care-services, the key to success of such high-performance may be engaged workforce in nurses who are vigorous, dedicated, absorbed and proactively resolve performance problems. It is therefore important to foster work engagement in nurses for optimal performance given that disengagement, or alienation, is central to the problem of workers' lack of commitment and motivation (Aktouf, 1992).

In addition, healthcare sector may be an important area to study engagement and its antecedents due to work pressure, high work demand as well as emotional demands associated with the profession. According to Gabr and El-Shaer (2013), healthcare profession is an interesting setting to study engagement, personal strengths, and organizational resources because of the challenging nature of the work. Healthcare professionals particularly nurses tend to be faced with a lot of high job demands that require a combination of both organizational and personal resources in order to cope effectively.

Although job demands are not necessarily seen as negative and distressful, they may turn into job stressors when meeting these demands require high effort and the associated high costs that elicit negative responses such as depression, anxiety or burnout (Coetzer & Rothmann, 2007). Nahrgang *et al* (2011) opine that high job demands such as role overload may turn into job stressors when the demands require high effort from individuals. As such, high levels of job demand which require the exertion of extra or additional effort need to be properly managed so as to prevent shoddy performance and achieve work goals. Therefore, the mechanism of work engagement among healthcare professionals can be explored from the perspective of job demands.

Job demands including role overload, a main aspect of work-related stress which a large proportion of the working population is facing nowadays constitutes constraint that hinders goal achievement of effective performance (EU-OSHA, 2013; Nahrgang *et al.,* 2011). In the nursing profession, it is one of the common and most challenging occupational stressors and cause of burnout (Sayyed, 2009). Particularly for nurses, role overload has been consistently associated with emotional exhaustion and most likely to lead to burnout and erosion of work engagement (Lee & Ashforth, 1996). Similarly, Gorostidi *et al* (2007) opine that role overload including lack of competence, emotional involvement, and lack of control in relationship with patients, and contact with suffering patients constitute the most significant stressors identified in nursing profession.

Role overload which is concerned with the amount of work required and the available timeframe to accomplish the work is characterized by working very fast, high level of amount of work and experiences of time pressure (Van Veldhoven & Meijman, 1994). According to Shirom *et al* (2006), role overload is the employees' perception of having more work than they could manage even if given a longer time to do it. Similarly, Iroegbu (1988) asserts that it is a situation where the various roles, assignments or work required of a role occupier exceed the amount of time and resources and energy available to the individual for their execution which results in stress, dissatisfaction and shoddy/poor work performance. When situations such as this arise, the individuals tend to experience stress, dissatisfaction with the job and may perform below optimal level which negates work engagement. Maslach (1993) argue that job demands in form of role overload drain the employees' energy and in an attempt to cope with the resulting exhaustion, the employees withdraw mentally; and when employees withdraw mentally, their work engagement levels may suffer.

Also, the mechanism of work engagement can be explored from the perspective of personal resources as Bakker and Demerouti (2008) argue that work engagement does not only stem from job resources but also from personal resources. Personal resources are state-like positive self-evaluations that are linked to resiliency and refer to individuals' sense of ability to control and impact upon their environment successfully (Hobfoll *et al.,* 2003). Such positive self-evaluations have been shown to predict goal-setting, motivation, performance, job and life satisfaction, and other desirable outcomes because the larger an individual's personal resources, the more positive their self-regard and the more goal self concordance is expected to be experienced (Judge *et al.,* 2005). Personal resources have been proposed to be functional in moderating the relationship between environmental factors and organizational outcomes (Judge *et al.,* 1997; Mäkikangas *et al.,* 2013).

Resilience is therefore, a personal resource of interest in this study assumed to be capable of exerting a great role in buffering the impact of high work demands and workplace stressors such as role overload on employees' performance outcome to foster work engagement. Lately, interest in resilience as a psychological construct has increased and gained relevance because of its capacity to fostering healthy behaviour (Baek *et al.,* 2010). According to Wagnild (2009), individuals with high level of resilience respond to the many challenges of life positively, see difficult times as challenging and not necessarily as overwhelming, defeating or destructive. Rather, individuals who are resilient show more emotional stability in the face of adversity; more flexible and adaptable to change, and are open to new experiences (Luthans *et al.,* 2006). Thus, highly resilient individuals tend to possess the type of attributes which may in part foster work engagement.

