

Job Satisfaction among Nigerian Dental Technologists And its Effect on their Relationship with Dental Surgeons, A Cross-sectional Study

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Key words: Dental technologist, dentist, extrinsic, intrinsic, job satisfaction, relationship.

ABSTRACT

Objective

Job satisfaction may influence interprofessional relationships among healthcare workers. This study assessed the job satisfaction of dental technologists and its effect on their relationship with dentists.

Methods:

An online questionnaire survey of Nigerian dental technologists was conducted using an adapted Minnesota Satisfaction Questionnaire. Data were analyzed using IBM SPSS Statistics (version 23). Chi-square tests were used to compare means, and logistic regression tested associations. Statistical significance was set at $p \leq 0.05$.

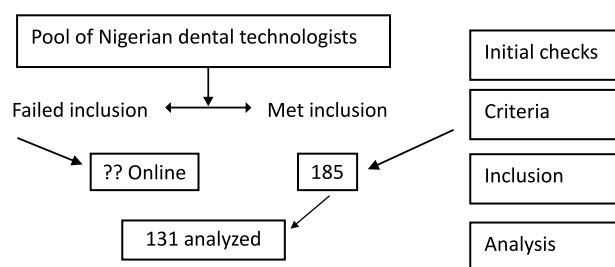
Results:

A total of 131 technologists participated (male: female ratio = 2.5:1). Seventy-seven (58.8%) were married, 68 (51.9%) had worked for 5 years or less, and 64 (48.9%) worked in teaching hospitals. Sixty-three (48.1%) had moderate levels of job satisfaction, while 77 (60.3%) were satisfied with their relationship with dentists. Intrinsic satisfaction was associated with higher education ($\chi^2 = 11.48$, $p = 0.02$) and employment in tertiary centers ($\chi^2 = 6.84$, $p = 0.03$); extrinsic satisfaction was associated with being married ($\chi^2 = 10.44$, $p = 0.01$), and overall satisfaction was higher among females ($\chi^2 = 8.41$, $p = 0.02$). In-service development increased the odds of extrinsic satisfaction by 3.1 (1.2–8.0); $p = 0.02$. Respect for dentists' decisions was associated with interprofessional relationships ($\chi^2 = 52.97$, $p = 0.001$), and

overall satisfaction strongly correlated with the relationship with the dentist ($\chi^2 = 42.79$, $p < 0.001$).

Conclusion

Job satisfaction was related to good interprofessional relationships. Higher satisfaction levels were associated with being female and working in teaching hospitals. Good interprofessional relationships also improved satisfaction.



Response rate: 71%

STROBE flowchart

Study Instrument:

A modified version of the Minnesota Satisfaction Questionnaire Short Form (MSQ) was used to ensure contextual relevance and content validity. The adaptation focused on workplace interactions affecting satisfaction. The online questionnaire was administered via Google Forms from January to June 2021, only to participants who provided informed consent. The study assessed intrinsic, extrinsic, and overall job satisfaction, as well as the relationship between job satisfaction and specific sociodemographic characteristics. Questions 5 and 6 of the MSQ were modified to assess relationships with dentists:

Q5: "I like the way the dentist relates with me."

Q6: "I respect the decisions the dentist makes."

These two items were analyzed independently to evaluate interprofessional relationships.

Scoring Criteria:

The questionnaire comprised 18 items (excluding two from the original MSQ). Extrinsic satisfaction was assessed using questions 2 and 13–15, while intrinsic satisfaction was assessed using the remaining questions. Responses were scored on a 5-point Likert scale (1 = very dissatisfied to 5 = very satisfied).

Scores were categorized following Weiss et al. (1967).²¹ Scores at or below the 25th percentile indicated low satisfaction, scores between the 26th and 74th percentiles indicated moderate satisfaction, and scores at or above the 75th percentile indicated high satisfaction.

- Intrinsic satisfaction: range 12–60 (25th percentile = 18; 75th percentile = 23)
- Extrinsic satisfaction: range 6–30 (25th = 47; 75th = 55)
- Overall satisfaction: range 18–90 (25th = 66; 75th = 77)

Data Analysis:

Responses were collected via Google Forms and exported to Microsoft Excel. Data were analyzed using IBM SPSS Statistics for Windows, Version 23.0 (IBM Corp., Armonk, NY). Frequencies and proportions were

calculated. Chi-square tests, Fisher's exact tests, and logistic regression were used to test associations and predict odds ratios (ORs). Statistical significance was set at $p \leq 0.05$.

