

Original Article

Prevalence and Factors Associated with Burnout Syndrome among Nurses Working in Two Selected Hospitals in Ibadan, Oyo State, Nigeria

Samiat Oke, RN MSN

Chief Nursing Officer, Psychiatric Unit, Ring Road State Hospital, Ibadan, Nigeria

Ganiyat Adeniran, RN PhD

Senior Lecturer, Department of Nursing, Osun State University, Nigeria

Morufat Alabi, RN MSN

Faculty of Nursing, College of Medicine, University of Ibadan, Nigeria

Victor Lasebikan, MD PhD FRCP

Professor of Psychiatry, Department of Psychiatry, College of Medicine, University of Ibadan, PMB 5116, Nigeria

Correspondence: Lasebikan Victor MD PhD FRCP, Professor of Psychiatry, Department of Psychiatry, College of Medicine, University of Ibadan, PMB 5116, Nigeria, Email: victorlash@yahoo.com

Abstract

Background: One of the major factors responsible for nurses' retention in healthcare industry is burnout. Burnout is a syndrome consisting of Emotional Exhaustion (EE), Depersonalization (DEP) and Personal Accomplishment (PA).

Aim: This study therefore assessed the prevalence and predictors of burnout among nurses working at the Adeoyo Maternity Teaching Hospital (AMTH) and the Ring Road State Hospital, both in Ibadan, Nigeria.

Methods: The descriptive cross-sectional study assessed 175 nurses from two Hospitals under the Oyo State Hospitals Management Board (OYSHMB), in Nigeria. A set of sociodemographic/ job related questionnaire and the Maslach Burnout Inventory (MBI) were used for data collection. Chi square statistic was used to determine the association between sociodemographic/ job related characteristics and burnout, while binary regression analysis was used to determine the predictors of burnout. All analyses were done using SPSS 20.0.

Results: Of all the respondents, 48.3% EE, 40.6% had DEP, while 98.3% reduced PA. Predictors of EE were shifting duties, OR = 3.29, 95% CI (1.28-8.54), expecting funding/remuneration from the management OR = 7.19, 95% CI, 1.09 - 47.35) and mild job demand on private lives OR = 0.108, 95% CI (0.03 - 0.46), predictors of depersonalization were male gender OR = 2.33, 95% CI (1.18-4.60), nurses who had spent only 4 years or less OR = 2.07 95% CI (1.04-4.10), nurse/nurse conflicts OR = 7.07, 95% CI (1.84-34.4) and working at RRSB, OR = 2.54, 95% CI (1.25-5.13). Reduced PA had no significant associated factor.

Conclusion: Nurses working with the OYSHMB have a high rate of burnout which differs based on location. Thus, there is the need to establish a workplace occupational health service for the nurses.

Keywords: Nurses, Burnout; Workplace; Organizational Factors; Personal-Accomplishment.

Introduction

According to the Institute of Medicine (US) Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing (2011), the professional and academic

responsibilities as well as the expectations required from nurses had been significantly more tedious in recent time as over the past decade, nurses have been part of a movement that reflects perhaps more change than any two decades combined. Thus, the nursing

profession had posed significant strain on the mental health of nurses because the scope of their job had changed over time based on wider scope of clinical practice, research, administrative work and continuing education (Lasebikan & Oyetunde, 2012; Pisanti et al., 2016).

Maslach and Jackson (1986) defined burnout syndrome as the fallout of chronic work-stress, comprising three dimensions: emotional exhaustion, depersonalization and lack of personal accomplishment. Alvaro et al. (2010) ascribed the theoretical framework of nurse burnout to the Conservation of Resources Theory that posits that burnout occurs in nurses as a result of perceived or actual loss of four resources, objects, conditions, personal characteristics and energy.

A study carried out by Reith (2018) reported that 43% of nurses working at United States hospitals had emotional exhaustion, while 37% providing direct patient care in nursing homes and 33% of hospital nurses had burnout. Aiken et al. (2011) found that design and nature of nursing work, organizational problems and low nurse/patient ratio were factors commonly associated with burnout among nurses. A similar observation was noted by Poghosyan, Clarke, Finlayson, and Aiken (2010). The study by Lasebikan and Oyetunde (2012) found that the prevalence of EE was 39.1%, depersonalization was 29.2% and 40.0% reduced personal accomplishment and factors such as age of the nurse, gender, years of service, rank of the nurse and low nurse/patient ratio were found to be associated with burnout. A study carried out at the University of Nigeria Teaching Hospital, Enugu State found that 42.9% had EE, 47.6% had depersonalization, while 53.8% had reduced personal accomplishment (Okwaraji & Aguwa, 2014).

The issue of burnout in Nigeria is of a growing concern, given the rate at which nurses disengage their services from Nigerian hospitals, seeking greener pasture. Unfortunately, available statistic indicate that Nigeria has 1.2 nurses per 1000 population which is far less than the WHO

recommendation of 2.3 per 1000 population (Babalola & Olumuyiwa, 2015).

Thus, our aim was to assess the prevalence and factors associated with burnout among a sample of in two largest government hospitals in Nigeria.

