SELF-REPORTED EMOTIONAL INTELLIGENCE LEVELS BY DENTISTS IN THE NIGERIAN RESIDENCY PROGRAMME

Ikusika O.F[1], Adeyemi T.E[2], Adeyemo Y.I[2], Akinlade A.A[3], Efunkoya A.A[3].

[1] Department of Restorative Dentistry,Bayero University/Aminu Kano Teaching Hospital,Kano
[2] Department of Child Dental Health ,Bayero University/Aminu Kano Teaching Hospital,Kano
[3] Department of Oral and Maxillofacial Surgery ,Bayero University/Aminu Kano Teaching Hospital,Kano

Correspondence author: Ikusika O.F[1]
Email: feyiikusika@yahoo.com

DOI: https://dx.doi.org/10.4314/gdj.v20i1.6

ABSTRACT

Introduction:
Emotional intelligence (EI) aids in the management of emotions. It is presumed to be important in maintaining well-being and organizational structure in stressful environments like the dental residency program.
This study assessed self-reported emotional intelligence skills among consenting Nigerian dentists in the residency training program.

Materials and Methods:
Eligible respondents were surveyed electronically to determine levels and patterns of EI as defined by Goleman, using the EI Inventory (www.ysmsolutions.co.uk). Variables were described as frequencies and percentages. Means were compared with t-test or ANOVA. Correlations were performed as appropriate. The level of statistical significance was set at $p \leq 0.05$.

Results:
Ninety residents with a mean age of 35.6 ± 4.8 years and 62(68.9%) males and 28(31.1%) females participated in the study. There were 57(63.3%) junior residents and 33(36.7%) senior residents who had spent between 1 and 12 years in the program.
The mean overall EI score was 187.4±21.4. EI scores were highest for Self-Awareness (40.7±5.1) and lowest for Managing Emotions (33.3±5.7). Males outperformed females in social skills ($p<0.001$).

Conclusion:
Participants had high EI scores in self-awareness and low scores for managing emotions. Overall, EI scores were good.

Keywords:
Emotional intelligence, Dentists, Residency Programme, Nigeria.

INTRODUCTION:

The residency training program for aspiring medical and dental specialists is organized as an apprenticeship where the trainee is expected to provide service, engage in research and achieve didactic learning outcomes[1,2].The program is designed to last for about six years in most dental specialties[3]. The Nigerian dental resident is not immune to the challenges faced by resident doctors in other countries.
The residency training program has been described as a stressful period for the trainees[4,5]. Several coping mechanisms have been suggested to ameliorate this challenge [6,7]. One of the potential coping mechanism is an improvement in the Emotional Intelligence (EI) of the resident doctor[8,9].
Emotional intelligence is a concept introduced by Meyer Salovey in about the year 1990[10,11]. The concept is concerned with the ability of an individual to recognize emotions within themselves and in others while allowing this ability to refine their behavior and thinking[10,11]. The place of emotional intelligence in the workplace and occupational structures was elucidated by the work of David Goleman[12,13]who postulated that there were five aspects of emotional intelligence that may impact the work environment[12,13]. He identified these aspects of emotional intelligence as self-awareness, empathy, social skills, self-regulation (or managing emotions) and motivation[12,13,14].
The future of the dental profession in Nigeria rests firmly in the residency training program[2]. The dental residents are the group from which will emerge future trainers and researchers[2]. The quality of the specialists produced from the program must therefore be jealously guarded. These quality control efforts will be sub-optimal if only directed at the curriculum and hands-on training of the trainees. There is an increasing awareness of the effect of the learners' emotional state on the learning process[15,16]. The ability to cope with occupational stresses has been shown to improve output and productivity[17]. The affective component of the learning process must therefore be considered to maximize the residents' overall learning process.
This study aimed to evaluate emotional intelligence among Nigerian dental resident doctors. It is hoped that the data accumulated from this study will provide insights that may assist in improving the understanding of emotional intelligence levels among residents. This may be leveraged in improving the impact of the training on the trainees.

