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Predictors of Job Satisfaction among Resident Doctors at University of Ilorin Teaching Hospital, Ilorin, Nigeria (2020-21)

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Abstract

Background: Nigeria is witnessing a significant brain drain of trained doctors, especially among trainee doctors, who emigrate to high-income countries. Low job satisfaction is a key factor driving this exodus, yet there is a paucity of research on this issue among resident doctors in Nigeria. This study aims to investigate job satisfaction and its predictors among resident doctors at the University of Ilorin Teaching Hospital.

Materials and Method: The study was a cross-sectional observational survey involving 176 trainee doctors across 16 medical specialties/subspecialties using a total sampling method between October 2020 and January 2021. A pre-designed questionnaire and a Generic Job Satisfaction Scale (GJSS) were used to collect data. A multivariate logistic regression was used to determine the predictor variables influencing job satisfaction.

Results: The mean age of respondents was 35.10 (SD 4.07). 47.7% of resident doctors had low job satisfaction. Residents with perceived stressful job environment (OR= 2.390, 95% CI [1.135 – 5.034]) and those who experienced work-related stress (OR= 2.221, 95% CI [1.134 – 4.351]) had higher odds of low job satisfaction, while those who reported reasonable satisfaction with colleagues relationship (OR = 0.234, 95% CI [0.080 – 0.684]) and income satisfaction (OR = 0.469, 95% CI [0.239 – 0.922]) had lower odds of dissatisfaction with their jobs.

Conclusion: The results of this study show that close to half of the respondents were dissatisfied with their jobs. Therefore, the government and other health policymakers must address the extrinsic factors identified to stem the tide of brain drain among Nigerian resident doctors.

Keywords: Job Satisfaction, Physicians, Specialties, Stress, Income, Workplace, Nigeria..

Introduction

Job satisfaction is a multifaceted concept representing a favourable emotional state, where individuals feel positively about their jobs and perceive their occupation as aligning with their work-related values and principles [1, 2]. Job satisfaction is an emotional and cognitive assessment of working conditions resulting from a balance of internal factors (e.g., achievement, recognition) and external factors (e.g., salary, environment), which influence future expectations [3, 4]. Job satisfaction among healthcare professionals, particularly trainee doctors, is crucial for delivering

high-quality patient care and ensuring patient safety [5]. Dissatisfaction can lead to burnout, intention to quit, and reduced quality of care, ultimately affecting patient access and outcomes [5, 6]. If left unaddressed, it can also impact their mental and physical well-being, relationships, and overall quality of life [7, 8].

Despite growing research on physician job satisfaction, particularly in developed countries, there is a need for updated insights, including in Nigeria [9]. Studies in countries like the US [10], Canada [11], Germany [12], Australia [13], and Norway [14] have shown high job satisfaction among doctors, attributed to factors such as reasonable work hours, fair pay, and a supportive work environment [14].

A systematic review of physicians and dentists in 37 Low- and Middle-Income Countries found that 60% were satisfied with their jobs, with dermatologists reporting higher satisfaction [15]. However, a study in India found that 55.2% of doctors were dissatisfied due to long work hours and frequent night shifts [16]. Research suggests that low wages, difficult working conditions, and lack of recognition contribute to low job satisfaction, while stable work, income, and recognition promote satisfaction [17].

Studies in Nigeria have reported varying levels of job dissatisfaction among doctors, ranging from 28.7% to 54% in tertiary hospitals in Calabar and Benin, respectively [18, 19]. A study in Ibadan found a 44.8% job dissatisfaction rate, with predictors including lower age, limited career advancement opportunities, and poor work environment [20]. In contrast, a study in North-West Nigeria found a high job satisfaction rate (80.1%) among resident doctors attributed to career advancement opportunities, team spirit, and better supervision [21].

