PERSONALITY CHARACTERISTICS AND SELF-ESTEEM AS PREDICTORS OF JOB STRESS AMONG HEALTHCARE PROFESSIONALS IN A TEACHING HOSPITAL IN LAGOS, NIGERIA

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Abstract

Healthcare profession is accompanied with heavy job demands which sometimes exert adverse effects on personal coping resources of employees. However, some people with certain behavioral attributes could cope better with the demands of this kind of job than others. This study investigated the differential using self-esteem and personality characteristics of employees as predictors of job stress. Seven hundred and eighty (780) healthcare employees (297 males and 483 females) of the Lagos University Teaching Hospital, Lagos Nigeria, participated in the study. The instruments for data collection consisted of the Big Five Personality Inventory (BFI), Index of Self-Esteem (ISE) and Job-Related Tension (JT) Scales, which were administered to them during random medical screening exercise. Data analysis was carried out by means descriptive statistics, correlations and hierarchical multiple regression analysis. After controlling for sex, age and job category, results showed that self-esteem, agreeableness and conscientiousness were negative predictors of job stress while neuroticism was shown to be a positive predictor with self-esteem having the greatest effect [$F(9, 770) = 22.04$, $P < .001$]. Results were discussed in the light of the need for personality assessment as a requirement for employment of health care providers and providing both intrinsic and extrinsic job factors to enhance employees' self-esteem.

Keywords: Healthcare professionals, Job stress, Personality, Self-esteem

Caractéristiques de la personnalité et estime de soi comme facteurs prédictifs du stress au travail chez les professionnels de la santé dans un hôpital universitaire à Lagos, au Nigéria

Abstrait

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La profession de la santé s'accompagne de lourdes exigences professionnelles qui ont parfois des effets néfastes sur les ressources d'adaptation personnelles des employés. Cependant, certaines personnes ayant certains attributs comportementaux pourraient mieux faire face aux exigences de ce type d'emploi que d'autres. Cette étude a examiné le différentiel en utilisant les caractéristiques d'estime de soi et de personnalité des employés comme prédicteurs du stress au travail. Sept cent quatre vingt (780) employés de l'hôpital universitaire de Lagos, à Lagos (au Nigéria), ont participé à l'étude (297 hommes et 483 femmes). Les instruments utilisés pour la collecte de données comprenaient le Big Five Personality Inventory (BFI), l'Échelle de l'estime de soi (ISE) et les échelles de tension au travail (JT), qui leur étaient administrées au cours d'un exercice de dépistage médical aléatoire. L'analyse des données a été réalisée à l'aide de statistiques descriptives, de corrélations et d'une analyse de régression multiple hiérarchique. Après contrôle du sexe, de l'âge et de la catégorie d'emploi, les résultats ont montré que l'estime de soi, l'amabilité et la conscience étaient des prédicteurs négatifs du stress au travail, tandis que le névrotisme était un prédicteur positif, l'estime de soi ayant le plus grand effet [F (9, 770). = 22,04, p <0,001]. Les résultats ont été examinés à la lumière du besoin d'une évaluation de la personnalité en tant qu'obligation d'employer des fournisseurs de soins de santé et fournissant des facteurs de travail intrinsèques et extrinsèques pour améliorer l'estime de soi des employés.

Mots-clés: Professionnels de la santé, Stress au travail, Personnalité, Estime de soi

Introduction

Working in the healthcare industry is accompanied with heavy job demands which may have overarching effect on personal coping resources of the individual employees. Health care professionals have been shown to encounter severe job stressors, such as excess workloads, poor working conditions, night duty, attending to emergencies, reduced work support, poor remuneration, contact with extremely afflicted, and dead patients (Portoghese, Galletta, Coppola, Finco & Campagna, 2014). The consequences of these stressors could expose these individuals to the risk of job burnout (Shanafelt et al., 2012; Finney, Stergiopoulos, Hensel, Bonato & Dewa 2013), poor general health (Khamisa, 2017), depression, insomnia, lower job satisfaction (Nam, 2016) and performing minimally in the provision of quality medical services (Dyrbye et al., 2010).