The research question was if there would be significant differences in the factors associated with burnout between the two hospitals, we hypothesized that there would be significant differences in the prevalence of burnout between the two hospitals

Methods

Study design/Setting

This was a descriptive cross-sectional study of a sample of nurses drawn from the two hospitals under the management of the Oyo State Hospitals Management Board (OYSHMB). These are Adeoyo Maternity Teaching Hospital (AMTH) and Ring Road State Hospital (RRSH), both in Ibadan, Nigeria. The AMTH is a 184-bed hospital with 220 nurses located at Adeoyo, *Ibadan*. It is an 80-year-old state hospital in Ibadan City, Nigeria.

The RRSH is a 105-bed multispecialty hospital with 122 nurses, commissioned for use by the late General Adeyinka Adebayo for use in 1965. The hospital provides inpatient, outpatient, and 24-hour emergency services to all patients.

Eligibility: The major eligibility criterion for the study was that participants were expected to have been working in the hospital for at least 6 months. This would ensure familiarity with the daily protocols of the ward.

Exclusion Criteria: Nurses who had any pre-existing mental health problem and or chronic general medical condition were excluded from the study.

Sample size estimation: This was obtained from the sample size formula for a descriptive cross-sectional study (Kish, 1965) and was 166. An additional 10% of the desired sample size was added to account for non-response. Since the number of nurses working in the two hospitals differs, the number of nurses interviewed in each hospital was determined by proportional sampling method and at the RRSH

Sampling Technique: A purposive sampling technique was used to select the two hospitals that were used for the study. In each of the two study centres, the list of the all the nurses in the hospital was obtained from the Chief Nursing Officer (CNO) in charge. All nurses were consecutively listed, and nurses recruited for the study systematically selected. An attempt was made in ensuring that nurses working in various units were recruited into the study.

Instrument for Data Collection

1. Socio-demographic/ Job related questionnaire: This questionnaire was adopted from a previous study in Nigeria by Lasebikan and Oyetunde (2012). This questionnaire yielded information on items such as age, sex, marital status, religion, qualification, number of years spent on the job, shifts being run, management support, role conflict and organizational factors/expectation which is defined as increase in remuneration, increase in funding and employment of more Nurse.

2. Maslach Burnout Inventory (MBI): The MBI is a 22-item self-report inventory, designed by Maslach and Jackson (1986) that measures the characteristics of burnout. Specific questions were asked and the responses rated as 0- Never 1- A few times a year, 2- Many times a year, 3- A few times every month, 4- Many times every month, 5- A few times every week, 6- Everyday. The prevalence of burnout is then determined in three areas, emotional exhaustion, depersonalization and personal accomplishment. Scoring: A score of ≥ 27 in items 1 to 9 of the Maslach Burnout Inventory, signifies a high burnout in emotional exhaustion. A score of ≥ 13 in items 10 to 14, signifies a high burnout in depersonalization, while a score of ≤ 33 in items 15-22 signifies a high burnout in the area of personal accomplishment. This is the cutoff point obtained during the validation process in Nigeria. (Coker & Omoluabi, 2009)

Validity of the Instruments for Data Collection: The MBI has cross-cultural reliability and validity (Maslach & Jackson, 1986) and has been used and validated in Nigeria among a sample of health workers. (Coker & Omoluabi, 2009). In that

study, the Cronbach's alpha of 0.86 and split-alpha of 0.57. (Coker & Omoluabi, 2009).

Pre-test: A pre-test was carried out among 10% of the proposed study among of nurses at the Jericho Nursing Home, Ibadan, to determine the feasibility all the instruments of data collection.

Ethical consideration: Ethical approval was obtained from the ethical review committee of the Oyo State Ministry of Health and permission obtained from the respective heads of the study sites. Written informed consent was also obtained from all the participants and confidentiality maintained throughout the study.

Method of Data Analysis

Prevalence of Burnout: A score of ≥ 27 in items 1 to 9 of the Maslach Burnout Inventory (MBI), signified a high burnout in emotional exhaustion. A score of ≥ 13 in items 10 to 14, signified a high burnout in depersonalization, while a score of ≤ 33 in items 15-22 signified a high burnout in personal accomplishment. This was presented as descriptive statistics. The sociodemographic characteristics associated with burnout were analyzed using the Chi square statistic. To determine the effect of confounders, all variables significantly associated with burnout during bivariate analysis were subjected to binary logistic regression analysis. All analyses were set at $p < 0.05$, 95% CI and done using Statistical Package for Social Sciences version 22.

Results

In this study, 175 participants were invited into the study however, 170 met the eligibility criteria. We then enrolled additional 5 participants to meet our minimum sample size. The mean age of all respondents was 36.83 ± 9.41 years.

Socio-demographic Characteristics and Burnout

the highest proportion of the respondents (47.4%) was between 31-40 years of age, a higher proportion (66.9%) was of the female gender, a higher proportion (73.73%) was married, the highest proportion of the respondents (80.0%) was Christians, while only

12% were degree holders. Also, the highest proportion of the respondents (65.7%) had spent more than 5 years on the job, the highest proportion (24.0%) of the respondent were principal nursing officers by rank, 73.7% of the respondents currently run shift, 32.6% found shift stressful, (86.9%) reported that their salary is not commensurate with Job while only 13.7% perceived the support from the hospital management as adequate (Table 1).