Following the positive organizational outcomes of work engagement, Moon *et al* (2013) recommend that managers of healthcare institutions should strive to develop programmes for the promotion of resilience in their workers. Nurses may, therefore, need such capacities because of the stressful nature of their work so as to buffer the negative impacts of the stressors associated with the profession in order to maintain their engagement level. In this regard, resilience may potentially prove an important role in buffering workplace stressors of role overload in healthcare industry and is, therefore, being considered as another moderating variable in this study.

In the context of workplace, resilience is regarded as the positive psychological capacity to bounce back from adversity, uncertainty, conflict, failure, or even positive change, progress and increased responsibility (Luthans, 2002). More recently, focusing on the work context, Caza and Milton (2011) regard resilience as a developmental trajectory that is demonstrated by competence in handling difficulties at work and growth professionally. Simply put, it can be described as the ability to bounce back from difficult experiences.

The capacity of resilient individuals to bounce back from adversity and stressful events makes it worth studying and developing in employees especially nurses who work in stressful environment, turbulent and ever changing world of work. Resilience is considered by some researchers to be an essential ingredient for nurses' success (e.g. Hodges *et al.,* 2004). As nurses are exposed to extreme life and death scenarios every day, ability to cope with and adapt to such stressors will be a valuable skill set for them to possess. The coping capacity can dampen the effects of role overload and to foster work engagement.

Thus, as nurses may be confronted with the stressors of role overload, it is expected that resilience as a personal resource can enable them to cope and remain engaged in their work. Not only does resilience act as a buffer against job demands with high stress, it may also undo the negative effects of past stress and able to reverse the effects of job demands, while creating a long lasting capacity for the future (Sweetman & Luthans, 2010). As such, ability to bounce back from adversity, conflict or dramatic positive changes is relevant in today's nursing environment.

Grounded in this backdrop, this study developed and tested a conceptual model that investigated the relationship between role overload and work engagement; and the moderating role of resilience in the role overload - work engagement relationship. Role overload conceptualized as job demands may prove a significant predictor of work engagement while resilience conceptualized as personal resources may serve as buffer of job strains associated with role overload to foster work engagement among nurses. It is therefore appropriate to test these contentions empirically.

As hospital managements are faced with the challenge of how to engage employees especially nurses, it is important to gain a deep understanding of the factors that may enable nurses to remain engaged. There is therefore the need for clear-cut empirical understanding of work engagement especially among nurses in order to prioritize and implement interventions targeted towards bettering their performance, patient outcomes, and other core healthcare organizational outcomes.

The present study will be of significance to the current knowledge base in some respects. Particularly, this study will offer significant contribution to scholarship, hospital managements as well as business practices in some ways of as it will serve as a proactive approach in tracking and tackling likely work engagement-related problems in organizations. High level of disengagement among employees is reported to have adverse consequences on contextual performance and overall organizational performance. Also, disengagement has been linked to counterproductive behavior in organizations such as lateness, absenteeism, withdrawal tendency, reduced performance, and poor organizational citizenship behavior, low commitment, and invariably declining output, and as a result should not be allowed to

fester among employees for a long period in an organization. Disengagement is therefore an index of organizational ineffectiveness which requires some attentions and understanding. Thus, the study will offer a significant insight to organizational practitioners by revealing which of the working conditions that ought to be targeted to foster work engagement.

Certainly, working in environments that entail heavy workload, long working hours, time pressure, insufficient job resources and dysfunctional patients' behavior may require unique personal resource such as resilience to mitigate the impact such work stressors. Therefore, in the face of such seemingly challenging and tasking work environment characteristics of nursing profession, nurses who are resilient can garner resources even in scarce resource environments and show more doggedness and resilience to overcome work-related stress of role overload to remain highly engaged with work. In other words, resilience in nurses can dampen work related stress that may be associated with role overload and work-family conflict and in the process foster work engagement. It is, therefore, imperative to examine empirically the buffering roles of resilience in the context of work related stressful environment characteristics of nursing profession. As nurses play pivotal roles in maintaining relationship with patients, the findings of the present study may provide useful suggestions concerning hiring and retention of quality nurses, management of role stress and work engagement.

In addition, studies of role overload and work engagement to date have been predominantly conducted in western cultural contexts. As this study is conducted in Enugu, Nigeria, it may provide a unique research context in the geographical zone. There is no doubt that the research will add to existing knowledge drawn from western contexts and provide further examination of the topic in African cultural contexts like Nigeria.