RESULTS

A total of 131 dental technologists responded, yielding an estimated response rate of 71%. Reminders were sent to minimize nonresponse bias. Of these, 93 (71.0%) were male and 38 (29.0%) female (M:F = 2.5:1). Seventy-seven (58.8%) were married. Most participants (88 or 67.2%) held the Higher National Diploma (HND) as their highest qualification, while 11 (8.4%) had postgraduate degrees, including one PhD [Table 1].

Sixty-four (48.9%) participants worked in teaching hospitals, and 68 (51.9%) had five or fewer years of work experience [Table 1].

Table 1. Demographic and professional characteristics of dental technologists working in public health facilities

Variables	Frequency (n)	Percentage (%)
Gender		
Female	38	29
Male	93	71
Marital status		
Single	54	41.2
Married	77	58.8
Highest qualification		
ND	2	1.5
HND	88	67.2
Bachelors	29	22.1
PGD	1	0.8
MSc	10	7.6
PhD	1	0.8
In service formal training		
No	46	35.1
Yes	85	64.9
Workplace		
FMC	23	17.6
Federal specialist	12	9.2
State specialist	32	24.4
Teaching hospital	64	48.9
Years post qualification		
0 to 5	68	51.9
6 to 10	21	16
> 10	42	32.1
Years on present job		
0 to 5	68	51.9
6 to 10	24	18.3
> 10	39	29.8

ND: National diploma; HND: Higher national diploma; PGD: Post graduate diploma; MSc: Master of Science; PhD: Doctor of Philosophy; FMC: Federal Medical Center

The average scores for intrinsic and overall job satisfaction were at a moderate level (50.6 ± 4.9 and 71.4 ± 7.8 , respectively), whereas extrinsic job satisfaction

scored significantly lower (20.7 ± 4.0). Despite this, most participants reported moderate satisfaction levels across all measured aspects, as detailed in Table 2.

Table 2. Average scores in aspects of job satisfaction and spread of participants at different levels of performance

Satisfaction scores	Range	Mean (SD)	Median Low	Levels of satisfaction, n (%)		
				Moderate	High	
Intrinsic	35 to 60	50.62 (4.9)	50	34 (26)	59 (45)	38 (29)
Extrinsic	9 to 30	20.7 (4.0)	21	40 (30.5)	50 (38.2)	41 (31.3)
Overall	51 to 90	71.4 (7.8)	71	35 (26.7)	63 (48.1)	33 (25.2)

Bachelor's degree holders were proportionally more likely to report high intrinsic job satisfaction, with 12 individuals (41.4%) in this category ($\chi^2 = 11.48$, $p = 0.02$). Similarly, federal government employees had a higher proportion of individuals with high intrinsic satisfaction (34 individuals, 34.3%; $\chi^2 = 6.86$, $p = 0.03$).

Unmarried participants showed the highest proportion of

high extrinsic satisfaction (25 individuals, 46.3%; $\chi^2 = 10.44$, $p = 0.01$), as did those with ≤ 5 years of work experience (31 individuals, 45.6%; $\chi^2 = 14.61$, $p = 0.01$).[^] In addition, female participants had a greater proportion of high overall job satisfaction (16 individuals, 42.1%; $\chi^2 = 8.41$, $p = 0.02$). [Table 3]

Table 3. Relationship between job satisfaction and demographic and professional characteristics of Nigerian dental technologists