MATERIALS AND METHODS:

Ethical approval (NHREC/28/01/2020/AKTH/EC/3321) was obtained from the institutional Ethics Review Committee. The study was a cross-sectional electronic questionnaire (Google Forms) survey of dental resident doctors across the Nigerian Federation from a data collation center in Northwest Nigeria. Data related to the emotional intelligence of participants were retrieved with the aid of the (EI) Emotional intelligence questionnaire developed and validated by the Yale School of Medicine (www.ysmsolutions.co.uk)
The questionnaire contains fifty statements randomly arranged to test the five aspects of emotional intelligence described by Goleman. The respondent is provided a Likert scale from 1 to 5 to score how much each statement applies to them. The instrument thereafter provides a key that allows the statements to be categorized into the five aspects of emotional intelligence being tested. There are thus possible scores from 10 to 50 per aspect and 50 to 250 for overall EI scores. A score of 35 per aspect (and

175 for the overall score) was recommended to be the threshold for a good performance.

This questionnaire was pre-tested for content and face validity on five residents who had recently become fellows. They certified the questionnaire to be easy to fill and understand, with a concordance of about 94.5%. The pilot of the questionnaire was performed on individuals from two different institutions.

The estimated population of respondents was derived from a similar study by Ikusika et al. [2] at a hundred and thirteen[2]. This population was used to determine a minimum sample size of eighty-eight participants at a 95% confidence interval, 5% margin of error, and 50% population proportion with the Sample Size Calculator (www.calculator.net). Data collection was discontinued after six weeks of questionnaire administration when minimum sample attainment and response saturation occurred.

Data related to participant sociodemographics and experiences in the residency program were retrieved. The age, gender, religious affiliation, stage of residency training, marital status, and duration spent in the residency program were recorded for each participant. The specialties of the participants were categorized into four groups. They were categorized as Restorative and Developmental Dental Specialties (RDDS) comprising Conservative Dentistry, Prosthodontics, Orthodontics, and Pedodontics. The Surgical Specialty (SS) was Oral and Maxillofacial Surgery, while the Diagnostic and Preventive Dental Specialties (DPDS) included Oral Pathology, Oral Medicine, Oral Radiology, Periodontology, and Dental Public Health. The fourth category of specialties was that for residents in General Dental Practice, locally referred to as Family Dentistry (FD).

All data collection protected participants' autonomy and confidentiality. The questionnaires were administered via the internet, ensuring fairness in participation. Participants benefited from questionnaire administration, as they were given an opportunity for personal introspection. They were not exposed to risks as all retrieved data bore no personal identifiers.

DATA MANAGEMENT AND ANALYSIS:

Data was retrieved online on an electronic spreadsheet (Microsoft Excel) and analyzed with STATA statistical software (Release 15, Stata Corp 2017). Categorical variables were described using frequencies and percentages. Histograms and Shapiro-Wilk test were used to check for normality.

Means of participants' performances in the various aspects of emotional intelligence were determined and compared across sociodemographic parameters with t-tests or One-Way ANOVA (or their non-parametric equivalent, the Mann-Whitney test). Pearson's and Spearman's rank correlations were used to assess the relationship between EI scores and sociodemographic variables. The level of statistical significance was set at $p \leq 0.05$.

RESULTS:

Ninety dental residents participated in the study. There were 62(68.9%) males and 28(31.1%) females. The average age of the participants was 35.6 ± 4.8 years within an age range of 27 to 48 years. Many N(43%) of the participants were less than 35 years old, 41% were between 36 and 40 years old, and 15.6% were older than 40. A third (33.3%) of the participants subscribed to the Islamic religion, while 66.7% claimed to be Christians. Twenty (22.2%) of the participants were unmarried while 70(77.8%) were married. Fifty-seven (63.3%) were junior residents, while 33(36.7%) were senior residents. Thirty (33.3%) participants had spent less than 3 years in the residency program, while 40(44.4%) had spent between 3 and 5 years in the program. Twenty (22.2%) had spent over 5 years in the program. The length of stay in the program spanned from 1 year to 12 years. There were 36(40%) participants in the RDDS specialties, 28(31.1%) in the SS specialty, and 20(22.2%) in the DPDS specialties. The specialty of FD had only 6 (6.7%) participants. The sociodemographic of the participants is summarized in Table 1.

