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Exploring Job Satisfaction Among Pharmacists Across Various Practice Environments in Nigeria

Ayodapo Oluwadare Jegede[1]*

1. Department of Clinical Pharmacy and Pharmacy Administration, Faculty of Pharmacy, Obafemi Awolowo University, Ile Ife, Osun State, Nigeria.

Abstract

This study aimed to assess the job satisfaction of pharmacists across five different practice settings in Nigeria, focusing on different elements of their work environment. It also assessed how demographic factors such as age, gender, and academic qualifications affect satisfaction levels. The study used a cross-sectional survey design, with a sample size of 618 graduate pharmacists, selected through simple random sampling. Pre-tested questionnaires were used to collect data. The findings showed that the majority of pharmacists, especially those in hospital settings, were dissatisfied with their work environment ($\chi2$ (4) = 9.652, P = .047). Younger pharmacists ($\chi2$ (3) = 17.346, P = .001), unmarried individuals ($\chi2$ (3) = 12.558, P = .006), those with less work experience ($\chi2$ (5) = 47.701, P = .000), lower cadre pharmacists ($\chi2$ (2) = 32.641, P = .000), and those with only a first degree ($\chi2$ (2) = 9.228, P = .010) showed lower job satisfaction. The study found that while overall satisfaction is low among Nigerian pharmacists, there are significant variations based on age, marital status, experience, education, and practice setting, with academic pharmacists being the most satisfied and hospital pharmacists being the least satisfied.

Keywords: Pharmacists, Job satisfaction, Work environment, Motivation, Salary, Practice setting

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Corresponding author: Ayodapo Oluwadare Jegede
E-mail ✉ dapojegede@oauife.edu.ng

Introduction

The work environment is a crucial factor in determining an employee's job performance and productivity [1], influencing their overall commitment to their role. This commitment is particularly important in the pharmacy sector, where it impacts pharmacists' productivity across diverse practice settings such as hospitals, community pharmacies, academia, administrative roles, and the pharmaceutical industry [2-4]. Oludeyi [5] describes the work environment as the various conditions, settings, and circumstances under which employees perform their tasks. Several factors—including competitive compensation, proper staffing, a supportive work environment, opportunities for career development, manageable workload, effective supervision, recognition, patient care outcomes, good colleague relationships, autonomy, job security, and career advancement—have been identified as key contributors to job satisfaction [6-9]. Additionally, research has shown a link between job satisfaction and patient satisfaction, as it can influence the effectiveness of therapeutic outcomes [10].

On the other hand, job dissatisfaction has been found to negatively affect the organization's structure and operations. For pharmacists working in hospitals, dissatisfaction can result in decreased productivity and higher turnover rates [11]. Pharmacists in academia, who juggle teaching, research, and administrative duties, often face the challenge of balancing their enthusiasm for learning and discovery with their other responsibilities. Despite the long hours, many of these professionals appreciate the opportunities for career growth, international career prospects, and the chance to positively impact society [12].

In many developed nations, pharmacists are readily accessible to the public and provide valuable advice on health-related matters [13]. They serve as the first point of contact for individuals seeking medical help, underscoring the importance of understanding the factors that enable them to deliver high-quality patient care, particularly in hospitals and community pharmacies [14]. The role of pharmacists has evolved from simply dispensing medications to providing comprehensive patient care, necessitating the development of advanced skills for effective counseling and service delivery [15]. As these skills become increasingly essential, the pharmacy profession is expected to offer attractive rewards, though a poor work environment can still undermine the effectiveness of even the most skilled professionals.

Leading up to World Pharmacists Day (WPD) in 2021, the Clinical Pharmacists Association of Nigeria (CPAN) raised concerns about the lack of adequate pharmaceutical care in healthcare facilities, attributing this to Nigeria's low health index. Dr. Joseph Madu, the National Chairman of CPAN, noted that while most patients receive medication in healthcare settings, they often miss out on the full range of pharmaceutical care they need. This issue is linked to the lack of motivation among pharmacists, which hampers their ability to perform their duties effectively. The challenges facing Nigeria's healthcare system, despite the increasing number of health professionals entering the sector, have prompted calls for further investigation into job satisfaction among pharmacists as a key factor influencing healthcare delivery [16].