Characteristics	Job satisfaction, n (%)								
	Low	Intrinsic Moderate	High	Low	Extrinsic Moderate	High	Low	Overall Moderate	High
Gender									
Female	8 (21.1)	16 (42.1)	14 (36.8)	10 (26.3)	16 (42.1)	12 (31.6)	9 (23.7)	13 (34.2)	16 (42.1)
Male	26 (28.0)	43 (46.2)	24 (25.8)	30 (32.3)	34 (36.6)	29 (31.2)	26 (28)	50 (53.8)	17 (18.3)
χ^2 ; p-value		1.73; 0.42			0.53; 0.77			8.41; 0.02*	
Marital status									
Single	16 (29.6)	25 (46.3)	13 (24.1)	15 (27.8)	14 (25.9)	25 (46.3)	15 (27.8)	25 (46.3)	14 (25.9)
Married	18 (23.4)	34 (44.2)	25 (32.5)	25 (32.5)	36 (46.8)	16 (20.8)	20 (26.0)	38 (49.4)	19 (24.7)
χ^2 ; p-value		1.28; 0.53			10.44; 0.01*			0.12; 0.94	
Highest qualification									
ND/HND	19 (21.1)	49 (54.4)	22 (24.4)	24 (26.7)	34 (37.8)	32 (35.6)	21 (23.3)	46 (51.1)	23 (25.6)
Bachelor	11 (37.9)	6 (20.7)	12 (41.4)	10 (34.5)	11 (37.9)	8 (27.6)	9 (31.0)	12 (41.4)	8 (27.6)
Postgraduate	4 (33.3)	4 (33.3)	4 (33.3)	6 (50)	5 (41.7)	1 (8.3)	5 (41.7)	5 (41.7)	2 (16.7)
Fisher's test; p-value		11.48; 0.02*			4.88; 0.30			2.58; 0.65	
Type of facility									
Secondary	8 (25)	20 (62.5)	4 (12.5)	13 (40.6)	11 (34.4)	8 (25)	12 (37.5)	14 (43.8)	6 (18.8)
Tertiary	26 (26.3)	39 (39.4)	34 (34.3)	27 (27.3)	39 (39.4)	33 (33.3)	23 (23.2)	49 (49.5)	27 (27.3)
χ^2 ; p-value		6.86; 0.03*			2.11; 0.35			2.71; 0.26	
In service formal training									
No	13 (28.3)	21 (45.7)	12 (26.1)	20 (43.5)	15 (32.6)	11 (23.9)	15 (32.6)	19 (41.3)	12 (26.1)
Yes	21 (24.7)	38 (44.7)	26 (30.6)	20 (23.5)	35 (41.2)	30 (35.3)	20 (23.5)	44 (51.8)	21 (24.7)
χ^2 ; p-value		0.36; 0.84			5.70; 0.06			1.62; 0.44	
Years on present job									
0 to 5	17 (25.0)	34 (50.0)	17 (25.0)	17 (25.0)	20 (29.4)	31 (45.6)	16 (23.5)	34 (50)	18 (26.5)
6 to 10	7 (29.2)	8 (33.3)	9 (37.5)	7 (29.2)	13 (54.2)	4 (16.7)	6 (25.0)	12 (50.0)	6 (25.0)
> 10	10 (25.6)	17 (43.6)	12 (30.8)	16 (41.0)	17 (43.6)	6 (15.4)	13 (33.3)	17 (43.6)	9 (23.1)
χ^2 ; p-value		2.26; 0.69			14.61; 0.01*			1.27; 0.87	

Participants working in federal establishments had 4.4 times higher odds of reporting high intrinsic job satisfaction (95% CI: 1.3–14.7, $p = 0.02$), as did those who received formal in-service training (OR: 3.1, 95% CI: 1.2–8.0, $p = 0.02$). Similarly, female participants were 3.8 times more likely to report high overall job satisfaction (95% CI: 1.5–9.3, $p = 0.004$). Conversely, increasing work

experience was associated with a >70% reduction in the odds of high extrinsic job satisfaction [Table 4].

Table 4: Logistic regression of high-level job satisfaction with sociodemographic of Nigerian dental technologists