Table 1. Demographic information of study participants (n = 90)

Variables	Frequency, n	Percentage,
Gender		
Female	28	31.1
Male	62	68.9
Age group		
≤ 35 years	39	43.3
36 to 40	37	41.1
> 40 years	14	15.6
Religion		
Islam	30	33.3
Christianity	60	66.7
Marital status		
Single	20	22.2
Married	70	77.8
Residency level		
Junior	57	63.3
Senior	33	36.7
Residency duration (years)		
1 to 2	30	33.3
3 to 5	40	44.4
> 5	20	22.2
Specialty		
RDDS	36	40.0
SS	28	31.1
DPDS	20	22.2
FD	6	6.7

RDDS: Conservative (16), Prosthodontics (3), Orthodontics (11) & Pediatrics (6)

DPDS: Oral radiology (1), Pathology (1) & Medicine (7), Periodontology (3) & Dental Public Health (8)

The mean overall EI score was 187.4±21.4. Overall EI scores ranged from 140 to 232. The best performances were recorded in the aspect of self-awareness, where there was a mean score of 40.7±5.1. The performance of participants in each of the five domains of EI by proportion is described in Table 2.

Table 2. The proportion of study participants in relation to their performance (n = 90)

	Emotional intelligence			
Area of competency	Not Good (< 35)		Good (≥ 35)	
	n	% (95% CI)	n	% (95% CI)
Self-awareness	10	11.1 (4.6 – 17.6)	80	88.9 (82.4 – 95.4)
Motivating oneself	25	27.8 (18.5 – 37.0)	65	72.2 (62.9 – 81.5)
Social skills	26	28.9 (19.5 – 38.3)	64	71.1 (61.7 – 80.5)
Empathy	26	28.9 (19.5 – 38.3)	64	71.1 (61.7 – 80.5)
Managing emotions	55	61.1 (51.0 – 71.2)	35	38.9 (28.8 – 48.9)
Total EI	28	31.1 (21.5 – 40.7)	62	68.9 (59.3 – 78.5)

CI: confidence interval; EI: Emotional intelligence

Male gender was statistically significantly associated with improved performance in social skills (p<0.001). Religious affiliation, marital status, level of residency training program, and specialty did not significantly affect EI scores statistically. The relationship between these sociodemographic variables and EI scores is summarized in Table 3.