In a developing country like Nigeria where resources are very scarce to effectively manage public health facilities, workers are overlaboured to give their best under strenuous and harsh conditions; thereby predisposing them to daily stressors on the job. For example, Etim, Bassey, Ndep, Iyam and Nwikeki (2015) found that 95% of healthcare professionals sampled in Ugep – Urban of Yakurr Local Government Area, Cross River State, Nigeria, encountered considerable amount of stress daily on their job. Similarly, in a sample of some healthcare industries in Lagos, Obasohan and Ayodele (2014) reported that 82.2% of participants experienced strain on the job in different forms. Another study reported work-related stress as one of the commonest occupational hazards for healthcare workers of the Obafemi Awolowo Teaching Hospital Ile-Ife, Nigeria by a prevalence rate of 83.3% (Orji, Fasuba, Onwudiegwu, Dare & Ogunniyi, 2002).

In cognizance of the high prevalence of job stress in the general population, past studies have examined those personality traits that could be resilient or vulnerable to job

stressors. Specifically, it has been suggested that positive correlation exists between neuroticism/psychoticism and job stress (Modaresi & Ahmadi, 2015; Kondratyuk & Morosanova, 2014; Desa, Yusooff, Ibrahim, Abd Kadir & Rahman, 2014; Gramstad, Gjestad & Haver, 2013). On the other hand, extraversion, agreeableness, openness and conscientiousness traits are shown to be negatively related to job stress (Törnroos, 2015; Gramstad, Gjestad & Haver, 2013). Much work has also been done in investigating the relationship between personality factors and job stress, however, most of the studies majorly focused on samples drawn from population of secondary school teachers, university lecturers, students and bankers with few references to the health sector which has its own distinctive job conditions and characteristics. Hence, there is need to replicate these studies among health professionals using local sample.

Research has shown that personality features are closely related to self-esteem (Besser & Zeigler-Hill, 2014). Perhaps, this is because self-esteem is largely embedded in one's personality. However, self-esteem may also assume a distinct role in predicting job stress. Individuals with lower self-esteem have been shown to have higher secretion of cortisols level in the blood, thereby making them vulnerable to react to stressful situations in a maladaptive manner (Orth, Robins, Widaman, & Conger, 2014). According to the contextual model of stress and coping, self-esteem is theoretically framed to be associated with adapting to stressful situations in the environment (Lee-Flynn, Pomak, DeLongis, Biesanz, & Puterman, 2015). Having higher self-esteem is advantageous in being less vulnerable to psychological problems (Galanakis, Palaiologou, Patsi, Velegraki, & Darviri, 2016), which may be posed by job stress. Specifically, self-esteem is found to be negatively related to work-place related stress among nursing professionals (Lee, Joo & Choi, 2012). However, study conducted nationally in this area among some selected staff of the Nigerian Police Force showed that self-esteem did not have a significant influence on job stress (Ilevbare & Ogunjimi, 2014). Given the proposed connections between self esteem and job stress, and the inconsistency between assumptions and field data, it is important to further investigate the connection between self-esteem and job stress among healthcare professionals within the Nigerian context.

In the light of existing literature, it is hypothesized in this study that both personality traits and self-esteem will significantly predict job stress among healthcare professionals while controlling for sex, age and job category. The outcome of this study will expand our knowledge on the possible role of personality traits and self esteem in manifestation of job stress among healthcare workers. Specifically, the study will inform us of the personality traits that may be vulnerable or resistant to job stress and, the possible role of self-esteem in the feelings of occupational stress.

Method

Sample and procedure

A survey design was adopted for the study because of its exploratory nature, with a sample of 780 participants drawn from healthcare professionals (297 males, 483 females) of Lagos University Teaching Hospital, Idi-Araba, Lagos, Nigeria. The mean age of participants was 27.86years (SD = 4.76) with an age range of 20-50 years. Analysis of the age category revealed that 33% of participants were between 20-25years, 26-30years (48%), 31-35years (11%) and 8% were between 36-50years. According to job categories, 37% of professionals were house-officers, registrars/consultants/lecturers (4%), nurses (27%), pharmacists (9%),

laboratory scientists (1%), physiotherapists (1%), administrative officers (3%) while others were 19%. The participants were selected during the periodic medical screening of members of staff and their consent was sought and obtained before the study instruments comprising Index of self-esteem (ISE), Big Five Inventory (BFI) and Job-Related Tension (JT) Scales were administered concurrently after establishing rapport with them. The tests were administered on individual basis and the period of data collection was 2 years.