Nigeria is experiencing a mass exodus of physicians, particularly resident doctors, who are migrating abroad for better opportunities, exacerbating the country's low doctor-patient ratio [22]. Job satisfaction is a key factor driving this migration, and it also influences doctors' commitment to their profession, making it crucial for recruitment and retention [23-25]. Despite existing studies on physicians [19, 26, 27], there is a need for more research on resident doctors' job satisfaction. This study aims to investigate the predictors of job satisfaction among resident doctors at the University of Ilorin Teaching Hospital, hypothesizing that there is no significant association between job satisfaction and sociodemographic and work-related factors.

Materials and Methods

The study was a component of extensive research in the 16 departments that provide residency training at UITH, Ilorin, Nigeria, from October 1, 2020, to January 31, 2021. The specialties and/or departments were grouped further into Surgical (Anaesthesia, Otorhinolaryngology, Obstetrics, and Gynaecology, Orthopaedic, and Trauma, Ophthalmology, Radiology, Surgery), Medical (Epidemiology and Community Medicine, Family Medicine, Internal Medicine, Paediatrics and Psychiatry) and Laboratory subspecialties (Chemical Pathology, Haematology, Microbiology and Morbid Anatomy) [28].

The study design employed was a cross-sectional observational survey. Of 245 total resident doctors, 185 were eligible, but only 176 responded to the survey. The recruitment process exclusively targeted individuals who provided informed consent and had completed at least six months of medical residency training (MRT). The 6-month minimum duration of residency allowed them to have a thorough understanding of the daily operations and activities of the training program. Resident doctors who were engaged in external rotation outside the hospital and those who were physically too unwell to take part in the study were not included. A comprehensive sampling was conducted, encompassing all eligible resident doctors who consented. They were enlisted through their department and categorized based on their specialized training for comparison. The clinicians in each department were listed and assigned numerical codes comparable to those on the questionnaires [28].

These included a pre-designed questionnaire that sought information on respondents' socio-demographic, residency, and work-related factors, as well as the Generic Job Satisfaction Scale (GJSS).

GJSS is a 10-item instrument developed by Scott Macdonald in 1997 that has been used to measure job satisfaction in a wide range of occupational groups, including doctors [29]. It is a Likert-type scale with responses ranging from 'strongly disagree' to 'strongly agree.' The least obtainable response is 10, while the highest is 50. The Cronbach alpha for the ten items of the scale is 0.77. Scores ranging from 42-50 indicate very high job satisfaction, 39-41 indicate high job satisfaction, 32-38 mean average job satisfaction, 27-31 indicate low job satisfaction, and 10-26 indicate very low satisfaction. For this study and ease of analysis, the GJSS was grouped into three categories: high, medium, and low. Thus, scores ranging from 39-50 indicate high job satisfaction, 32-38 indicate medium job satisfaction, while scores ranging from 10-31 indicate low job satisfaction. The instrument has been used in Nigeria, with one study reporting a Cronbach alpha reliability index of 0.803 in Nigerian public servants. [30, 31, 32].

Completed questionnaires were sorted out and coded serially. The data collected were analyzed using the Statistical Package for Social Sciences version 27 (SPSS 27). Descriptive statistics and cross-tabulations were utilized to demonstrate correlations between variables, using frequency tables and charts as reporting tools. Continuous variables were represented as the mean value plus or minus the standard deviation (SD), whereas frequencies were represented as percentages.

The chi-square test assessed the relationships between job satisfaction and the independent variables. A logistic regression analysis was utilized to identify the predicted factors influencing job satisfaction. Variables for logistic regression analysis were selected based on a statistically significant association with a P-value of 0.05.

Results

Characteristics of the Respondents: The highest number of respondents were from surgical-related specialties (n=85; 48.3%), while laboratory departments constituted the least respondents (n=10; 5.7%). The mean age of respondents was 35.10 ± 4.07, ranging from 26 to 48 years. One hundred twenty-three respondents were males (69.9%), 97 (55.1%) were senior registrars, and the majority (85.2%) were married. Although about two-thirds (65.9%) of respondents expressed dissatisfaction with their income, most (88.1%) reported being satisfied with their connection with their co-workers.