In sum, clear theoretical and practical understanding of the antecedents of nurses' engagement is needed in order to prioritize and implement interventions targeted towards improving nurses' performance, patient outcomes, and other core healthcare organizational outcomes.

2. Conceptual Framework

The present study is anchored on Job Demands-Resources (JD-R) model which assumes that prolonged exposure to high job demands without commensurate resources will lead to employees who may become chronically exhausted and distance themselves psychologically from their work (Bakker *et al.,* 2014). In this study, role overload is conceptualized as job demands capable of having significant negative impact on work engagement. In essence, individuals may start to experience burnout and disengagement in the presence of these job demands without commensurate job or personal resources. However, the presence of resilience conceptualized as personal resources as moderating variable is expected to attenuate the negative impacts role overload may have on work engagement.

Thus, in this study the researcher aims to test the direct relationships between the predictor variable - role overload - and the criterion variable - work engagement; and indirect relationship between role overload and work engagement via the moderator variable - resilience (See Figure 1).

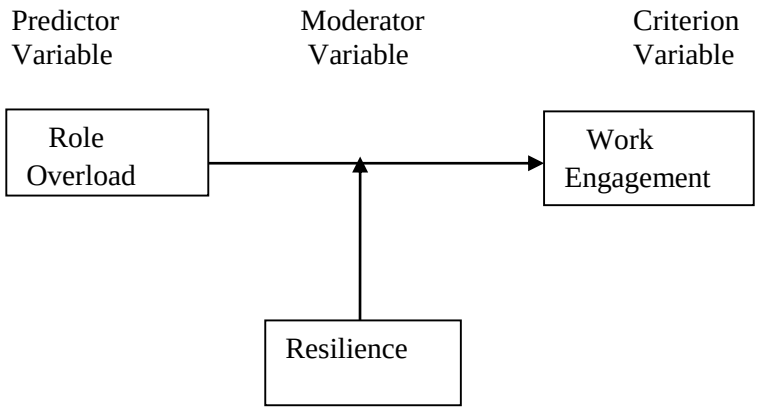


Figure 1: Conceptual model showing the hypothesized and moderated associations among the study variables.

Hypotheses

i. Role overload will have a significant negatively relationship with work engagement.
ii. Resilience will have significant positive relationship with work engagement.
iii. Resilience will significantly moderate the negative relationships between role overload and work engagement such that the relationship will be weaker for nurses with high level of resilience than those with low level of resilience.

3. Methods

Participants and Procedures

Four hundred and fifty (450) nurses comprising three hundred and fifty five (355) females and twenty four (95) males randomly selected from four public hospitals in Enugu, southeast of Nigeria participated in the study. Their ages ranged from 26 to 58 years with the mean (M = 40.10, SD = 8.48). Approximately 58.2% of the participants were married, 30.8% were single, and the rest were divorced, separated or widowed. Their educational qualifications include certificate in general nursing (RN), midwives (RM), public health nurses (RPH), HND and B.Sc nursing. The average job tenure was 5.22 years while the average tenure in the institution was 6.15 years. Four research assistants helped in data collection from the participants sampled. A total of 485 copies of questionnaire set were distributed to volunteered nurses; and out of this number, 465 copies were completed and returned representing 95.88% response rate. Fifteen copies out of the 465 returned were discarded due to incorrect filling of the questionnaire thereby bringing the valid copies to 450 that were used for data analyses. The participants were given assurance of the confidentiality of their responses and results reported at the general level in order to conceal the identity of any staff.

Instruments

The instruments for data collection were questionnaires measures of role overload, work engagement, and resilience.

Role overload was measured by 10 item subscale of Occupational Roles Questionnaire (ORQ) developed by Osipow and Spokane (1987). Responses to the items are based on a 5-point Likert scale ranging from 1 *"never or rarely"* to 5 *"most of the time"*. The scale is scored in a

positive direction, with high score indicating high level of role overload. The scale is reported to demonstrate acceptable reliability as the authors reported a Cronbach's coefficient alpha of 0.83 using five hundred and forty nine (549) working adults of various occupations. Regarding the validity of the scale, Decker and Borgen (1993) reported a significant correlation between vocational strain and role overload (r = .33). In contrast, Golec (1983) reported significant negative correlations (r = -.07) in establishing divergent validity of the scale by correlating the scale with job satisfaction. For the present study, the scale was found reliable and attained a Cronbach's alpha coefficient of .83.