Measures

The Big Five Personality Inventory (BFI): The BFI is a 44-item inventory designed to measure personality characteristics on a five-point Likert scale response format ranging from "Disagree strongly (1)" to "Agree strongly (5)." The scale was developed by John and Srivastava (1999) to assess individual personality make up based on the Big Five Factors or dimensions (Goldberg, 1993). The five factors are a), extraversion (sociable vs reserve); b), agreeableness (trusting vs suspicious); c), conscientiousness (competent vs incompetent); d), neuroticism (anxious vs calm); and e), openness to experience (prefers variety vs prefers routine). The authors reported a 3 month test-retest coefficient of .85 and while using Nigerian sample, Umeh (2004) obtained validity coefficients ranging from .05 to .39 when the subscales were correlated with University Maladjustment Scale. A two-week test-retest coefficients ranging from .89 to .91 for the BFI subscales (Umeh, 2004).

Index of Self-Esteem (ISE): This is a 25 item inventory developed by Hudson (1982) to measure the self-perceived and self-evaluative components of self-concept which is the sum total of the self-perceived and other-perceived views of the self, held by a person. It yields score on a 5 point Likert scale response format ranging from "Rarely or none of the time (1) to Most or all of the time (5)." The author obtained a coefficient alpha of .93 and a two weeks test-retest coefficient of .92, and while using Nigerian samples, Onighaiye (1996) obtained concurrent validity coefficients of .46 and .38 with interpersonal sensitivity and depression subscales of Symptom Distress Checklist 90 (SCL-90) respectively. Okeke, Abamara, Okoye, Eze and Ozoude (2017) obtained a Cronbach alpha coefficient of .71 for the ISE using the Nigerian sample.

Job-Related Tension Scale (JT): This is a 15 item inventory developed by Kahn, Wolfe, Quinn Snoek and Rosenthal (1964) to measure stress in the workplace. The focus of the test is to tease out feelings of tension, discomfort, uncertainty, indecisiveness and distress that a worker experiences as a result of the social and physical circumstances of the work setting. It is scored on a 5 point Likert format ranging from "Never (1) to Nearly all the time (5)." Sheridan and Vredenburgh (1978) obtained a coefficient alpha of .87 with American samples while with Nigerian sample; Oseghare (1988) reported coefficient alpha of .69 and a concurrent validity coefficient of .46 with Symptom Distress Checklist 90.

Data analysis

Frequencies and cross tabulations gave the distributions of age and job categories. Bivariate analysis was used to establish relationship among study variables. Hierarchical multiple regression was utilized to investigate the predictive ability of self-esteem and personality traits on job stress while controlling for sex, age and job category. Data analysis was carried out with the aid of the Statistical Package for the Social Sciences (IBM SPSS 20.00).

Results

Table 1 presents the age and job categories of participants by gender and for the total sample. It is shown that most of the participants were in the age range of 20-30 years (61%). Also, majority of participants were house officers (37%) and nurses (27%) with females (92%) dominating the nursing profession.

Table 1: Demographics of participants by gender and for the total sample

Variables	**N (%)** Male N = 297 (38)	**N (%)** Female N = 483 (62)	**N (%)** Total N = 780
Age			
20-25yrs	75 (25)	184 (38)	259 (33)
26-30yrs	143 (48)	229 (47)	372 (38)
31-35yrs	45 (15)	41 (6)	86 (11)
> 34yrs	34 (11)	29 (6)	63 (8)
Job Category			
House Officers	141 (48)	151 (31)	292 (37)
Registrars/Consultants/Lecturers	17 (6)	11 (2)	28 (3.6)
Nurses	17 (6)	192 (40)	209 (27)
Pharmacists	14 (5)	54 (11)	68 (9)
Laboratory Scientists	2 (1)	9 (2)	11 (1)
Physiotherapists	5 (2)	2 (1)	7 (1)
Admin Officers	10 (3)	4 (1)	14 (2)
Others	91 (31)	60 (12)	151 (19)

Table 2 gives the mean, standard deviation scores and correlation coefficients among study variables. Job stress was found to be significantly related with self esteem and all dimensions of personality. Specifically, job stress was negatively and moderately related to self-esteem [r (778) = -.33, $p < .001$] and agreeableness [r (778) = -.28, $p < .001$] while positively related to neuroticism [r (778) = .32, $p < .001$]. However, job stress was weakly associated with extraversion [r (778) = -.10, $p = .006$, and openness [r (778) = -.10, $p = .01$].