The average mean work hours per week was 55.21 ± 28.06, with the majority (n=174; 98.9%) taking calls for an average mean duration of 43.77 ± 22.74 hours per week. More than half (52.8%) of the residents indicated experiencing inadequate sleep, with a mean average number of 2.92 ± 1.53 days of good sleep (defined as a perceived feeling of restorative sleep for at least four days) in a week (28). More than half (54%) experienced work-related stress, and most (75.6%) considered their job environment as stressful (Table 1).

Table 1. Socio-demographic, Residency, and work-related characteristics of respondents

Variables		Frequency (N=176)	Percentage (100%)
Age groups (years)	≤ 30	23	13.1
	31 – 35	72	40.9
	36 – 40	70	39.8
	≥ 41	11	6.2
	Mean ± SD	35.10 ± 4.07	
	Range	26 – 48	
Gender	Female	53	30.1
	Male	123	69.9
Marital status	Single	26	14.8
	Married living together	123	69.9
	Married living apart	27	15.3
Number of children n=155	None	20	12.9
	1 – 2	84	54.2
	> 2	51	32.9
Monthly income ₦ (in thousands) N=176	< 250	11	6.3
	250 – < 350	88	50.0
	350 – 450	55	31.3
	> 450	22	12.5
Satisfaction with income	No	116	65.9
	Yes	60	34.1
Rank	Registrar	79	44.9
	Senior registrar	97	55.1
Take calls	Yes	174	98.9
	No	2	1.1
Duration of work per week (hours)	≤ 50	99	56.3
	> 50 hours	77	43.7
Mean ± SD		55.21 ± 28.06	
Break during working hours	Yes	34	19.3
	No	142	80.7
Sleeps well	Yes	83	47.2
	No	93	52.8
Duration of training (Years)	One	20	11.4
	Two	54	30.7
	Three	24	13.6
	Four	20	11.4
	Five	27	15.3
	Six or more	31	17.6

Job satisfaction among respondents: This study showed that nearly half 84 (47.7%) of the resident doctors reported low job satisfaction, 76 (43.2%) had moderate job satisfaction, and only 16 (9.1%) recorded high job satisfaction.

Associations between socio-demographic variables and job satisfaction: Table 2 shows no significant relationship between job satisfaction and socio-demographic factors except income satisfaction. More than half (55.2%) of respondents unsatisfied with their

monthly income reported low job satisfaction (χ^2= 7.868; p= 0.020). Also, the majority (60.0%) of resident doctors with no children reported low job satisfaction compared to 48.8% and 41.2% in those with 1 to 2 children and those having > 2 children, respectively (χ^2=2.365; p= 0.669). However, this did not reach the level of significance.

Table 2. Associations between socio-demographic variables and job satisfaction among respondents

Variables		General job satisfaction scale			χ^2	P-value
		High n=16	**Moderate n=76**	**Low n=84**		
Age groups (years)	≤ 30	1 (4.3)	9 (39.1)	13 (56.5)	6.394	0.380
	31 – 35	6 (8.3)	31 (43.1)	35 (48.6)		
	36 – 40	9 (12.9)	33 (47.1)	28 (40.0)		
	≥ 41	0 (0.0)	3 (27.3)	8 (72.7)		
Gender	Female	4 (7.5)	24 (45.3)	25 (47.2)	0.281	0.869
	Male	12 (9.8)	52 (42.3)	59 (48.0)		
		n=16	**n=76**	**n=76**		
Marital status	Single	0 (0.0)	13 (50.0)	13 (50.0)	3.828	0.430
	Married living together	12 (9.8)	52 (42.3)	59 (48.0)		
	Married living apart	12 (44.4)	11 (40.7)	4 (14.8)		
		n=16	**n=65**	**n=74**		
Number of children	None	1 (5.0)	7 (35.0)	12 (60.0)	2.365	0.669
	1 – 2	9 (10.7)	34 (40.5)	41 (48.8)		
	> 2	6 (11.8)	24 (47.1)	21 (41.2)		
		n=16	**n=76**	**n=84**		
Monthly income (₦)(in thousands)	< 250	2 (18.2)	2 (18.2)	7 (63.6)	5.615	0.468
	250 – < 350	8 (9.1)	37 (42.0)	43 (48.9)		
	350 – 450	5 (9.1)	24 (43.6)	26 (47.3)		
	> 450	1 (4.5)	13 (59.1)	8 (36.4)		
Satisfaction with income	No	10 (8.6)	42 (36.2)	64 (55.2)	7.868	0.020
	Yes	6 (10.0)	34 (56.7)	20 (33.3)		
Duration of training (Years)	One	2 (10.0)	9 (45.0)	9 (45.0)	6.436	0.777
	Two	4 (7.4)	21 (38.9)	29 (53.7)		
	Three	2 (8.3)	11 (45.8)	11 (45.8)		
	Four	4 (20.0)	7 (35.0)	9 (45.0)		
	Five	3 (11.1)	14 (51.9)	10 (37.0)		
	Six or more	1 (3.20	14 (45.2)	16 (51.6)		