Work engagement was measured by 17 items Utrecht Work Engagement Scale (UWES) developed by Schaufeli and Bakker (2003). It is a self-report inventory anchored on a 5-point Likert response format ranging from 1 *"strongly disagree"* to 5 *"strongly agree"* capturing the three dimensions of work engagement, namely: vigor (6 items), dedication (5 items) and absorption (6 items). The scale has encouraging psychometric properties with the internal consistencies (Cronbach's alpha) of 0.79, 0.88, and 0.80 for vigor, dedication, and absorption respectively, and 0.93 for the composite scales as reported by the authors. Ugwu (2013) adapted the instrument for Nigerian samples using two hundred and sixty eight (268) employees from two occupational groups and reported Cronbach's alpha of 0.76, 0.79, and 0.74 for vigor, dedication, and absorption dimensions respectively and a Cronbach's alpha of 0.91 for the composite scales.

Resilience was assessed using a 14 item short version of Resilience Scale (RS-14) developed by Wagnild (2009). The RS-14 which was selected from the original RS version of 25 items has the advantage of reducing participant's burden in research. It is a self-report inventory designed in a 5-point Likert response format ranging from 1 *"Strongly Disagree"* to 5 *"Strongly Agree"*. The instrument has demonstrated an excellent reliability with internal consistency (alpha coefficient) of .93 and found to correlate strongly (r = .97) with the original RS (Wagnild, 2009). In a study aimed at validating RS-14 in Nigeria, Abiola and Udofia (2011) reported a Cronbach's coefficient alpha of .81 and a convergent validity of .97 with RS-25 as well as divergent validity coefficients of -.28 (Depression subscale of Hospital Anxiety Depression Scale, HADS) and -.26 (Anxiety subscale of HADS). High scores on the RS-14 indicate high level of resilience and vice versa.

4. Results

Table 1 shows the descriptive statistics - the means, standard deviation - and correlation coefficients of the study variables. The Zero-order correlations shows that gender, age, marital status, and job tenure were not significantly correlated with work engagement (r = .06, -.09, .02, and -.05, respectively). However, role overload (r = -.49, p <.001) showed significant negative correlation with work engagement; while resilience (r = .52, p < .001) has significant positive relationship with work engagement.

Table 1: Intercorrelations of demographic and study variables

S/N	Variables	1	2	3	4	5	6	7
1	Gender	-						
2	Age	.04	-					
3	Marital status	.21***	.24***	-				
4	Job tenure	.12*	.81***	.25***	-			
5	Role overload	-.04	.05	-.02	.04	-		
6	Resilience	-.03	.04	-.03	.03	.78***	-	
7	Work engagement	.06	-.09	.02	-.05	-.49***	.52***	-

Note. $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$

Table 2 shows that role overload has a negative significant association with work engagement (B = -.45, t = -3.62, p <.05), indicating that for every one unit rise in role overload, there is a .45 unit decrease in work engagement. Also, resilience has a significant positive association with work engagement (B = .90, t = 5.17, p <.01), which indicates that for every one unit rise in resilience, there is a .90 unit increase in work engagement.

Table 2: Hayes' PROCESS Macro results predicting work engagement from role overload and resilience

Predictors	Coefficient	SE	T	P	95% CI
Role overload (ROL)	-.45	.59	-2.62	.005	[-.52, .99]
Resilience	.90	.29	3.17	.002	[-1.46, -.34]
ROL * Resilience	-.01	.01	-1.81	.070	[-.03, .00]

Note. (a) Total R^2 = .26, F (3, 446) = 63.77, p< .001.

However, the interaction effect of role overload and resilience in relation to work engagement was not significant (B = -.01, t = -1.81, p> .05), indicating that resilience did not significantly moderate the relationship between role overload and work engagement. All the variables in the model explained 26% of the variance in work engagement (R^2 = .26).

Summary of Major Findings

i. Role overload is significantly and negatively correlated with work engagement
ii. Resilience has a significant positive correlation with work engagement.
iii. Resilience did not moderate the relationship between role overload and work engagement.

5. Discussion

The present study explored the relationships between role overload and work engagement; as well as the moderating role of resilience in the relationships. The results of Hayes's Process Macro were all in the anticipated direction showing that role overload had significant negative relationship with work engagement. Role overload is significantly and negatively correlated with work engagement such that as the nurses' role overload increase by one unit, their work engagement decreases by 4.51 units. Consequently, the first hypothesis which proposed that role overload will be negatively related with work engagement was supported. This finding is consistent with the precepts of JD-R model which argues that prolonged exposure to high job demand such as role overload without commensurate resources to cope with such demand

will lead to employees who may become chronically exhausted and distance themselves psychologically from their work. In line with the assertion, role overload as a job demand requires a great deal of effort and exertion of energy and in the process may evoke stress reactions in the individuals leading to health impairment, withdrawal and apathy which tends to undermine motivation and learning necessary for the experiences of absorption, dedication and vigor characterizing work engagement.