Table 2: Mean, standard deviation scores and correlations among study variable

Variables N = 252	**M (SD)**	**1**	**2**	**3**	**4**	**5**	**6**
1. Job stress	27.06 (8.20)	-					
2. Self-esteem	21.41 (11.70)	-.33**	-				
3. Extraversion	25.36 (5.21)	-.10**	.32**	-			
4. Agreeableness	39.35 (4.50)	-.28**	.38**	.12	-		
5. Conscientiousness	39.91 (4.86)	-.29**	.35**	.13	.46**	-	
6. Neuroticism	14.66 (5.12)	.32**	-.41**	-.18	-.39**	-.41**	-
7. Openness	27.86 (4.76)	-.10*	.33	.15	.24**	.24**	-.25**

*$p < 0.05$ (2-tailed) **$p < 0.001$ (2-tailed)

Table 3 presents the hierarchical multiple regressions for job stress. The first step of hierarchical multiple regression showed that the control variables (sex, age and job category) significantly influenced job stress F (3, 776) = 6.03; p < .001 and explained 2% of variance in job stress. Independently, sex [β= .08, p = .03] and job category [β= -.11, p = .005] influenced job stress while age [β= .02, p = .54] did not. This shows that the female gender and being a house-officer predicted feelings of job stress. The entry of the predictor variables in step 2

made a significant contribution to the model and gave an additional variance of 18% (F (9, 770) = 22.04; p < .0001). Hence, self-esteem and personality traits interactively predict job stress. Independently, self esteem [β= .22, p < .001], agreeableness [β= -.10, p = .02] and conscientiousness [β = -.12, p < .002] negatively predicted job stress; however, job stress was positively predicted by neuroticism [β= .16, p < .001]. Extraversion [β= .02, p = .53] and openness [β= .05, p = .19] did not significantly predict job stress.

Table 3: Hierarchical Multiple Regression for risky sexual behavior

	R	**R^2**	**ΔR^2**	**F**	**β**
Step 1	.15	.02	-	6.03***	
Sex					.08*
Age					.02
Job category					-.11**
Step 2	.45	.21	.18	22.04***	
Sex					.06
Age					.06
Job category					-.15**
Self-esteem					-.22**
Extraversion					.02
Agreeableness					-.09*
Conscientiousness					-.12**
Neuroticism					.16**
Openness					.05

*p < .05; **p < .01; ***p < .001

Sex (0= male, 1=female); Job category (0 = house officers, all other professions= 1)

Discussions

This study assessed the predictive ability of personality traits and self-esteem on feelings of job stress among healthcare professionals. Bivariate results showed that self-esteem and all dimensions of personality were significantly related to job stress. Specifically, self-esteem was found to be negatively related to job stress. Furthermore, extraversion, agreeableness, conscientiousness and openness were negatively related to job stress while neuroticism was positively associated with it. The associations of extraversion and openness with job stress were at weak levels; whereas, agreeableness, conscientiousness and neuroticism were moderately associated with job stress. After controlling for sex, age and job category, result of hierarchical regression showed that self-esteem and personality traits interactively predict feelings of job stress among health professionals. Independently, self esteem, agreeableness, conscientiousness and neuroticism were significant predictors of job stress levels, with self esteem having more effect than the other predictor variables.

The prediction of feelings of job stress by self esteem demonstrates that having high self esteem may predispose an individual to experiencing lower feelings of the stressors associated with one's job. This shows that being confident and having sense of worth could serve as a kind of buffer for job stress. Invariably, level of personal confidence may incline the individual to higher self-efficacy; thereby preparing him or her to surmount varying barriers, challenges, difficulties and stressors connected with the job. This result is in tandem with contextual model of stress and coping which posits that self-esteem is an important factor in developing resilience during stressful conditions (Lee-Flynn, Pomak, DeLongis, Biesanz, & Puterman, 2015). This outcome further suggests that self-esteem may be incompatible with occupational stress (Subramanian & Vinothkumar, 2015). However, the present result

contradicts the study of Ilevbare & Ogunjimi (2014) where self-esteem was reported as an insignificant predictor of work stress.