The highest proportion of the respondents (25.7%) expected the management of the hospital to provide equipment to work with, while only (16%) of the respondent reported that the job did not demand on their private life. Only 10.9% reported any physical or mental disorder. Nurse/ Doctor relationship was a major source of role conflict (42.3%) identified by the respondents (Table 1).

The prevalence of EE was 48.3%, prevalence of Dep was 40.6% and RPA, 98.3%. (Fig 1).

Sociodemographic/Job-Related Characteristics Associated with Emotional Exhaustion (EE)

A significantly higher proportion of male nurses (65.5%) had burnout in the domain of emotional exhaustion compared to female nurses (40.2%), $X^2 = 10.0$, $p = 0.002$. Other sociodemographic and job-related characteristics were not significantly associated with emotional exhaustion. $P > 0.05$. A significantly higher proportion of respondents who ran shift had EE (54.3%) compared with respondents (32.8%) who did not run shifts, $X^2 = 6.4$, $p = 0.012$. Among respondents who ran shifts, a significant proportion (71.4%) who reported that shift duties were stressful had emotional exhaustion, compared with (42.5%) who reported that shift duties were not stressful, $X^2 = 9.2$, $p = 0.002$ (Table 2).

Also, there was a significant difference in the expectation of the staff who had emotional exhaustion, $X^2 = 13.6$, $p = 0.009$. Post-hoc pairwise comparisons show that this was because a high proportion of respondents who reported that the hospital required funding/increased staff remuneration had

emotional exhaustion (66.7%) compared with those who expected increased remuneration alone (41.7%), increased funding alone (25.0%) and those who expected the employment of nurses (37.1%), $p < 0.05$ respectively (Table 2).

Furthermore, there was a significant difference in the association between the effect of job demands on private life and emotional exhaustion $X^2 = 33.7$, $p < 0.001$. Post-hoc pairwise comparison shows that this was because a higher proportion of respondents who reported that the effect of job demands on private life was severe had emotional exhaustion (75.0%) compared with those who reported it was moderate (44.7%), mild (25.0%) or not at all (21.4%), $p < 0.001$, $p = 0.001$, $p = 0.001$ respectively on one hand and also because a significantly higher proportion of respondents reported that the effect of job demands on private life was moderate (44.7%) compared with those who reported it was mild (25.0%) or not at all (21.4%), $p = 0.001$ respectively (Table 2).

Sociodemographic/Job-Related Characteristics Associated with Depersonalization

A significantly higher proportion of male nurses (55.2%) had depersonalization compared to their female counterpart. (33.3%), $X^2 = 7.67$, $p = 0.006$. Also, a significantly higher proportion of respondents who had spent less than 4 years in service 33 (55.0%) reported depersonalization compared with fewer proportion (33.0%) who had spent 4 years and above in service, $X^2 = 7.9$, $p = 0.005$. No other sociodemographic or job-related characteristic was not significantly associated with depersonalization, $p > 0.05$. There was a significant difference in proportion of those nurses have conflicts with, $X^2 = 14.1$, $p = 0.003$. Post hoc multiple pairwise comparisons indicate that this significant difference was in part due to a higher proportion of nurses having conflicts with their colleagues compared with any other person (59.3% versus 37.5%, $X^2 = 5.5$, $p = 0.02$), a higher proportion of nurses having conflicts with their colleagues compared to not having conflict with anybody (59.3% versus

11.5%, $X^2 = 12.4$, $p = 0.004$) and also a higher proportion of nurses having conflicts with doctors compared with not having conflict with anybody (45.9% versus 11.5%, $X^2 = 6.6$, $p = 0.01$) (Table 2).

Sociodemographic/Job-Related Characteristics Associated with Personal Accomplishment

There were no significant sociodemographic characteristics associated with personal accomplishment $p > 0.05$ (Table 2).

Odds of Emotional Exhaustion (EE)

Factors associated with EE following regression analysis were stressful shift duties OR = 3.29,

95% CI (1.28-8.54), expecting higher funding/remuneration from the management OR = 7.19, 95% CI, 1.09 - 47.35) and mild job demand on their private lives OR = 0.108, 95% CI (0.03 – 0.46) (Table 3).

Odds of Depersonalization (Dep)

Factors associated with Dep following regression analysis were male gender OR = 2.33, 95% CI (1.18-4.60), spending 4 years or less OR = 2.07 95% CI (1.04-4.10), nurse/nurse conflicts OR = 7.07, 95% CI (1.84-34.4), working at RRSB OR = 2.54, 95% CI (1.25-5.13) (Table 3).