χ^2: Chi square test, **ρ value**< 0.05 is statistically significant

Table 3. Associations between work-related factors and job satisfaction among respondents

Variables		General job satisfaction scale		χ^2	P-value
		High/Moderate n=92	**Low n=84**		
Rank	Registrar	55 (56.7)	42 (43.3)	1.756	0.416
	Senior Registrar	37 (46.8)	42 (53.2)		
Duration of work per week (hours)	≤ 50	55 (53.5)	46 (46.5)	0.159	0.924
	> 50 hours	39 (50.6	38 (49.4)		
Break during working hours.	Yes	17 (50.0)	17 (50.0)	0.616	0.735
	No	57 (52.8)	67 (47.2)		
		n=160	**n=16**		
Departments	Laboratories	9 (90)	1 (10.0)	0.692	0.952
	Medicals	73 (90.1)	8 (9.9)		
	Surgical	78 (91.8)	7 (8.2)		
Sleeps well	Yes	53 (63.9)	30 (36.1)	8.447	0.004
	No	39 (41.9)	54 (58.1)		
Stressful job environment	Yes	63 (47.4)	70 (52.6)	5.248	0.022
	No	29 (67.4)	14 (32.6)		
The presence of stressful events in the last six months	Yes	71 (49.0)	74 (51.0)	3.609	0.057
	No	21 (67.7)	10 (32.3)		
Work-related stress	Yes	39 (40.6)	57 (59.4)	11.485	0.001
	No	53 (66.3)	27 (33.8)		
Academic related stress	Yes	30 (57.7)	22 (42.3)	0.869	0.351
	No	62 (50.0)	62 (50.0)		
Attempts at exams	Yes	54 (52.4)	49 (47.6)	0.002	0.961
	No	38 (52.1)	35 (47.9)		
Satisfaction with relation with colleague	Yes	87 (56.1)	68 (43.9)	7.743	0.005
	No	5 (23.8)	15 (76.2)		
Satisfaction with the training Programme	Yes	24 (66.7)	12 (33.3)	3.758	0.053
	No	68 (48.6)	72 (51.4)		
Medical errors	Sometimes	24 (50.0)	24 (50.0)	0.238	0.888
	Rarely	60 (52.6)	54 (47.4)		
	Never	8 (57.1)	6 (42.9)		

χ^2: Chi square test, **ρ value**< 0.05 is statistically significant

Associations between work-related factors and job satisfaction: More respondents who reported poor sleep had significantly lower job satisfaction than those with good sleep (58.1% vs. 36.1%; χ^2= 8.447, p= 0.004). Similarly, more resident doctors who were experiencing work-related stress reported low job satisfaction compared to those who were not having work-associated stress (59.4% vs. 33.8%; χ^2= 11.485, p= 0.001). Also, the majority (76.2%) of respondents who were not satisfied with their relationship with their colleagues had low job satisfaction compared with (43.9%) of those who reported a good relationship with colleagues (χ^2= 7.743; p= 0.005). However, residency rank, specialties, duration of weekly work hours, call-duty hours, presence of stressful events in the previous six months, perceived stressful job environment, academic-related stress, attempts at examination, and reporting of medical errors have no significant associations with job satisfaction level (Table 3).