One other tenable explanation for this finding can be buttressed by the notion of "Inverted - U" used to explain the relationship between stress and employee performance stress management. Blumenthal (2003) argues that u-typed curve is used to depict the effect of stress on production and performance, revealing that when an employee has little pressure to carry out the task, performance will tend to increase. With increased pressure, performance also tends to increase because the employee is able to focus on the task effectively with enough pressure and few disturbances to disrupt performances. However, as employees become more pressurized by the work demands, distractions, discomfort, anxieties and negative thinking will set in and if this continues to happen on a regular basis, then, ultimately the workers begin to feel occupational stress since the job demands exceed the resources.

The current study also investigated the moderating role of resilience in the relationship between role overload and work engagement. The results of the Hayes' PROCESS Macro analysis (see Table 2) indicated that resilience has a significant positive association with work engagement thereby supporting the second hypothesis, However, the interaction effect of role overload and resilience in relation to work engagement was not significant, indicating that resilience did not significantly moderate the relationship between role overload and work engagement. As a result, the third hypothesis which stated that resilience will significantly moderate the negative relationship between role overload and work engagement is not supported. This finding is in contrast with most other previous research studies (e.g. Xanthopoulou *et al* 2007; Brouze, 2013; Xirui *et al* 2015; Teo *et al*, 2014; Van der Schoor, 2015; Mariano *et al*, 2015) which had established significant moderating effect of resilience in the relationship between job demands and work engagement. The possible reason for the contrasting result could be due to the fact that resilience alone as a personal resource in the dimensions of psychological capital (PsyCap) was not potent enough to exert significant impact in reducing the effect of job demands on work engagement. Avey *et al* (2011) argue that employees become more satisfied with their jobs and perform better when the entire arsenal of psychological capital (PsyCap) which consists of resilience, self-efficacy, hope and optimism as personal resources are fully deployed rather than an individual domain of the construct. In other words, the synergistic effect of psychological capital (PsyCap) as a whole produces higher correlations with certain outcomes than each component independently (Wernsing, 2014). Similarly, Luthans *et al* (2006) argue that the overall core construct of PsyCap relates better to outcomes of work engagement and organizational commitment than each of the individual dimensions (hope, optimism, resilience and self-efficacy) that make up the construct. The greater the personal resources, the more positive the self-evaluation is expected to be. Engaged employees who possess more self-efficacy, self-esteem, resilience, coping strategies, and optimism seem to have more impact on their work environment and control it (Bakker *et al.*, 2008). Therefore, it is likely that PsyCap as a core construct have predictive value over and above the first-order latent variables (i.e. resilience, efficacy, hope,

and optimism), and as such, resilience alone may not have on its own achieved a significant moderating effect on the job demands of role overload and work engagement.

Again, resilience as one of the personal resources might have operated mainly at an affective-cognitive level and less at a behavioral-practical level, which is important for the management of the specific job demands and the prevention of exhaustion. As a result, personal resources of a more practical nature, such as individuals' abilities to organize their time or the energy they should invest in a given task could have played a better moderating role. For example, Peeters and Rutte (2005) found that for teachers operating in an environment of high job demands and low autonomy, those who were able to manage their time well demonstrated lower levels of exhaustion than their colleagues with low time-management abilities.

Also, the lack of support for the moderating role of resilience in the relationship between role overload and work engagement may be partly attributed to the homogeneous nature of the sampled population of this study. The fact is that the participants (nurses) for this study were mostly females which may have resulted in range restrictions (toward the positive end) regarding the study variables. Such restrictions can lead to Type II errors in the test of the moderation hypothesis and can be avoided with the examination of heterogeneous samples of employees, who are exposed to a wide range of the variables of interest (Kristensen, 1996).