Table 1: Sociodemographic/Job Related Characteristics of the Respondents

Variables	N	%
Age group		
21-30 years	35	20.0
31-40 years	183	47.4
>40 years	57	32.6
Gender		
Male	58	33.1
Female	117	66.9
Marital status		
Not currently married	46	26.3
Currently married	129	73.7
Religion		
Christian	140	80.0
Islam	35	20.0
Hospital		
Ring Road State Hospital	63	36.0
Adeoyo Maternity Hospital	112	64.0
Basic qualifications		
Single Qualified	17	9.7
Dual	137	78.3
Degree Holders	21	12.0
Years spent on job		
≤3yr	34	19.4
>3-5yr	26	14.9
>5yr	115	65.7
Rank		
NO 1	24	13.7

NO II	31	17.7
SNO	38	21.7
PNO	42	24.0
ACNO	22	12.6
CNO/ ADNS	18	10.3

Do you run shifts?

Yes	129	73.7
No	46	26.3

Do you find shifting duty stressful? (n=129)

Yes	42	32.6
No	87	67.4

Salary Commensurate with Job

Yes	23	13.1
No	152	86.9

Perception of support from the hospital management

Not at all	17	9.7
Inadequate	134	76.6
Adequate	24	13.7

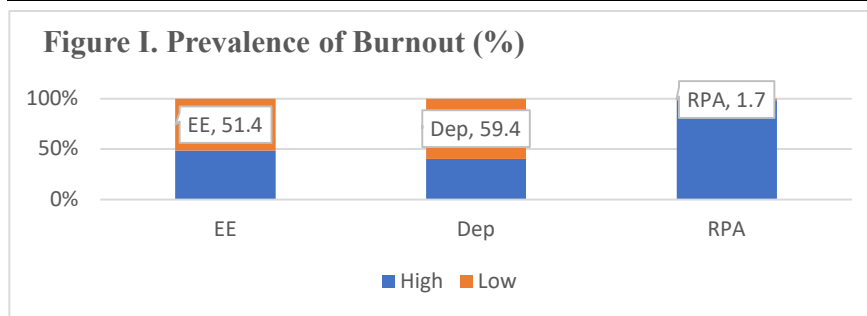


Table 2: Socio-demographic Characteristics and Burnout

Variables					Personal Accomplishment							
	Emotional Exhaustion		X ²	P	Depersonalization		X ²	p	High (172)	Low (3)	X ²	p
	High (85)	Low (90)			High (71)	Low (104)						
Age group												
21-30years	17 (48.6)	18 (51.4)	2.2	0.33	18 (51.4)	17 (48.6)	5.75	0.06	35 (100.0)	0 (0.0)	1.8	0.4
31-40 years	36 (43.4)	47 (56.6)			26 (31.3)	57 (68.7)			82 (98.8)	1 (1.2)		
>40 years	32 (56.1)	25 (43.9)			27 (4.4)	30 (52.6)			55 (96.5)	2 (3.5)		
Gender												
Male	38 (65.5)	20 (34.5)	10.0	0.002	32 (55.2)	26 (44.8)	7.67	0.006	56 (96.6)	2 (34.1)	1.5	0.2
Female	47 (40.2)	70 (59.8)			39 (33.3)	78 (66.7)			116 (99.1)	1 (0.9)		
Marital status												
Unmarried	67 (47.9)	73 (52.1)	0.141	0.71	55 (39.3)	85 (60.7)	0.48	0.48	137 (97.9)	3 (2.1)	0.8	0.4

Married	18 (51.4)	17 (48.6)			16 (45.7)	19 (54.3)			35 (100.0)	0 (0.0)		
Religion												
Christian	67 (47.9)	73 (52.1)	0.14	0.71	55 (39.3)	85 (60.7)	0.48	0.45	137 (97.9)	3 (2.1)	0.8	0.4
Islam	18 (51.4)	17 (48.6)			16 (45.7)	19 (54.3)			35 (100.0)	0 (0.0)		
Others												
Qualifications												
	10 (58.8)	7 (41.2)	1.7	0.4	7 (41.2)	10 (58.8)	0.52	0.77	16 (94.1)	1 (5.9)	2.2	0.3
Diploma	63 (46.0)	74 (54.0)			57(41.6)	80 (58.4)			135 (98.5)	2 (1.5)		
Degree + diploma	12 (57.1)	9 (42.9)			7 (33.3)	14 (66.7)			21 (100.0)	0 (0.0)		
Years spent on job[#]												
< 4 years	24 (40.0)	36 (60.0)	2.7	0.1	33 (55.0)	27 (45.0)	7.9	0.005	60 (100.0)	0 (0.0)	1.6	0.2
≥ 4 years	61 (53.0)	54 (47.0)			38 (33.0)	77 (67.0)			112 (97.4)	3 (2.6)		
Rank												
Junior	23 (41.8)	32 (58.2)	2.5	0.9	23 (42.8)	32 (58.2)			55 (100.0)	0 (0.0)	1.1	0.3
Intermediate	28 (43.8)	36 (56.2)	1.9	0.8	31 (38.8)	49 (61.2)			78 (97.5)	2 (2.5)		
Senior	14 (38.8)	22 (61.2)			17 (42.5)	23 (57.5)			39 (97.5)	1 (2.5)		
Hospital												
RRSH	36 (57.1)	27 (42.9)	2.9	0.09	33 (52.4)	30 (47.6)	5.7	0.02	60 (95.2)	3 (4.8)	0.2	0.2 ^{FE}
AMTH	49 (43.8)	63 (56.3)			38 (33.9)	74 (66.1)			111 (99.2)	1 (0.8)		
Stressful Shift (n = 129)												
Yes	37 (71.4)	12 (28.6)	9.2	0.002	22 (52.4)	20 (47.6)	2.49	0.11	22 (52.4)	20 (47.6)	2.5	0.1
No	34 (42.5)	46 (57.5)			37 (37.5)	50 (62.5)			37 (37.5)	50 (62.5)		
Salary commensurate with Job												
Yes	7 (30.4)	16 (69.6)	3.5	0.06	12 (52.2)	11 (47.8)	1.48	0.225	22 (95.7)	1 (4.3)	1.1	0.3
No	78 (51.3)	74 (48.7)			59 (38.8)	93 (61.2)			150 (98.7)	2 (1.3)		
Perceived Support from Management												
None	8 (47.1)	9 (52.9)	1.4	0.5	6 (35.3)	11 (64.7)			16 (94.1)	1 (5.9)	2.2	0.3
Inadequate	68 (50.7)	66 (49.3)			55 (41.0)	79 (59.0)	0.22	0.906	132 (98.5)	2 (1.5)		
Adequate	9 (37.5)	15 (62.5)			10 (41.7)	14 (58.3)			24 (100.0)	0 (0.0)		