Predictors of Job Satisfaction among Resident Doctors: Table 4 shows that respondents who experienced work-related stress (OR= 2.221, 95% CI [1.134 – 4.351]) and those who perceived their job environment as stressful (OR= 2.390, 95% CI [1.135 – 5.034]) have higher odds for low job satisfaction. However, respondents who were satisfied with their income (OR = 0.469, 95% CI [0.239 – 0.922]) and those who had good relationships with colleagues (OR = 0.234, 95% CI [0.080 – 0.684]) negatively predicted low job satisfaction.

Table 4. Predictors of job satisfaction: multivariate logistic regression analysis

Variables		β	Odds ratio	95 % C I
Rank	Senior Registrar	RC	1.486	0.818 – 2.701
	Registrars	0.396		
Satisfaction with income	Yes	-0.756	0.469	0.239 – 0.922
	No	RC		
Sleep well	Yes	-0.517	0.596	0.305 – 1.167
	No	RC		
Work-related stress	Yes	0.798	2.221	1.134 – 4.351
	No	RC		
Stressful job environment	Yes	0.871	2.390	1.135 – 5.034
	No	RC		
Satisfaction with relation with colleague	Yes	-1.451	0.234	0.080 – 0.684
	No	RC		

CI: Confidence Interval, **RC**: Reference Category, β: Coefficient of regression

Discussion

This study evaluated job satisfaction and its determinants among trainee doctors in UITH, Ilorin, Nigeria. Our study found that about half of the respondents experienced job dissatisfaction while income and workplace culture, such as perceived stressful job environments, work-related stress, and satisfaction with relationships with colleagues, were the strong determinant factors identified. The prevalence of low job satisfaction (47.7%) in the current study is comparable to the 44.8% rate of job dissatisfaction among resident doctors in a survey done in southwest Nigeria [20]. In contrast, the low job satisfaction rate (47.7%) in the present study is higher than the 30% and 39.6% reported in Saudi Arabia [25] and Taiwan [33], respectively. The observed differences could be due to the characteristics of respondents and the tool used (one-item questionnaire) compared to our study, where a validated job satisfaction scale was employed. Gedam et al. [34] reported that 76% of doctors working in a tertiary hospital in Delhi, India, were dissatisfied with their jobs, which was higher than the findings (47.7%) in this study. This discrepancy may be due to differences in methodology, respondents, culture, and nature of work.

Further, our study showed that slightly above half of the respondents (52.3%) had either moderate or high job satisfaction, lower than the prevalence rate of 80.1% and 85.7% reported by previous studies [21, 35]. A possible explanation for the latter study [35] could be the large sample size and inclusion of specialist and non-specialist hospital doctors. The high proportion of resident doctors with low job satisfaction, as found in this study, suggests an urgent need to implement measures that will positively enhance the welfare and training of resident doctors. This will go a long way in promoting resident doctors' motivation at work, efficiency, and mental health.

The significant factor among socio-demographic variables contributing to job satisfaction in the present study is income satisfaction, as respondents who were satisfied with their monthly income were less at risk of having low job satisfaction. Therefore, income satisfaction promotes job satisfaction, keeping with previous studies [16, 25, 27, 36, 37]. Mohebbifer et al. [38] opined that 'good wages' ranked the highest among employees' motivating factors and a significant predictor of job satisfaction. However, one study found no association between income and job satisfaction [39]. It is, therefore, important for hospital administrators and

other employers of labour to pay more attention to their employees' income and related issues for staff retention and efficiency at the workplace that would, in turn, ensure patient safety and satisfaction.