Implications of Findings

As is evident in this study, role overload influenced work engagement deleteriously; it therefore, behooves on hospital managements and business practitioners to foster work engagement by trying to adopt strategies that would mitigate the impact of the stressor in the workplace. Regarding role overload, a reasonable level of workload that will serve as challenge instead of hindrance to the individuals should be provided by hospital managements. Hospital managements as well should recognize that it is their responsibilities to try and reduce nurses' workload. As nurses' workload may not be evenly distributed and often varies from one unit to another, managements may consider putting in place some strategies designed to increase nurses' control over their workload. Such strategy could be the introductions of team nursing to assist nurses manage their workload. Such team nursing entails nurses working in small groups to complete daily tasks such as administration of medications and observation of patients.

Also, the present study suggests that resilience, a personal resource impacted work engagement positively; individuals with high level of resilience trait should be targeted at the initial stage of recruitment and selection process. Resilience which can be modified in individuals can be learnt and developed (Masten, 2001; Youssef & Luthans, 2005). Also, Amir (2014) contends that resilience is adaptive, developable in both routine and daily activities. There is therefore, the need to foster the learning of this psychological capacity. Apart from targeting such employees with high level of resilience trait at the initial recruitment and selection process, hospital managements should consider other practical ways of developing resilience capacity, such as individual interventions like "thriving" (Spreitzer *et al.*, 2012), "positivity portfolio" (Fredrickson, 2009), or "happiness" (Lyubomirsky, 2007).

Limitations of the Study

The current study is, however, not without some limitations. The study employed a cross-sectional research approach which does not take into account the measurement of changing variables over time. As such, it becomes difficult to determine causal relationships between the variables of the study.

Another limitation of this study has to do with the use of self-report questionnaires used in this study. The use of such self-report questionnaires is often associated with common method variance or bias. As a result, the issue of social desirability which may have impacts on the reliability and validity of a study could not be circumvented. However, attempt was made to reduce this bias by protecting the anonymity of the surveyed participants since they were not asked to disclose their identity so as to reduce the wariness associated with answering questions as was suggested by Podsakoff *et al* (2003). Also, the participants were assured that there were no "right" or "wrong" answer to the questions elicited by the questionnaires and as such were requested to be as honest as possible in answering the questionnaires.

In addition, even though workplace perceptions of the employees are important sources of information, perceptions do not necessarily reflect objective reality. Therefore, the information collected in this research may not have reflected the objective and true assessment of the participants since they reflected how the individuals perceived the situation. Consequently, future research should endeavor to gather data from multiple sources so as to ensure that the obtained results are not just the results of shared variant methods.

Also, this study can be said to be gender sensitive or bias since the participants for the study were mostly female nurses who constituted 94.7 percent as against 5.3 percent of the male participants. By implication, the study made use of female gender as the participants; as a result the issue of generalization should be handled carefully. Also, the results of this study are specific to organizations in a given sector (public hospitals) and from one geographical area. As a result, generalization to other organizations and other areas may be done with caution.

Suggestions for Further Studies

Although cross-sectional survey study does not furnish information about cause-effect relationship, there is hope for future research in terms of establishing cause-effect relationship which lies in longitudinal or experimental research. The longitudinal study will try to overcome some of the biases raised against cross-sectional study since previous levels of the variable may be controlled to a certain degree, and the interaction effect may be marginally affected by the biases (Lu *et al.,* 2014). Thus, longitudinal studies should be embarked upon in future research to investigate the causality of relationships between the job demands, job resources and work engagement.

The issue of common method variance or bias arising from the use of self-report questionnaire can be overcome by employing multiple sources of data. To overcome this limitation, future research should make use of multiple sources of data to cushion any spurious or bogus information that might be elicited from single source.

Also, as the results of this study are specific to organizations in a given sector (public hospitals) and from one geographical area, future research should enlarge the scope of the study as well as inclusion of other gender (male) to make for better generalization. Naturally, it would be important to replicate and compare the results reported in this study with those of other countries, focusing on other nurses, with the aim of generalizing the results to nursing communities in other countries.

Finally, future research should try to investigate other job demands and stressors common among healthcare practitioners such as role conflict, role ambiguity, interpersonal conflict, work pressure, emotional demands, work shift etc which may prove potential threats to work engagement. Also, future study should examine the impacts of other job resources such as supervisors' support, job autonomy, task clarity, growth opportunities as well as personal resources such as optimism, hope, self-efficacy, mindfulness, extraversion, agreeableness, neuroticism, consciousness etc capable of playing a buffering role in strain relationship. Thus, it is important to study other various predictors of work engagement in various industries and organizations so as to achieve a broader analysis. There is also the need for more studies on this topic to embrace other participants, as the study sample was particularly female nurses.

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