Expectations from the management												
Increase remuneration	15 (41.7)	21 (58.3)	13.6	0.009 ^B _s	15 (41.7)	21 (58.3)	3.94	0.41	35 (97.2)	1 (2.8)	1.4	0.8
Increase funding	5 (25.0)	15 (75.0)			12 (60.0)	8 (40.0)			20 (100.0)	0 (0.0)		
Funding/remuneration	26 (66.7)	13 (33.3)			15 (38.5)	24 (61.5)			38 (97.4)	1 (2.6)		
Employ more nurses	13 (37.1)	22 (62.9)			12 (34.3)	23 (65.7)			35 (100.0)	0 (0.0)		
Provide equipment to work with	26 (57.8)	19 (42.2)			17 (37.8)	28 (62.2)			44 (97.8)	1 (2.2)		
Job demands on Private Life?												
Not at all	6 (21.4)	22 (78.6)	33.7	< 0.001 ^B _s	12 (42.9)	16 (57.1)	7.04	0.07	28 (100.0)	0 (0.0)	2.6	0.4
Mildly	12 (25.0)	36 (75.0)			12 (25.0)	36 (75.0)			46 (95.8)	2 (4.2)		
Moderately	58 (44.7)	79 (33.3)			42 (48.3)	45 (51.7)			86 (99.2)	1 (1.1)		
Severely	9 (75.0)	3 (25.0)			5 (41.7)	7 (58.3)			12 (100.0)	0 (0.0)		
Physical Illness Present												
Yes	9 (47.4)	10 (52.6)	0.01	0.9	5 (26.3)	14 (73.7)	1.8	0.18	19 (100.0)	0 (0.0)	0.4	0.5
No	76 (48.7)	80 (51.3)			66 (42.3)	90 (57.7)			153 (98.7)	3 (1.9)		
Any role conflict on duty												
Nurse/nurse	14 (51.9)	13 (48.1)	32	0.4	16 (59.3)	11 (40.7)	14.1	0.003 ^B _s	27 (100.0)	0 (0.0)	2.4	0.5
Nurse/doctor	32 (43.2)	42 (56.8)			34 (45.9)	40 (54.1)			72 (97.3)	2 (2.7)		
Nurse/Any other person	28 (48.3)	20 (41.7)			18 (37.5)	30 (62.5)			48 (100.0)	0 (0.0)		
None	11 (42.3)	15 (57.7)			3 (11.5)	23 (88.5)			25 (96.2)	1 (3.8)		

3: Odds of Burnout

Variables	Emotional Exhaustion			Depersonalization			
	OR	95% CI	p		OR	95% CI	p
Gender				Gender			
Male	1.51	0.62-3.65	0.4	Male	2.33	1.18-4.60	0.015
Female	1			Female	1		
Do you run shifts?				Years spent on job			
Yes	1.38	0.34-5.70	0.7	< 4 years	2.07	1.04-4.10	0.04
No	1			≥ 4 Years	1		
Stressful Shift				Role conflict			
Yes	3.29	1.28-8.54	0.01	Nurse/nurse	7.97	1-84-34.4	0.005
No	1			Nurse/doctor	2.04	0.73-5.53	0.3
Expectations from the management				Nurse/Any other person	1.72	0.80	0.2
Increase remuneration	0.53	0.22-17.39	0.11	None	1		
Increase funding	0.49	0.16-1.55	0.22	Hospital			
Funding/remuneration	7.19	1.09-47.35	0.04	RRSH	2.54	1.25-5.13	0.009
Employ more nurses	0.83	0.35-1.96	0.67	AMTH	1		
Provide equipment	1						
Job demand on private life							
Not at all	0.508	0.11-2.31	0.4				
Mildly	0.108	0.03-0.46	0.003				
Moderately	0.123	0.015-0.999	0.05				
Severely	1						