Contrary to previous research that suggested age, sex, and marital status as significant predictors of job satisfaction among resident doctors [20, 21, 36], our study did not reveal any statistically significant associations between these demographic variables and job satisfaction. This finding aligns with Aldrees and colleagues [25] results, who also failed to identify significant correlations between these demographic factors and job satisfaction. There are several possible explanations for this discrepancy. First, the inconsistency may be attributed to differences in study design, sample size, or population characteristics. Alternatively, it is possible that other factors, such as individual personality traits or workplace culture, play a more significant role in influencing job satisfaction among resident doctors than demographic characteristics. This study's results underscore the need for a more nuanced approach to understanding the factors affecting job satisfaction among resident doctors.

Work environment and job stress are determinants for job satisfaction, as resident doctors with perceived stressful work environments and those who experienced work-related stress had higher odds of job dissatisfaction in this study. Similar findings were observed in previous studies among doctors where poor working conditions and high workload, among others, were identified as critical predictors for low job satisfaction [14, 37]. Previous studies [28, 37, 40] have shown the importance of interpersonal and professional conflicts among co-workers as a driver for severe burnout, which could, in turn, lead to poor job satisfaction. This agrees with the findings in the current study, which state that a satisfactory relationship with colleagues is less predictive of low job satisfaction. The conclusions of this study further underscored the role of organizational/extrinsic factors over intrinsic factors in addressing job satisfaction in workplaces and the need for the promotion of harmonious working relationships among professionals through improved communication to enhance their satisfaction.

This study is limited by its cross-sectional design, making it difficult to prove causation between the linked elements. Furthermore, the survey was exclusively conducted within a solitary training institution in one of Nigeria's six geopolitical zones. Hence, its findings cannot be generalised to all resident doctors in Nigeria. This study, however, contributes significantly to the need for more literature on job satisfaction among trainee doctors in Nigeria. The study's strengths include a high response rate among the respondents and the use of well-standardised, validated tools to improve findings from previous Nigerian studies that used one-item questionnaires to assess job satisfaction.

Conclusion

Job satisfaction strongly influences the quality and efficiency of the healthcare system. Our study revealed that less than one-tenth of the respondents had high job satisfaction, while nearly half reported low job satisfaction. The predictors of low job satisfaction included income dissatisfaction, work-related stress, perceived stressful job environment, and poor satisfaction with colleague relationships. Therefore, relevant stakeholders should intensify efforts at addressing these identified extrinsic factors to improve resident doctors' motivation/satisfaction, patient safety, and productivity at the workplace. This will, in turn, help stem the tide of emigration among this group of doctors through improved retention. A longitudinal study is encouraged to ascertain the determinant factors found in our study. A multi-center-based study comprising all geopolitical zones in Nigeria is encouraged to elucidate predictors of job dissatisfaction among this group of doctors with a view of providing lasting solutions through legislative means by health policymakers and hospital administrators.

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Conflict of interest

None declared.

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Ethical Considerations

This study was conducted by the principles of the Declaration of Helsinki. The survey was voluntary, and only those who signed informed consent were recruited into the study.

Code of Ethics

The project received approval from the UITH Ethics and Research Committee (ERC) under Approval No: ERC PAN/2020/06/0023.

Authors' Contributions

Mumeen Olaitan Salihu: Contributed to the conception, design, acquisition of data, analysis, interpretation, and

writing of the first draft of the manuscript; Alfred Bamiso Makanjuola: Contributed to the conception, design, analysis, interpretation, and revision of the article with a critical contribution to the intellectual content; Oluwabunmi Idera N Buhari: Contributed to the article's data analysis, interpretation, and revision with a critical contribution to intellectual content; Bukola Awoyemi: Contributed to the article's data analysis, interpretation, and revision with a critical contribution to intellectual content. All authors of this article have contributed sufficiently to the manuscript and read and approved the final manuscript.