Table 3. Relationship between sociodemographic variables and EI scores

		Emotional intelligence; mean ± SD					
Variable	**n**	**SA**	**MO**	**EM**	**SS**	**ME**	**Overall EI**
Gender							
Female	28	41.1 ± 4.2	38.0 (33–39)[a]	36.7 ± 5.0	35.1 ± 5.6	32.5 ± 4.9	181.1 ± 19.4
Male	62	40.5 ± 5.5	38.5 (35–42)[a]	37.8 ± 5.2	39.7 ± 5.8	33.7 ± 6.0	190.2 ± 21.8
P-value		0.65	0.09[b]	0.35	**< 0.001**	0.37	0.06
Religion							
Islam	30	40.9 ± 5.1	36.0 (34-40)[a]	37.2 ± 5.3	37.6 ± 6.7	33.0 ± 4.4	185.4 ± 22.6
Christianity	60	40.6 ± 5.2	38.5 (34-42)[a]	37.6 ± 5.1	38.7 ± 5.8	33.5 ± 6.3	188.4 ± 20.9
P-value		0.77	0.35[b]	0.73	0.43	0.69	0.53
Marital status							
Single	20	39.9 ± 5.5	37.0 ± 7.6	35.7 ± 4.9	37.0 ± 5.4	31.6 ± 6.2	181.0 ± 22.7
Married	70	40.9 ± 4.9	37.8 ± 5.2	37.9 ± 5.1	38.7 ± 6.3	33.9 ± 5.5	189.2 ± 20.8
P-value		0.39	0.56	0.08	0.29	0.11	0.13
Level in residency							
Junior	57	40.4 ± 5.2	37.6 ± 6.2	37.1 ± 5.1	38.7 ± 6.1	33.2 ± 5.6	187.1 ± 21.8
Senior	33	41.2 ± 4.9	37.7 ± 4.9	37.9 ± 5.2	37.5 ± 6.1	33.5 ± 5.8	187.9 ± 20.9
P-value		0.48	0.93	0.45	0.38	0.83	0.86
Specialty							
RDDS	36	41.4 ± 4.8	36.9 ± 5.9	38.0 ± 5.5	38.3 ± 5.8	33.9 ± 7.1	188.8 ± 22.8
SS	28	39.1 ± 5.5	38.3 ± 5.7	36.8 ± 4.8	38.5 ± 5.2	32.5 ± 4.8	185.2 ± 20.5
DPDS	20	41.9 ± 4.5	39.1 ± 4.2	37.3 ± 4.7	39.1 ± 6.9	33.3 ± 3.9	190.6 ± 18.3
FD	6	39.0 ± 5.9	33.7 ± 8.2	37.3 ± 6.8	35.0 ± 8.9	33.7 ± 6.0	178.7 ± 28.1
P-value[γ]		0.14	0.18	0.82	0.56	0.80	0.60

[a]Median (interquartile range)
P-value obtained using independent T-test, Mann-Whitney[b] U test and One-way ANOVA[γ]

SA: Self Awareness, MO: Motivation, EM: Empathy, SS: Social Skills, ME: Managing Emotion

Similarly, there was no statistically significant correlation between participants' ages or length of stay in the residency program and EI scores. However, there was a weakly positive association between them. Table 4 summarizes the correlation between age, length of stay in the program and EI scores.

Table 4. Correlation between age, duration in residency program and EI (n =90).

EI scores	**Age**		**Residency duration**	
	r	***P*-value**	**r_s**	***P*-value**
Self-awareness	0.02	0.85	0.15	0.16
Motivatingoneself	0.18	0.10	-0.08	0.47
Empathy	0.11	0.32	0.10	0.36
Social skills	0.18	0.09	0.04	0.70
Managing emotions	0.03	0.76	0.09	0.38
Overall EI	0.14	0.20	0.08	0.46

EI: Emotional intelligence
r = Pearson correlation coefficient
rs = Spearman correlation coefficient

DISCUSSION:

The well-being and productivity of resident doctors has been associated with the possession of higher levels of emotional intelligence[17,18,19]. Higher levels of emotional intelligence using the instrument employed for this study are represented by scores of seventy percent and above in the various components of emotional intelligence. Unfortunately, most training centers in Nigeria do not include tests of emotional intelligence in their recruitment exercises. However, there have been suggestions that such tests be incorporated in recruitment from studies conducted in other countries[20]. Luckily, there are assertions that EI skills can be improved[21]. Endeavors to introduce training in EI into the curriculum for the training of dental residents may be a progressive development.

The male preponderance among Nigerian resident doctors has been severally reported in the literature, so the gender disparity recorded in this study was not surprising[22,23]. Ogunsemi et al. reported a male preponderance at 74.1% among resident doctors they studied in Sagamu[24]. while Chukwumah and Umweni reported only 40.8% of dental resident doctors being female in their study conducted in Benin City[25]. Ebi et al. reported a male preponderance at 61.5% in a 2021 study

conducted in Uyo among medical and dental residents.26 Ikusika et al reported a male preponderance at 69.9% in a national survey of dental residents published in 2022[2].There are various reasons that have been advanced for this male dominance of the dental residency program, but thankfully there are reported improvements in the numbers of female dental residents within the country[25].