Discussion

Prevalence of Burnout

In this study, we found that in all, 48.6% of the sample had EE, 40.6% had Dep, while 98.3% had reduced PA. These figures are very close to the 44.4% reported for AA, 31.7% for DEP and 98.8% reported for RPA by (Alabi, Ishola, Onibokun, & Lasebikan, 2021). These figures are quite high compared with the results by De la Fuente-Solana et al. (2019) in an obstetric/gynaecological unit, who reported prevalence values of 29% for emotional exhaustion, 19% for depersonalization and 44% for low personal accomplishment. This may be attributed to differences in study population.

Nevertheless, except in the area of reduced PA, our rates are close to the figures reported by Okwaraji and Aguwa (2014) at the University of Nigeria Teaching Hospital (UNTH) Ituku Ozalla, in Enugu State of Nigeria, where the prevalence of burnout was 42.9% for EE, 47.6% for Dep and 53.8% for reduced PA. Contrastingly, we obtained lower rates for EE and a slightly higher rate for Dep and a much higher rate for reduced PA than the figures reported in a systematic review of 7 African countries, where Owuor, Mutungi, Anyango, and Mwitia (2020) found that the prevalence of EE was 66%, Dep was 37%, and reduced PA, 49%.

In an earlier study carried out by one of us (Lasebikan & Oyetunde, 2012) at the Ring Road State Hospital, Ibadan, 39.1% of the respondents had EE, 29.2% had Dep, while 40.0% had reduced PA. The question is why this wide disparity in the prevalence of burnout? Simple states, this variability is expected, given that the construct of burnout is biological and intrinsically motivated by a combination of factors such as the activities of the hypothalamopituitary-adrenal axis, the autonomic nervous system and the thyroid-adreno-cortical system, with wide individual variations, coupled with highly differential individual demographic and contextual factors (Ogundipe, Olagunju, Lasebikan, & Coker, 2014). The high rate of reduced personal accomplishment in this study could be added to several factors of which a striking one is lack of self-accomplishment which has made scores of nurses

resign and exit government employment for employment in other parts of the world (Ihuoma, 2021).

Demographic characteristics and burnout

Our results showed no association between age and burnout the three dimensions of burnout. This finding contrasts the results of earlier studies that found age to be strongly linked with burnout. For example, some studies in Nigeria found that older nurses were more likely to have burnout (Lasebikan & Oyetunde, 2012; Okwaraji & Aguwa, 2014). Contrary to this, Hatch et al. (2018) in the United States reported that younger nurses were more likely to report burnout. It is possible that this finding is due to failure of the government to recruit new nurses; making the majority of the nurses in the workforce of the OYSHMB to be older nurses. In our bivariate analysis, we found that burnout in the areas of EE and Dep was higher in male nurses than in their female counterparts. This finding is in support of a recent meta-analysis by Cañadas-De la Fuente et al. (2018). The present study therefore is not in support of previous hypothesis that female nurses tend to be at a greater risk of burnout, given the additional traditional gender and professional roles (Ogundipe et al., 2014).

In the present assessment, it was found that significantly higher proportion of inexperienced nurses (< years in service) reported burnout in the area of depersonalization and that years in service < 4 years was a predictor of depersonalization. However, Li, Guan, Chang, and Zhang (2014), found that inexperienced nurses had burnout in all the three dimensions, while Al-Turki et al. (2010) found a high level of emotional exhaustion among nurses with little work experience. Irrespective of the domain of burnout, the literature seems consistent with an association between inexperience in nursing and burnout. It is conceivable that inexperienced nurses will have difficulties in decision-taking and management skills leading to task shifting to other cadres of nurses or physicians, creating embarrassment and significant stressor for the nurse.

Work related stressors and burnout

We observed that shifting duty was associated with EE. This finding corroborates the results of a previous study that found that shifting duty was

significantly associated with burnout in all the three dimensions (Lasebikan & Oyetunde, 2012). This is because sleep deprivation impairs many types of performance: reduces the ability to concentrate; slows reaction time; and reduces the ability to remember and learn new facts and motor skills (Goel, Rao, Durmer, & Dinges, 2009). Beyond this, nurses who run night shifts run those shifts alone and spends more hours on duty than those on day duties who spend shorter hours in duty and who have all cadres of nurses on duty with them.

We also noticed that high expectation from nurses regarding funding and increased remunerations were associated with EE. This finding corroborates the observation made by one of us (Lasebikan & Oyetunde, 2012), where burnout in all the three areas were associated with organizational factors such as inadequate nursing personnel and poor wages. Similarly, Sillero and Zabalegui (2018), found that organizational factors such as staffing and resources inadequacy have been identified as factors strongly associated with emotional exhaustion, depersonalization and reduced personal accomplishment

We further report herein that job demanded on private life was associated with EE. The impact on private life has been ascribed to fatigue by Azmoon, Salmani Nodooshan, Jalilian, Choobineh, and Kargar Shouroki (2018), in line with this, Grant-Vallone and Donaldson (2001), over a decade ago had emphasized the significant impact of family-work interaction on burnout.