References

1. Spector PE. Job satisfaction: Application, assessment, causes, and consequences. Thousand Oaks, California, United States: Sage Publishing; 1997.
2. Locke EA. What is job satisfaction? Organ Behav Hum Perform. 1969;4(4):309-36.
3. Lu H, While AE, Barriball KL. Job satisfaction among nurses: a literature review. Int J Nurs Stud. 2005; 42(2):211-27.
4. Herzberg F, Mausner B, Snyderman BB. 3rd ed. The Motivation to Work. Thames, Oxfordshire, England, United Kingdom: Routledge; 2017.
5. DeVoe J, Fryer GE, Straub A, McCann J, Fairbrother G. Congruent satisfaction: is there geographic correlation between patient and physician satisfaction? Med Care. 2007;45(1):88-94.
6. Landon BE, Reschovsky JD, Pham HH, Blumenthal D. Leaving medicine: the consequences of physician dissatisfaction. Med Care. 2006;44(3):234-42.
7. Lewis JM, Barnhart FD, Howard BL, Carson DI, Nace EP. Work satisfaction in the lives of physicians. Tex Med. 1993;89(2):54-61.
8. Sundquist J, Johannson SE. High demand, low control and impaired general health: working conditions in a sample of Swedish general practitioners. Scand J Public Health. 2000;28(2):123-31.
9. Cabrita J, Perista H. Measuring job satisfaction in surveys-Comparative analytical report. Dublin, Ireland: European Foundation for the Improvement of Living and Working Conditions; 2007.
10. Perina DG, Marco CA, Smith-Coggins R, Kowalenko T, Johnston MM, Harvey A. Well-Being among emergency medicine resident physicians: results from the ABEM longitudinal study of emergency medicine residents. J Emerg Med. 2018;55(1):101-9.e2
11. Malhotra J, Wong E, Thind A. Canadian family physician job satisfaction - is it changing in an evolving practice environment? An analysis of the 2013 National Physician Survey database. BMC Fam Pract. 2018;19(1):100.
12. Behmann M, Schmiemann G, Lingner H, Kuhne F, Hummers-Pradier E, Schneider N. Job satisfaction among primary care physicians: results of a survey. Dtsch Arztebl Int. 2012;109(11):193-200.
13. Joyce CM, Schurer S, Scott A, Humphreys J, Kalb G. Australian doctors' satisfaction with their work: results from the MABEL longitudinal survey of doctors. Med J Aust. 2011;194(1):30-3.
14. Rosta J, Nylenna M, Aasland OG. Job satisfaction among hospital doctors in Norway and Germany. A comparative study on national samples. Scand J Public Health. 2009;37(5):503-8.
15. Sabitova A, McGranahan R, Altamore F, Jovanovic N, Windle E, Priebe S. Indicators Associated With Job Morale among Physicians and Dentists in Low-Income and Middle-Income Countries: A Systematic Review and Meta-analysis. JAMA Netw Open. 2020;3(1):e1913202.
16. Kaur S, Sharma R, Talwar R, Verma A, Singh S. A study of job satisfaction and work environment perception among doctors in a tertiary hospital in Delhi. Indian J Med Sci. 2009;63(4):139-44.
17. Bonenberger M, Aikins M, Akweongo P, Wyss K. The effects of health worker motivation and job satisfaction on turnover intention in Ghana: a cross-sectional study. Hum Resour Health. 2014;12:43.
18. Ofili AN, Asuzu MC, Isah EC, Ogbeide O. Job satisfaction and psychological health of doctors at the University of Benin Teaching Hospital. Occup Med (Lond). 2004;54(6):400-3.
19. Bello S, Asuzu MC, Ofili AN. Job satisfaction and psychological health of medical doctors in Calabar, Southern Nigeria. East Afr Med J. 2013;90(6):189-94.
20. Akinyemi O, Atilola O. Nigeria resident doctors on strike: insights from and policy implications of job satisfaction among resident doctors in a Nigerian teaching hospital. Int J Health Plann Manage. 2013;28(1):e46-61
21. Yakasai IA, Ugwa EA, Abubakar IS. Job satisfaction among resident doctors in a tertiary health care facility in Northern Nigeria, a cross sectional. Trop J Obstet Gynaecol. 2013;30(1).
22. Nigeria lost over 30,000 doctors to global migration: postgraduate college. The Peoples Gazette [Internet]. 2023 Sep 19 [cied 2024 Mar 19]. Available from: https://gazettengr.com/nigeria-lost-over-30000-doctors-to-global-migration-postgraduate-college/
23. Toyin-Thomas P, Ikhurionan P, Omoyibo EE, Iwegim C, Ukueku AO, Okpere J, et al. Drivers of health workers' migration, intention to migrate and non-migration from low/middle-income countries, 1970–2022: a systematic review. BMJ Glob Health. 2023;8(5):e012338.
24. Ogaboh AA, Udom HT, Eke IT. Why brain drain in the Nigerian health sector? Asian J Appl Sci. 2020;8(2).
25. Aldrees T, Al-Eissa S, Badri M, Aljuhayman A, Zamakhshary M. Physician job satisfaction in Saudi Arabia: insights from a tertiary hospital survey. Ann Saudi Med. 2015;35(3):210-3.
26. Bello S, Oni T, Omobowale O. Determinants of Job satisfaction among health workers in Lagos State Teaching Hospital, Nigeria (2019). J Occup Health Epidemiol. 2022;11(4):302-10.