Characteristics	Job satisfaction					
	Intrinsic a OR (95% CI) p		Extrinsic a OR (95% CI) p		Overall a OR (95% CI) p	
Gender						
Male (reference)	1.0		1.0		1.0	
Female	1.7 (0.67-4.1) 0.27		1.2 (0.48-3.2) 0.81		3.8 (1.5-9.3) 0.004*	
Marital status						
Single (reference)	1.0		1.0		1.0	
Married	1.4 (0.49-4.2) 0.50		0.64 (0.23-1.8) 0.40		0.91 (0.30-2.7) 0.86	
Highest qualification						
ND/HND (ref)	1.0		1.0		1.0	
Bachelor	2.3 (0.89-6.2) 0.09		0.47 (0.17-1.3) 0.15		0.80 (0.29-2.2) 0.67	
Postgraduate	0.94 (0.22-3.9) 0.93		0.33 (0.04-3.1) 0.33		0.45 (0.08-2.6) 0.37	
Type of facility						
Secondary (ref)	1.0		1.0		1.0	
Tertiary	4.4 (1.3-14.7) 0.02*		1.5 (0.56-4.0) 0.42		1.9 (0.67-5.5) 0.22	
In service formal training						
No (ref)	1.0		1.0		1.0	
Yes	1.02 (0.42-2.5) 0.95		3.1 (1.2-8.0) 0.02*		1.2 (0.47-2.9) 0.75	
Years on present job						
0 to 5 (ref)	1.0		1.0		1.0	
6 to 10	1.8 (0.53-5.9) 0.36		0.20 (0.05-0.8) 0.02*		1.1 (0.30-4.0) 0.89	
> 10	1.4 (0.40-4.6) 0.62		0.27 (0.07-0.99) 0.05*		1.2 (0.33-4.3) 0.79	

aOR: Adjusted odds ratio; ND: National diploma; HND: Higher national diploma

*Significant at $p < 0.05$

Approximately half (49.6%) of participants reported respecting dentists' decisions, while 22.9% remained undecided and 27.5% expressed dissatisfaction. Regarding dentist-patient relationships, 60.3% of respondents indicated satisfaction, with equal proportions

expressing uncertainty or dissatisfaction (19.8% each). Notably, federal government employees showed significantly higher satisfaction rates (65.7%; $\chi^2=11.52$, $p=0.02$), as did participants with ≤ 5 years of work experience (69.1%; $\chi^2=14.38$, $p=0.01$) [Table 5].

Table 5: Relationship between demographic and professional characteristics and attitude toward the dentist

Characteristics	Attitude towards the dentist, n (%)					
	Work relationship			Competency in decision making		
	Dissatisfied	Undecided	Satisfied	Dissatisfied	Undecided	Satisfied
Gender						
Female	10 (26.3)	7 (18.4)	21 (55.3)	12 (31.6)	7 (18.4)	19 (50.0)
Male	16 (17.2)	19 (20.4)	58 (62.4)	24 (25.8)	23 (24.7)	46 (49.5)
χ^2 ; p-value		1.41; 0.49			0.79; 0.67	
Marital status						
Single	10 (18.5)	9 (16.7)	35 (64.8)	9 (16.7)	14 (25.9)	31 (57.4)
Married	16 (20.8)	17 (22.1)	44 (57.1)	27 (35.1)	16 (20.8)	34 (44.2)
χ^2 ; p-value		0.86; 0.68			5.4; 0.07	
Highest qualification						
ND/HND	17 (18.9)	17 (18.9)	56 (62.2)	22 (24.4)	20 (22.2)	48 (53.3)
Bachelor	6 (20.7)	5 (17.2)	18 (62.1)	9 (31)	7 (24.1)	13 (44.8)
Postgraduate	2 (25)	4 (33.3)	5 (41.7)	5 (41.7)	3 (25)	4 (33.3)
Fisher's exact test; p-value		2.53; 0.65			2.64; 0.63	
Type of facility						
Secondary	13 (40.6)	5 (15.6)	14 (43.8)	13 (40.6)	6 (18.8)	13 (40.6)
Tertiary	13 (13.1)	21 (21.2)	65 (65.7)	23 (23.2)	24 (24.2)	52 (52.5)
χ^2 ; p-value		11.52; 0.003*			3.67; 0.165	
In service formal training						
No	14 (30.4)	7 (15.2)	25 (54.3)	14 (30.4)	10 (21.7)	22 (47.8)
Yes	12 (14.1)	19 (22.4)	54 (63.5)	22 (25.9)	20 (23.5)	43 (50.6)
χ^2 ; p-value		5.19; 0.08			0.31; 0.86	
Years on present job						
0 to 5	15 (22.1)	6 (8.8)	47 (69.1)	16 (23.5)	13 (19.1)	39 (57.4)
6 to 10	2 (8.3)	10 (41.7)	12 (50.0)	4 (16.7)	7 (29.2)	13 (54.2)
> 10	9 (23.1)	10 (25.6)	20 (51.3)	16 (41.0)	10 (25.6)	13 (33.3)
χ^2 ; p-value		14.38; 0.01*			7.98; 0.09	