The negative relationship between personality factors (with the exception of neuroticism) and job stress suggests that extraversion, agreeableness, conscientiousness and openness traits may also predispose resilience (although at varying levels) to feelings of job related tensions. On the other hand, the positive relationship between neuroticism and job stress suggests that individuals with neuroticism trait may be vulnerable to job stressors. However, the result demonstrates that three out of these personality traits (namely; agreeableness, conscientiousness and neuroticism) significantly predict job stress**.** Since individuals with agreeableness trait tend to cooperate with others and are altruistic in character, they may easily overcome the challenges of job related stressors. The cooperative and altruistic attributes of agreeable individuals (which are characterized by helping others) may make others to assist them in times when they experience job strains based on the norm of reciprocity. By this means, they would feel less stressed because of the social support received from others.

In view of the fact that conscientious individuals are hardworking, efficient and achievement driven, they are easily prepared to absorb occupational stress. Conscientious individuals may not be overwhelmed or deterred by job stressors because what drives them more are what they are able to achieve and deliver on the job. However, individuals with neuroticism trait may be prone to experiencing the brunt of job stress. This is because neurotic individuals are frequently anxious, depressed, impulsive and vulnerable (John & Srivastava, 1999). The predictive ability of agreeableness, conscientiousness and neuroticism on job stress as found in the present work is supported by previous studies (e.g. Törnroos, 2015; Modaresi & Ahmadi, 2015; Gramstad, Gjestad & Haver, 2013).

In addition, the result of regression analysis shows that the control variables (sex and job category with the exception of age) significantly predict job stress. In particular, being a female or a house officer predicted the feelings of job stress. This outcome confirms that women may express the feeling of job stress than men in carrying out daily tasks. Apart from carrying out the same paid task as men, women also perform the role of the primary caregiver for family and relatives, thus adding to the pressures experienced at work (River-Toress, Araques-Padilla, & Montero-Simo, 2013). Moreover, even within the same organization, women are more likely to occupy lower level positions (which may be characterized with extra job strains) than men (River-Toress, Araques-Padilla, & Montero-Simo, 2013). Invariant with the outcome of the present study, other studies have reported that men tend to have higher feelings of stress than women (Brunborg, 2008; Sanne, Mykletun, Dahl, Moen, & Tell, 2005). As of the female gender, being a house officer also predicts feelings of occupational stress. This confirms the notion that young physicians (working as trainees) may be more prone to job stress due to the number of patients they are left to cater for by their superiors. This outcome corroborates the findings of previous studies that showed that physicians experience greater amount of job stress as compared to other professions within the health sector (Røvik, Tyssen, Hem, Gude, Ekeberg, Moum & Vaglum, 2007; Tyssen & Vaglum, 2002).

This study has some limitations which suggest that the outcomes should be cautiously interpreted. First, data collection was carried out at only one point in time. Consequently, making a causal inference among variables may not be plausible. Second, the measures used in the study were not counterbalance or randomized among participants which may have

resulted to an occurrence of response bias. However, the relatively large sample size of health professionals utilized may suggest generalization of findings. Future studies in this area may adopt the longitudinal design and counterbalance measures to avoid these problems.

Conclusion

It is confirmed in this study that self-esteem, agreeableness, conscientiousness, and neuroticism were significant predictors of occupational stressors. In particular, self-esteem, agreeableness, and conscientiousness negatively predict job stress while neuroticism was a positive predictor. The implication of findings is that, self-esteem, agreeableness, and conscientiousness are protective factors to the feelings of job strain whereas neuroticism is a risk factor. Hence, it is recommended that hospital management boards should put necessary programmes in place (including the provision of both intrinsic and extrinsic job factors) to enhance the self-esteem of employees so as to mitigate their level of job stress. More importantly, personality assessment may serve as one of the basic requirements in the recruitment process of health care professionals. Perhaps, this will help select the best personalities that are less vulnerable to feelings of stress associated with the health care provision. Hence, human resources divisions within the health care industry may use personality assessments as screeners to identify job applicants with dominance of agreeableness and conscientiousness traits and less neuroticism trait. Ultimately, there will be improved work performance and provision of quality healthcare services notwithstanding the strains that unavoidably characterize working in the hospital environment. Future research may investigate the mediating role of self-esteem in the relationship between personality factors and job stress.

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