27. Kolo ES. Job satisfaction among healthcare workers in a tertiary center in Kano, Northwestern Nigeria. Niger J Basic Clin Sci. 2018;15(1):87-91.
28. Salihu MO, Makanjuola AB, Abiodun OA, Kuranga AT. Predictors of burnout among resident doctors in a Nigerian teaching hospital. S Afr J Psychiatr. 2023;29:2017.
29. Macdonald S, MacIntyre P. The Generic job satisfaction scale. Empl Assist Quart. 1997;13(2):1-16.
30. Okwaraji FE, Aguwa EN. Burnout, psychological distress and job satisfaction among secondary school teachers in Enugu, South East Nigeria. J Psychiatry. 2015;18(1):237-45.
31. Dele Ajibewa O. Job demands, job involvement and job discrimination as predictors of job satisfaction among FRSC personnel in Ilorin Kwara State, Nigeria. Int J Psychol Afr. 2019;27(2):37-48.
32. Oshishepo SA, Kenku AA, Otaki PO. Job Demand and Work Life Balance as Factors Influencing Job Satisfaction among Police Officers in Keffi, Nasarawa State, Nigeria. Jalingo J Soc Manag Sci. 2024;5(3):210-20.
33. Tung YC, Chou YY, Chang YH, Chung KP. Association of intrinsic and extrinsic motivating factors with physician burnout and job satisfaction: a nationwide cross sectional survey in Taiwan. BMJ Open. 2020;10(3):e035948.
34. Gedam SR, Babar V, Babhulkar S. Study of job satisfaction and stress among doctors from tertiary care institute at Rural Region of Central India. Int Arch Addict Res Med. 2018;4(1):1510026.
35. Joyce CM, Schurer S, Scott A, Humphreys J, Kalb G. Australian doctors' satisfaction with their work: results from the MABEL longitudinal survey of doctors. Med J Aust. 2011;194(1):30-3.
36. Bello S, Ajayi DT, Asuzu MC. Determinants of job satisfaction among physicians in public hospitals in Calabar, Nigeria. J Community Med and Prim Health Care. 2018;30(1):19-33.
37. Bendorf DC, Helmer SD, Osland JS, Tenofsky PL. Income, productivity, and satisfaction of breast surgeons. Am J Surg. 2010;199(3):405-9.
38. Mohebbifer R, Zakaria Kiaei M, Khosravizadeh O, Mohseni M. Comparing the perspectives of managers and employees of teaching hospitals about Job motivation. Glob J Health Sci. 2014;6(6):112-8.
39. Suliman AA, Eltom M, Elmadhoun WM, Noor SK, Almobarak AO, Osman MM, et al. Factors affecting job satisfaction among junior doctors working at teaching hospitals in River Nile State, Sudan. J Public Health Emerg. 2017;1(10).
40. Embriaco N, Papazian L, Kentish-Barnes N, Pochard F, Azoulay E. Burnout syndrome among critical care healthcare workers. Curr Opin Crit Care. 2007;13(5):482-8.