All dimensions of job satisfaction demonstrated significant positive associations with interprofessional relationships between participants and dentists (intrinsic: $\chi^2=26.38$, $p<0.001$; extrinsic: $\chi^2=32.69$, $p<0.001$; overall: $\chi^2=43.79$, $p<0.001$; Table 6). Similarly, both extrinsic

($\chi^2=24.20$, $p<0.001$) and overall satisfaction ($\chi^2=20.71$, $p<0.001$) showed significant positive correlations with respect for dentists' decisions. Notably, no significant association was found between intrinsic satisfaction and respect for dentists' decisions ($\chi^2=7.88$, $p=0.10$).

Table 6: Relationship between dental technologists' job satisfaction and attitude toward the dentist

	Attitude towards the dentist, n (%)					
Job satisfaction	Work relationship			Respect for decisions		
	Dissatisfied	Undecided	Satisfied	Dissatisfied	Undecided	Satisfied
Intrinsic						
Low	14 (41.2)	10 (29.4)	10 (29.4)	13 (38.2)	11 (32.4)	10 (29.4)
Moderate	10 (16.9)	13 (22.0)	36 (61.0)	15 (25.4)	12 (20.3)	32 (54.2)
High	2 (5.3)	3 (7.9)	33 (86.8)	8 (21.1)	7 (18.4)	23 (60.5)
χ ² ; p-value	26.38; < 0.001*			7.88; 0.10		
Extrinsic						
Low	17 (42.8)	8 (20.0)	15 (37.5)	19 (47.5)	12 (30.0)	9 (22.5)
Moderate	8 (16.0)	15 (30.0)	27 (54.0)	13 (26.0)	12 (24.0)	25 (50)
High	1 (2.4)	3 (7.3)	37 (90.2)	4 (9.8)	6 (14.6)	31 (75.6)
χ ² ; p-value	32.69; < 0.001*			24.20; < 0.001*		
Overall						
Low	18 (51.4)	8 (22.9)	9 (25.7)	16 (45.7)	13 (37.1)	6 (17.1)
Moderate	6 (9.5)	17 (27.0)	40 (63.5)	14 (22.2)	12 (19.0)	37 (58.7)
High	2 (6.1)	1 (3.0)	30 (90.9)	6 (18.2)	5 (15.2)	22 (66.7)
χ ² ; p-value	42.79; < 0.001*			20.71; < 0.001*		

Statistically significant at $P < 0.05$

DISCUSSION

Findings: Dental technologists play a crucial role in translating dentists' designs into functional prostheses and appliances.^{22–25} Although they interact with various dental specialists, their closest professional relationships are with restorative dentists and orthodontists. These interprofessional dynamics significantly impact treatment quality and efficiency,²⁶ but the technologist–dentist relationship is often complex, sometimes due to professional territorialism.^{27–31}

Job satisfaction studies among healthcare workers began in the United States in the 1970s^{20,21} and have become valuable tools for workforce planning in Nigeria.³² Although few Nigerian studies have focused specifically on dental technologists, our findings align with those from Romania.²⁷

Key observations from this study include:

- Male predominance, consistent with Arigbede et al.³³
- Low bachelor's degree attainment, reflecting the recent introduction of degree programmes in dental technology³⁴
- Younger workforce composition, which may indicate a growing appeal of the profession or reluctance among older professionals to pursue further studies
- Higher intrinsic satisfaction levels, contrasting with

the findings of Ayamolowo et al.³⁵ but aligning with those of Bello et al.³⁶

- Higher intrinsic satisfaction was significantly associated with:
- Bachelor's degree attainment, supporting findings from Ethiopia³⁷
- Employment in federal establishments, likely due to better infrastructure and working conditions³⁸
- Formal in-service training

In terms of extrinsic satisfaction, married participants reported higher levels, possibly influenced by cultural expectations,³⁹ as also observed by Bello et al.⁴⁰ Female respondents showed greater overall job satisfaction—an instance of the "gender job-satisfaction paradox"^{42–43} which may be explained by lower job expectations among women.