Another interesting finding was that nurse/nurse conflict was a significant source of depersonalization, followed by nurse/doctor conflict. This finding is supported by the report from Lasebikan and Oyetunde (2012). Tunc and Kutanis (2009) in Tukey found that nurse/nurse role conflict and nurse/doctor role conflict were associated with burnout.

In this study, we did find a significant difference in burnout in the area of depersonalization among the nurses working at the RRSN compared with those working at the AMTH. This may suggest certain contextual factors responsible for this. Indeed the study conducted by Lasebikan and Oyetunde (2012) noted that the RRSN had numerous functional and structural problems that were sources of distress for the nurses. These were

a lack of security at night, encroaching thick forest, lack of electricity, non-functional accident and emergency department, failure of doctors to take night calls amongst other factors that are potential sources of stress for nurses.

Odds of Burnout

We found that shift duties, expecting higher funding/remuneration from the management, and mild job demand on their private lives reported higher odds of having EE, while male gender, spending 4 years or less, nurse/nurse conflicts and working at RRSN reported lower odds of having of Dep. These findings shed more light on those factors that require attention when setting up workplace occupational mental health services for nurses. We emphasize the need to give attention for these determinants of burnout if a meaningful mental health prevention program is being established for this population.

Implications of the study

Although burnout is not a psychiatric diagnosis in the Tenth Edition of the International Classification of Diseases (ICD-10) (World Health Organization, 1994) nor in the Fifth Edition of the Diagnostic and Statistical Manual (DSM-V) (American Psychiatric Association, 1994), yet it is diagnosed by office-based doctors and clinicians because of its clinical, social and economic impact (Koreczak, Huber, & Kister, 2010). Burnout among nurses require serious recognition, given the relationship between burnout and medical error. This calls for the need to put up a mental health support group in the workplace for the health workers, in this instance, the nurse because of their 24-hour hospital coverage. Regrettably, few interventions exist to combat this problem. Prospective, controlled studies are needed to examine the effect of interventions to manage burnout among nurses.

Strength and Limitation of the Study

Our results may be generalizable to the mental health nurse's population in Nigeria as a whole because our sample size was statistically determined. The main limitation of the present study was its cross-sectional design. Future design should include possible intervention program for burnout. The potential for recall bias in the self-reported measures was also a limitation. In conclusion, burnout is highly prevalent among

nurses and the prevalence and factors associated with it very by location of hospital. It is therefore recommended that workplace screening and intervention for burnout be made available for this population of health care workers and future studies should look in the direction of effective intervention for burnout in Nurses.

Acknowledgements: The contributions of the nursing staff of Adeoyo Maternity Teaching Hospital and the Ring Road State Hospital, Ibadan. We also acknowledge the head of the two hospitals for granting us permission to carry out the study. The contributions of Dr OO Oladele and Dr O Afolabi are also acknowledged.