The mean age in this study is similar to the mean ages observed in similar Nigerian studies[2,27]. However, this figure is higher than the mean ages observed in some foreign studies[28,29,30,31]. Yaghoubi et al. in Iran observed an average age of 27.83 years,[28], while Kazempoor et al. also in Iran[29]; and Tahir et al. in Pakistan[30], recorded mean ages that were less than thirty years. However, Chery et al. in 2021 found a mean age of 33.8±3.6 years, similar to ours[31]. Our cohort's relatively older average age should generate concern within the Nigerian dental community. These specialists in training will have a shorter period to avail society of their expertise if they specialize closer to retirement age. The incessant disruptions in Undergraduate training occasioned by frequent industrial actions may be responsible for many dentists facing delays in the conclusion of their undergraduate programs [32]. The length of stay within the program may also be a contributing factor. A recent review of the laws that govern the program has allowed residents to stay longer in the program[33]. These laws limit the training period to a maximum of eight years. However, subjective enforcement of the residency training statutes by different institutions may also contribute to some residents spending up to twelve years in the program, as seen in this study[33]. However, as exemplified by the study by Chery et al.[31], some regions do have similar mean ages to that of our cohort.

The higher rate of married residents within the cohort is not surprising when their average ages are considered. Nigerian men have been reported to have a median age at first marriage of twenty-four years[34].While higher income and education have been said to increase this age, possession of a job and building a career have been said to encourage marriage[34]. It is therefore not surprising that many of the members of our cohort are married. We found no statistically significant association between marriage and emotional intelligence levels. This contrasts with the findings of Kousha et al. among Iranian resident doctors, who found a positive correlation between being married and high EI scores among their participants[35]. However, their study stood the risk of participants exhibiting social desirability bias as the respondents underwent face-to-face interviews with the investigators who were their trainers. The influence of cultural biases cannot also be separated from variations between Iranian and Nigerian residents regarding such differences.

The disparity in religious affiliation may be due to more training centers being located in the Southern and more predominantly Christian parts of the country[36]. While several investigators have reported an association between faith or religiosity and emotional intelligence[37], we did not find any statistically significant association between professed religious affiliation and levels of emotional intelligence in our cohort. However, we did not set out to quantify the level of religiosity among our study participants.

The overwhelming majority of our participants were training to be Oral Maxillofacial Surgeons. This is in keeping with reported trends in dental residency training in Nigeria[38,39]. This specialty seems to hold much attraction for aspiring specialists[38]. However, there is an urgent need to incentivize the other specialties if holistic levels of specialist care are to be provided to the population. Similarly, the specialty of Family Dentistry should be encouraged to fulfill the needs of specialist secondary-level care in the population.

There was a paucity of similar corroborative studies in Nigeria to compare our results. However, several Nigerian studies have studied emotional intelligence among Nigerian resident doctors[39,40]. These studies all report reasonably high levels of overall EI among their participants. However, most of these studies were not concerned with analyzing the patterns of EI but related overall EI levels to job satisfaction, well-being, and organizational efficiency[39,40].

Our finding of high scores in self-awareness, empathy, motivation, and social skills suggest that these character traits may predispose an individual to cope with the rigors of dental training. Kumar et al. reported that these traits were associated with better academic performance among the dental students they studied[41]. Bhaskar reported that Indian Pedodontics and Preventive Dentistry residents had high scores in these dimensions of Ei[42]. Bhaskar and colleagues used an instrument similar to the one used in this study in his assessment. They also found males to have higher social awareness scores, similar to our own findings.

The low EI scores recorded with managing emotions suggest a predisposition of our cohort to becoming overwhelmed by the stresses induced by the residency training program. Burnout is one of the hazards the resident doctor faces[43,44]. This hazard has been reported to be mitigated by high levels of EI, especially the management of emotions[8,44]. IsHak et al., in a literature review, elucidated the influence of psychological states and emotional intelligence on the establishment of burnout[44]. IsHak also highlighted the positive effects of EI educational programs on combating burnout. We suggest that the Postgraduate Colleges organize formal training exercises for their fellows to equip them with the skill sets to impart improvements in this all-important area of EI to their trainees.