Implications: Positive associations were observed between job satisfaction and:

- University-level education
- Marital status
- Formal in-service training
- Female gender
- High-quality interprofessional relationships
- These factors can be harnessed to improve job satisfaction and productivity among dental technologists.

Trade-offs (Limitations)

1. Potential selection bias due to the online survey format, which may have excluded older professionals
2. Possibility of self-report bias in job satisfaction ratings
3. Absence of qualitative data to complement quantitative insights
4. Although the MSQ was slightly modified, core items were preserved for comparability

Take-home (Conclusion):

Overall, most dental technologists reported moderate job satisfaction. Higher satisfaction levels were significantly associated with being female, tertiary hospital employment, university education and shorter work experience. While respect for dentists' decisions was moderate, technologists in teaching hospitals reported satisfactory professional relationships.

Expectations for Future Research:

Further studies should explore motivations and experiences of older technologists and investigate generational differences in professional satisfaction

Recommendations

1. To enhance job satisfaction and interprofessional collaboration:
2. Expand access to formal in-service training
3. Strengthen factors that promote intrinsic satisfaction
4. Address generational participation gaps through targeted engagement strategies

Funding:

Nil.

Conflicts of interest:

None declared.

REFERENCES

1. Cameron JJ, Granger S. Does self-esteem have an interpersonal imprint beyond self-reports? A meta-analysis of self-esteem and objective interpersonal indicators. *Pers Soc Psychol Rev* 2019; 23:73-102.
2. Lohmann J, Shulenbayev O, Wilhelm D, Muula AS, De Allegri M. Psychological wellbeing in a resource-limited work environment: Examining levels and determinants among health workers in rural Malawi. *Hum Resour Health* 2019; 17:85.
3. Elkayam C, Snir S, Regev D. Relationship between work conditions, job satisfaction and burn out in Israeli Ministry of Education art therapists. *Int J Art Ther* 2020; 25:30-38.
4. Foà C, Guarnieri MC, Bastoni G, Benini B, Giunti OM, Mazzotti M, et al. Job satisfaction, work engagement and stress/burnout of elderly care staff: A qualitative research. *Acta Biomed* 2020;91: e2020014.
5. Skaalvik C. Emotional exhaustion and job satisfaction among Norwegian school principals: Relations with perceived job demands and job resources. *Int J Lead Educ* 2020;1-25. [doi: 10.1080/13603124.2020.1791964].
6. Kalkhoff NL, Collins DR. Speech-language pathologist job satisfaction in school versus medical settings. *Lang Speech Hear Serv Sch* 2012; 43:164-175
7. Ellickson MC, Logsdon K. Determinants of job satisfaction of municipal government employees. *Public Pers Manage* 2002; 31:343-58.
8. Martin TN, Schermerhon JR Jr. Work and non-work influences on health: A research agenda using inability to leave as a critical variable. *Acad Manage Rev* 1983; 8:650-659.
9. Nguyen TH. Impact of leader-mentor relationship quality on job satisfaction, innovation and operational performance: A case in Vietnam. *J Asian Fin Econ Bus* 2020; 7:449-56.
10. Jabber MN, Hussin F, Hashmi MA, Jafri SM. Effect of administrative practice on job performance: An empirical study among public universities in Pakistan. *Glob Acad J Econ Bus* 2020; 1:1-4.
11. Bektas C. Explanation of intrinsic and extrinsic job satisfaction via mirror model. *Bus Manag Stud Int J* 2017; 5:627-39.
12. Goetz K, Campbell SM, Broge B, Dörfer CE, Brodowski M, Szecsenyi J. The impact of intrinsic and extrinsic factors on the job satisfaction of dentists. *Community Dent Oral Epidemiol* 2012; 40:474-480.
13. van Saane N, Sluiter JK, Verbeek JH, Frings-Dresen MH. Reliability and validity of instruments measuring job satisfaction – A systematic review. *Occup Med (Lond)* 2003; 53:191-200.
14. Orrung Wallin A, Edberg AK, Beck I, Jakobsson U. Psychometric properties concerning four instruments measuring job satisfaction, strain, and stress of conscience in a residential care context. *Arch Gerontol Geriatr* 2013; 57:162-71.
15. Cheung T, Lee PH, Yip PSF. The association between workplace violence and physicians' and nurses' job satisfaction in Macau. *PLoS One* 2018;13: e0207577.
16. Aygun M. Analysis of the relationship between job satisfaction and organizational trust of physical education and sports teachers. *J Pedagogical Res* 2021; 5:203-215.
17. Kolo ES. Job satisfaction among healthcare workers in a tertiary center in Kano, Northwestern Nigeria. *Niger J Basic Clin Sci* 2018; 15:87-91.
18. Edoho SA, Bamidele EO, Neji OI, Frank AE. Job satisfaction among nurses in public hospitals in Calabar, Cross Rivers State, Nigeria. *Am J Nurs Sci*