References

- Aiken, L. H., Cimiotti, J. P., Sloane, D. M., Smith, H. L., Flynn, L., & Neff, D. F. (2011). Effects of nurse staffing and nurse education on patient deaths in hospitals with different nurse work environments. *Medical care*, 49(12), 1047-1053. doi:10.1097/MLR.0b013e3182330b6e
- Al-Turki, H., Al-Turki, R., Al-Dardas, H., Al-Gazal, M., Al-Maghrabi, G., Al-Enizi, N., & Ghareeb, B. (2010). Burnout syndrome among multinational nurses working in Saudi Arabia. *Annals of African Medicine*, 9(4), 226-229. doi:10.4103/1596-3519.70960
- Alabi, M. A., Ishola, A. G., Onibokun, A. C., & Lasebikan, V. O. J. A. H. S. (2021). Burnout and quality of life among nurses working in selected mental health institutions in South West Nigeria. *African Health*, 21(3), 1428-1439.
- Alvaro, C., Lyons, R. F., Warner, G., Hobfoll, S. E., Martens, P. J., Labonté, R., & Brown, E. R. (2010). Conservation of resources theory and research use in health systems. *Implementation Science*, 5(1), 79. doi:10.1186/1748-5908-5-79
- American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders*. Retrieved from Washington DC:
- Azmoon, H., Salmani Nodoshan, H., Jalilian, H., Choobineh, A., & Kargar Shouroki, F. (2018). The Relationship Between Fatigue and Job Burnout Dimensions in Hospital Nurses. *Health Scope*, 7(2), e80335. doi:10.5812/jhealthscope.80335
- Babalola, E. O., & Olumuyiwa, O. (2015). Job Satisfaction and Psychological wellbeing among mental Health Nurses. *International Journal of Nursing Didactics*, 5(8), 12-18. doi:http://dx.doi.org/10.15520/ijnd.2015.vol5.iss8.107.12-18.
- Cañadas-De la Fuente, G. A., Ortega, E., Ramirez-Baena, L., De la Fuente-Solana, E. I., Vargas, C., & Gómez-Urquiza, J. L. (2018). Gender, Marital Status, and Children as Risk Factors for Burnout in Nurses: A Meta-Analytic Study. *International Journal of Environmental Research and Public Health*, 15(10), 2102. doi:10.3390/ijerph15102102
- Coker, A. O., & Omoluabi, P. F. (2009). Validation Of Maslach Burnout Inventory. *IFE Psychologia*, 17(1), 1117-1421.
- De la Fuente-Solana, E. I., Suleiman-Martos, N., Pradas-Hernández, L., Gomez-Urquiza, J. L., Cañadas-De la Fuente, G. A., & Albendín-García, L. (2019). Prevalence, Related Factors, and Levels of Burnout Syndrome Among Nurses Working in Gynecology and Obstetrics Services: A Systematic Review and Meta-Analysis. *International Journal of Environmental Research and Public Health*, 16(14), 2585. doi:10.3390/ijerph16142585
- Goel, N., Rao, H., Durmer, J. S., & Dinges, D. F. (2009). Neurocognitive consequences of sleep deprivation. *Semin Neurol*, 29(4), 320-339. doi:10.1055/s-0029-1237117
- Grant-Vallone, E., & Donaldson, S. (2001). Consequences of work-family conflict on employee well-being over time. *Work Stress*, 15, 214-226.
- Hatch, D. J., Freude, G., Martus, P., Rose, U., Müller, G., & Potter, G. G. (2018). Age, burnout and physical and psychological work ability among nurses. *Occupational Medicine*, 68(4), 246-254. doi:10.1093/occmed/kqy033
- Ihuoma, C. (2021). How work pressure forces Nigerian doctors, nurses to relocate abroad. *International Centre for Investigative Reporting*.
- Institute of Medicine (US) Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing, a. t. I. o. M. (2011). *The Future of Nursing: Leading Change, Advancing Health*. Retrieved from Washington (DC): <https://www.ncbi.nlm.nih.gov/books/NBK209872/>
- Korczak, D., Huber, B., & Kister, C. (2010). Differential diagnostic of the burnout syndrome. *GMS Health Technology Assessment*, 6, Doc09. doi:10.3205/hta000087
- Lasebikan, V. O., & Oyetunde, M. O. (2012). Burnout among Nurses in a Nigerian General Hospital: Prevalence and Associated Factors. *ISRN Nurs*, 402157(10), 29.
- Li, X., Guan, L., Chang, H., & Zhang, B. (2014). Core Self-Evaluation and Burnout among Nurses: The Mediating Role of Coping Styles *PLoS ONE*, 9(12), e115799. doi: <https://doi.org/10.1371/journal.pone.0115799>
- Maslach, C., & Jackson, S. E. (1986). *Maslach Burnout Inventory*. CA: Consulting Psychologists Press.
- Ogundipe, O. A., Olagunju, A. T., Lasebikan, V. O., & Coker, A. O. (2014). Burnout among doctors in residency training in a tertiary hospital. *Asian J Psychiatr*, 10, 27-32. doi:10.1016/j.ajp.2014.02.010
- Okwaraji, F. E., & Aguwa, E. N. (2014). Burnout and psychological distress among nurses in a Nigerian tertiary health institution. *African Health Sciences*, 14(1), 237-245. doi:10.4314/ahs.v14i1.37
- Owuor, R. A., Mutungi, K., Anyango, R., & Mwita, C. C. (2020). Prevalence of burnout among nurses in sub-

- Saharan Africa: a systematic review. *18*(6), 1189-1207. doi:10.11124/jbisrir-d-19-00170
- Pisanti, R., van der Doef, M., Maes, S., Meier, L. L., Lazzari, D., & Violani, C. (2016). How Changes in Psychosocial Job Characteristics Impact Burnout in Nurses: A Longitudinal Analysis. *Front Psychol*, *7*, 1082. doi:10.3389/fpsyg.2016.01082
- Poghosyan, L., Clarke, S. P., Finlayson, M., & Aiken, L. H. (2010). Nurse burnout and quality of care: cross-national investigation in six countries. *Res Nurs Health*, *33*(4), 288-298. doi:10.1002/nur.20383
- Reith, T. P. (2018). Burnout in United States Healthcare Professionals: A Narrative Review. *Cureus*, *10*(12), e3681-e3681. doi:10.7759/cureus.3681
- Sillero, A., & Zabalegui, A. (2018). Organizational Factors and Burnout of Perioperative Nurses. *Clin Pract Epidemiol Ment Health*, *14*, 132-142. doi:10.2174/1745017901814010132
- Tunc, T., & Kutanis, R. O. (2009). Role conflict, role ambiguity, and burnout in nurses and physicians at a university hospital in Turkey. *Nurs Health Sci*, *11*(4), 410-416. doi:10.1111/j.1442-2009.00475.x
- World Health Organization (Ed.) (1994). *The ICD-10 Classification of Mental and Behavioural Disorders: Clinical Descriptions and Diagnostic Guidelines, Tenth Revision*. Geneva World Health Organization.