The weak correlation between age and duration of stay within the program on EI is not surprising. Fariselli et al., in their white paper for "The Emotional Intelligence Network," had drawn attention to a slight increase in emotional intelligence with increasing age, as we found with our cohort[45]. Alheet and co-workers found that experience improves emotional intelligence while age does not[46]. We theorize that previous experience within the program may act as mitigating factors to shocks produced by stressful situations that the trainee may experience. However, we believe this aspect of the residents' EI is open to further investigation.

This study was a self-reported assessment by the study participants and may suffer the drawback of biased answers. However, self-reports have been reported to have certain advantages over performance-based or expert-based emotional intelligence assessments. Expert-based assessments are limited by the difficulty in determining the necessary expertise required[47]. The difficulty with assessing emotional intelligence by a performance-based model is the risk of the norms of the assessor skewing the results. There is also the difficulty in designing an assessment model that would be practical within an organizational setting[47].

CONCLUSION:

The Nigerian dental resident doctors who participated in this study had high EI scores in self-awareness, motivation, empathy, and social skills. They, however,

had low scores in managing their emotions. The institution of training programs in emotional intelligence may be considered an option to improve the ability of the residents to manage their emotions.

REFERENCES:

1. Umar SS, Babandi ZS, Suleiman AG, Umar UM, Olorukooba AA, Ahmad AJ, Muhammad BO, Umar AI, Ahmad A, Obazenu LO. Assessing performance of resident doctors in training in northwestern Nigeria. Niger J Med. 2021; 30(3): 264-70.
2. Ikusika O, Aladelusi T, Adeyemo Y, Adeyemi T, Idon P. Use of Information Communication Technology Tools Among Nigerian Dental Resident Doctors: An Exploratory Study. Niger J Med Dent Educ. 2022; 4(1): 8-19.
3. Nwachukwu AC. The state of residency training in Nigeria resident doctors' perspective. World J Innov Res. 2019; 6(4): 109-2.
4. Ogunnubi OP, Ojo TM, Oyelohunnu MA, Olagunju AT, Tshuma N. Stress and training satisfaction among resident doctors in Nigeria: Any justification for a change in training policy? J Clin Sci. 2018; 15(1): 32.
5. Geraldine NU, Temitope OE, John AN. Depression Among Resident Doctors: Prevalence and Associated Factors in A Tertiary Institution in South-South Nigeria. International J Innov Res Med Sci (IJIRMS). 2022;7(08).
6. Issa BA, Yussuf AD, Olanrewaju GT, Oyewole AO. Stress in residency training as perceived by resident doctors in a Nigerian university teaching hospital. Eur J Sci Res. 2009; 30(2): 253-9.
7. Oridota ES, Owolabi TO, Akanmu ON, Olajide TO, Soriyan OO. Stress Patterns and its Coping Strategies Among Physicians in a Teaching Hospital in Nigeria. Uni Lagos J Basic Med Sci. 2022; 2(1): 27-31
8. Zoorob D, Shah S, La Saevig D, Murphy C, Aouthmany S, Brickman K. Insight into resident burnout, mental wellness, and coping mechanisms early in the COVID-19 pandemic. PLoS One. 2021; 16(4): e0250104.
9. Serebrakian AT, Petrusa ER, McKinley SK, Ortiz R, Austen WG, Phitayakorn R. Evaluating and comparing emotional intelligence and improvement mindset of plastic surgery residents. J Surg Res. 2021; 268: 750-6.