- 2015; 4:231-237.
19. Lasebikan OA, Ede O, Lasebikan NN, Anyaehie UE, Oguzie GC, Chukwujindu ED. Job satisfaction among health professionals in a federal tertiary hospital in Nigeria. *Niger J Clin Pract* 2020; 23:371-5.
 20. Ezeaja EB, Azodo CC, Ehizele AO, Ehigiator O, Oboro HO. Assessment of job satisfaction and working conditions of Nigerian oral health workers. *Int J Biomed Health Sci* 2010; 6:143-150.
 21. Weiss DJ, Davies RV, England GW, Lofquist LH. Manual for the Minnesota satisfaction questionnaire. In: *Minnesota Studies in Vocational Rehabilitation*. Minneapolis: University of Minnesota Industrial Relations Center; 1967. p. 22.
 22. Onwujekwe O, Mbachu C, Ezenwaka U, Arize I, Ezumah N. Characteristics and effects of multiple and mixed funding flows to public healthcare facilities on financing outcomes: A case study from Nigeria. *Front Public Health* 2019; 7:403.
 23. Carrol LS. A comprehensive definition of technology from an ethological perspective. *Soc Sci* 2017; 6:128.
 24. Evans JL, Henderson A, Johnson NW. Traditional and inter-professional curricula for dental technology: Perception of students in two programs in Australia. *J Dent Educ* 2013; 77:1225-1236.
 25. Bobich AM, Mitchell BL. Transforming dental technology education: Skills, knowledge, and curricular reform. *J Dent Educ* 2017; 81: S59-64.
 26. Koff SZ. The dental squad. In: *The Dental Team in the European Union*. Cham: Springer; 2021. [doi: 10.1007/978-3-030-72232-6_5].
 27. Malament KA, Pietbrobon N, Neeser S. The interprofessional relationship between prosthodontist and dental technology. *Int J Prosthodont* 1996; 9:341-354.
 28. McGarry TJ, Jacobson TE. The professions of dentistry and dental laboratory technology: Improving the interface. *J Am Dent Assoc* 2004; 135:220-6.
 29. Croll BM. Dentistry and dental technology. *NY State Dent J* 2008; 74:16-18.
 30. Morison S, Marley J, Machniewski S. Educating the dental team: Exploring perceptions of roles and identities. *Br Dent J* 2011; 211:477-483.
 31. Ogiwara S, Araki H. Job satisfaction in Ishikawa Prefecture Japan. *J Phy Ther Sci* 2006; 18:127-132.
 32. Bellerose M, Alva S, Magalona S, Awoonor-Williams K, Sacks E. Supervision of community health nurses in Ghana: A mixed method study on experience and mentorship needs. *Health Policy Plan* 2021; 36:720-727.
 33. Arigbede AO, Abiodun-Solanke IM, Taiwo JO, Ocheke BO. Assessment of current cross-infection control practices among dental technologists in Nigeria. *Ann Biomed Sci* 2013; 12:46-53.
 34. SOHT-Federal University of Technology Owerri. Dental Technology; 2021. Available from: [https://soht.futo.edu.ng/dental technology/](https://soht.futo.edu.ng/dental%20technology/). [Last accessed August 21, 2021].
 35. Ayamolowo SJ, Irinoye O, Oladoyin MA. Job satisfaction and work environment of primary healthcare nurses in Ekiti State, Nigeria. *Int J Caring Sci* 2013; 6:531-542.
 36. Bello S, Adewole DA, Afolabi RF. Work facets predicting overall job satisfaction among resident doctors in selected teaching hospitals in Southern Nigeria; A Minnesota Satisfaction Questionnaire Survey. *J Occup Health Epidemiol* 2020; 9:52-60.
 37. Temesgen K, Aychew MW, Leshargie CT. Job satisfaction and associated factors among health professionals working at Western Amhara Region, Ethiopia. *Health Qual Life Outcomes* 2018; 16:65.
 38. Edet JT. Revenue allocation in Nigeria: Issues, challenges and prospects. *J Public Admin* 2021; 56:139-154.
 39. Diener E, Gohm CL, Suh E, Oishi S. Similarity of the relations between marital status and subjective well-being across cultures. *J Cross Cult Psych* 2000; 31:419-436.
 40. Bello S, Ajayi DT, Azuzu MC. Determinants of job satisfaction among physicians in public hospitals in Calabar, Nigeria. *J Community Med Prim Health Care* 2018; 30:19-33.
 41. Kaplan SA, Winslow CJ, Luchman JN. What are we working for? Comparing the importance of job features for job satisfaction over the career span. *Soc Indic Res* 2020; 148:1021-1037.
 42. Perugini C, Vladislavljevic M. Gender inequality and the gender-job satisfaction paradox in Europe. *Labour Econ* 2019; 60:129-147.
 43. Pita C, Torregrosa RJ. The gender-job satisfaction paradox through time and countries. *Appl Econ Lett* 2021; 28:12, 1000-1005. DOI: 10.1080/13504851.2020.1792402