10. Mayer JD, Salovey P. The intelligence of emotional intelligence. Intelligence. 1993; 17(4): 433-42.
11. Bru-Luna LM, Martí-Vilar M, Merino-Soto C, Cervera-Santiago JL. Emotional intelligence measures: a systematic review. Healthcare MDPI 2021; 9(12): 1696
12. Gayathri N, Meenakshi K. A literature review of emotional intelligence. International J Human Soc Sci Invent. 2013 Mar;2(3):42-51.
13. Morone M, Giorgi G, Pérez JF. Emotional and organizational competency for success at work: a review. Quality-Access to Success. 2016 Jun 1;17(152): 120-125
14. Sadiku MN, Musa SM. Emotional Intelligence. In A Primer on Multiple Intelligences Springer Cham 2021: 69-83.
15. Adeyemo I, Idon P, Ikusika O. An Assessment of the Level and Patterns of Metacognition among Dental Students in a Northwestern Nigerian University. Niger J Med Dent Educ. 2021; 3(2): 50-6.
16. Strain AC, D'Mello SK. Affect regulation during learning: The enhancing effect of cognitive reappraisal. Appl Cognitive Psychol. 2015; 29(1):1-9.
17. Slaski M, Cartwright S. Health, performance and emotional intelligence: An exploratory study of retail managers stress and health: J Int Soc Investig Stress. 2002 Apr;18(2):63-8.
18. Khesroh E, Butt M, Kalantari A, Leslie DL, Bronson S, Rigby A, Aumiller B. The use of emotional intelligence skills in combating burnout among residency and fellowship program directors. BMC Med Educ. 2022; 22(1): 1-7.
19. Alwali J, Alwali W. The relationship between emotional intelligence, transformational leadership, and performance: a test of the mediating role of job satisfaction. Leadership & Organization Development Journal. 2022; (ahead-of-print).
20. Supramaniam S, Singaravelloo K. Impact of emotional intelligence on organisational performance: An analysis in the Malaysian Public Administration. Administr Sci. 2021 Jul 26;11(3):76.
21. Sharp G, Bourke L, Rickard MJ. Review of emotional intelligence in health care: an introduction to emotional intelligence for surgeons. ANZ J Surg. 2020; 90(4): 433-40.
22. Ogunbodede EO. Gender distribution of dentists in Nigeria, 1981 to 2000. J Dent Educ. 2004 Jul; 68:15-8.
23. Ikusika OF, Idon PI, Alalade O, Sotunde AO, Akinpelu MA, Igweagu CE. Fixed-prosthodontics in Nigerian private practice settings. Ibom Medical Journal. 2022; 15(2): 116-25.
24. Ogunsemi OO, Alebiosu OC, Shorunmu OT. A survey of perceived stress, intimidation, harassment and well-being of resident doctors in a Nigerian teaching hospital. Niger J Clin Pract. 2010; 13(2): 183-6
25. Chukwumah N.M, Umweni A.A. Gender disparity and the dental profession in Nigeria: a 10-year follow-up study. Niger J Dent Res. 2017; 2(2): 87-92.
26. Ebi OC, Akpabio AA, Ighorodje EE, Emenyi ME, Mkpang EC, Akwaowo CD. Is there a gender disparity in the residency training programme? Perspectives of trainees from a tertiary hospital in Nigeria. J Med Women's Assoc Niger. 2021 Jan 1;6(1):6.

27. Isiekwe IG, Umeizudike KA, Daramola OO, Akeredolu MO, Leo - Olagbaye AA. The COVID - 19 pandemic and dental residency training in Nigeria. Eur J Dent Educ. 2021; 25(4): 753-61.

28. Yaghoubi Z, Mousavi M. Is Burnout Related to Spiritual Intelligence? Correlation Between Burnout and Spiritual Intelligence Among Residents of an Iranian Dental School. Avicenna J Dent Res. 2022; 14(3): 102 – 106

29. Kazemipoor M, Keshmiri F, Owlia F, Rashidi Maybodi F. Assessment of dental residents' professionalism through Professionalism Mini - Evaluation Exercise (P - MEX). J Dent Educ. 2021 Apr;85(4):456-62.