APPENDIX A:

Adapted MSQ* Short Form Questionnaire

Please tick only one option per question. All questions must be answered. You may not proceed without first ticking yes to the question seeking your consent.

I consent to participate

- ☐ Yes
- ☐ No

1. I get a chance to work without supervision on the job

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

2. My job keeps me busy all the time

- ☐ Strongly agree

- Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 3. My job allows me to do different procedures all the time**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 4. I feel important in the hospital environment**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 5. I like the way the dentist relates with me**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 6. I respect the decisions made by the dentist**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 7. My job does not make me do things that go against my conscience**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 8. I have job security**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 9. My job allows me to add meaning to other people's lives**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 10. My job gives me the opportunity to give instructions to colleagues and other co-workers**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 11. My job allows me to showcase my talents**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 12. I am satisfied with the hospital policy regarding my job**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 13. My salary matches the work I do**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 14. I am happy with my opportunities for career progression**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 15. My job allows the freedom to use my own judgement**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 16. I get the chance to try out my own ways of doing my job in the laboratory**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 17. I like the conditions under which I work**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
- 18. I get along well with my colleagues**
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree

- ☐ Neither agree nor disagree
 - ☐ Disagree
 - ☐ Strongly disagree
- 19. I like the amount of praise I get for doing a good job**
- ☐ Strongly agree
 - ☐ Agree
 - ☐ Neither agree nor disagree
 - ☐ Disagree
 - ☐ Strongly disagree
- 20. I feel accomplished with my job**
- ☐ Strongly agree
 - ☐ Agree
 - ☐ Neither agree nor disagree
 - ☐ Disagree
 - ☐ Strongly disagree
- 21. Gender**
- ☐ Male
 - ☐ Female
- 22. Marital Status**
- ☐ Single
 - ☐ Married
 - ☐ Divorced
 - ☐ Separated
 - ☐ Widowed
- 23. Age at last birthday in years**
- ☐ -----
- 24. Highest academic qualification obtained**
- ☐ ND
 - ☐ HND
 - ☐ BSc
 - ☐ MSc
 - ☐ PhD
 - ☐ Others
- 25. Years on present job**
- ☐ 0 – 5 years
 - ☐ 6 – 10 years
 - ☐ Greater than 10 years
- 26. Years of post-qualification experience**
- ☐ 0 – 5 years
 - ☐ 6 – 10 years
 - ☐ Greater than 10 years