30. Tahir F, Khan AS, Raja HZ, Butt H, Piracha MH, Khan NR. Stress Factors among Dental Postgraduate Residents of Lahore, Pakistan. J Gandhara Med Dent Sci. 2021; 8(4):14-5.

31. Chery J, Freitas V, Saman DM, Gupta A. Comparison of Cavity Preparation Times Using Conventional High-Speed Handpiece Versus Er, Cr: YSGG Laser: A Pilot Study with Pediatric Dental Residents. Pediatric Dent. 2022; 44(2): 90-4.

32. Offem OO, Anashie AI, Aniah SA. Effect of strikes on management and planning of educational activities in Nigerian universities. Global J Educ Res. 2018;17(1):1-8.

33. The Federal Government of Nigeria. Medical Residency Training Act, 2017. Laws of the federation of Nigeria The Constitution of Nigeria Federal Laws/Statutes

34. Okunlola DA, Makinde OA, Babalola S. Socio-economic Correlates of Marital Status and Marriage Timing Among Adult Men in Nigeria. J Fam Issues. 2022: 13X211059828.

35. Kousha M, Bagheri HA, Heydarzadeh A. Emotional intelligence and anxiety, stress, and depression in Iranian resident physicians. J Fam Med Prim Care. 2018 Mar;7(2):420.

36. Osaghae EE, Suberu RT. A history of identities, violence and stability in Nigeria. Oxford: Centre for Research on Inequality, Human Security and Ethnicity, University of Oxford; 2005.

37. Łowicki P, Zajenkowski M, van der Linden D. The interplay between cognitive intelligence, ability emotional intelligence, and religiosity. J Religion Health. 2020; 59(5): 2556-76.

38. Ameh PO, Uti OG, Daramola OO. Study motivations, specialty preferences, and empathy of dental students in a Nigerian university. Pan Afr Med J. 2022;41.

39. Osim JH, Essien EA, Okegbe J, Udofia O. The Jefferson scale of physician empathy: a preliminary study of validity and reliability among physicians in Nigerian tertiary hospital. Acta Medica Int. 2019; 6(1): 22.

40. Adebayo O, Kanmodi K, Olaopa O, Fagbule OF, Adufe I, Adebayo AM, Oduyemi I, Amoo A, Omololu A, Igbokwe M, Babalola R. Strategies for mitigating burnout among early career doctors in Nigeria: lessons learnt from the qualitative CHARTING study. Global Psychiatry. 2020; 3(1): 97-103.

41. Kumar A, Puranik MP, Sowmya KR. Association between dental students' emotional intelligence and academic performance: A study at six dental colleges in India. J Dent Educ. 2016; 80(5): 526-32.

42. Bhaskar DJ, Aruna DS, Rajesh G, Suganna M, Suvarna M. Emotional intelligence of Pedodontics and Preventive Dentistry postgraduate students in India. Eur J Dent Educ. 2013; 17(1): e5-9.

43. Berger L, Waidyaratne-Wijeratne N. Where does resiliency fit into the residency training experience: a framework for understanding the relationship between wellness, burnout, and resiliency during residency training. Canadian Med Educ J. 2019; 10(1): e20.

44. IsHak WW, Lederer S, Mandili C, Nikravesh R, Seligman L, Vasa M, Ogunyemi D, Bernstein CA. Burnout during residency training: a literature review. J Grad Med Educ. 2009; 1(2):236-42.

45. Fariselli L, Ghini M, Freedman J. Age and emotional intelligence. Six Seconds: The Emotional Intelligence Network. 2008 22:1- 10.

46. Alheet AF, Hamdan Y. Exploring the relationship between emotional intelligence and job performance: A study of Jordanian retail industry. Int J Entrepreneur. 2021;25(3):1-6.

47. MacCann C, Matthews G, Zeidner M, Roberts RD. Psychological assessment of emotional intelligence: A review of self - report and performance - based testing. The Int J Organizational Analysis. 2003; 11(3): 247 - 274