Demographic variables such as age, gender, education level, and marital status significantly influence pharmacists' job satisfaction. For example, gender-related disparities often affect female pharmacists, with research showing that women tend to earn lower salaries, have fewer attractive job roles, and experience slower career advancement compared to their male counterparts [17]. Interestingly, despite these challenges, female pharmacists often report higher job satisfaction levels than their male peers, although both genders react differently to various aspects of their jobs [17, 18]. In contrast, Clark [19] found that gender differences in job satisfaction diminish among highly educated, young females in male-dominated fields. Additionally, studies by researchers [20] show that female pharmacists in academia tend to be less satisfied than their male counterparts, whereas the reverse holds in non-academic sectors.

Age is another key demographic factor affecting job satisfaction, with younger and mid-career pharmacists reporting lower satisfaction levels compared to older pharmacists [21]. Similarly, pharmacists with postgraduate degrees typically report higher satisfaction levels compared to those with only a bachelor's degree.

Although there is a wealth of research on job satisfaction among pharmacists across different countries, there is a notable lack of studies focusing on the Nigerian context and examining various practice settings. This study seeks to bridge this gap by investigating job satisfaction among pharmacists in five distinct practice areas: hospital, community pharmacy, academia, administration, and industry. The study will examine the influence of work environment elements on job satisfaction and explore how demographic factors such as age, gender, and education level impact pharmacists' satisfaction. The findings from this research will provide valuable insights into the factors affecting job satisfaction in these practice settings and help identify areas where improvements can be made to enhance job satisfaction and overall work conditions for pharmacists.

Materials and Methods

This study utilized a descriptive cross-sectional design to assess the factors influencing pharmacists' job satisfaction with their work environment in Nigeria. The target population consisted of pharmacists who graduated from selected pharmacy schools across Nigeria. Primary data was collected for this study.

According to the Pharmacy Council of Nigeria (PCN), the total number of registered pharmacists in the country was 15,900. The sample size for the graduate population was determined using the Krejcie and Morgan [22] formula. A simple random sampling technique was applied to select a sample from the PCN's registered pharmacist list. The initial sample size was calculated as 560; however, considering potential data loss, an additional margin was added, resulting in a final sample size of 618.

Pharmacists who had graduated from universities offering the newly approved PharmD program by the PCN were excluded from the study.

The study's key variables included pharmacists' job satisfaction, and demographic factors such as age, marital status, years of experience, area of practice, job level (cadre), academic qualification, and gender. Pharmacists were categorized into three work cadres: lower cadre (entry-level positions), intermediate cadre (mid-level positions), and senior cadre (senior and management roles).

A pretested questionnaire was used as the data collection tool. The questionnaire collected both demographic data and information about the pharmacists' satisfaction with various elements of their work environment. The satisfaction level was measured using a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The main areas of interest included salary satisfaction, career development opportunities, job fulfillment, practice area satisfaction, and working conditions.

The questionnaire was reviewed and validated by senior faculty members. The internal consistency of the instrument was tested using Cronbach's alpha, yielding a value of 0.86. Additionally, a test-retest reliability check was conducted using a sample of 30 respondents who were not part of the final study sample, which resulted in a reliability coefficient of 0.89.

Ethical approval for the study was granted by the Institute of Public Health at Obafemi Awolowo University, Ile-Ife, Osun State, with the reference number IPHOAU/12/1214.

Data collection was carried out with informed consent from all participants. Research assistants, who were trained for this task, distributed and collected the questionnaires. The questionnaires were sent via email and WhatsApp over five months, yielding a response rate of 92.7%.

Upon receiving the completed questionnaires, the data were thoroughly checked for errors and missing information. Data analysis was performed using the Statistical Package for Social Sciences (SPSS), version 25. Descriptive statistics such as frequencies and percentages were used to summarize the data, while inferential statistics, including correlation, binomial, and Kruskal-Wallis tests, were used at a 5% significance level. The binomial test was applied to assess the overall job satisfaction of respondents, excluding neutral responses. Respondents who answered "strongly agree" or "agree" were categorized as "satisfied," and those who selected "strongly disagree" or "disagree" were considered "not satisfied."

Results and Discussion

Table 1 presents the demographic information of the study participants. The gender distribution showed a slight male majority (50.8%) over females (49.2%). The majority of respondents were under the age of 40 (60.5%), married (71.2%), held a bachelor's degree in pharmacy (66.0%), and had fewer than 10 years of professional experience (52.2%). The smallest percentage of respondents worked in the industrial sector (8.3%), while the largest group was employed in hospitals (37.5%) and community pharmacies (35.1%).

Table 1. Demographic characteristics

Variable	Options	N	%
Age (years)	< 40	373	60.5
	40-50	141	22.8
	51-60	74	12.0
	> 60	29	4.7
Total		617	100.0
Gender	Female	304	49.2
	Male	314	50.8
Total		618	100.0
Marital status	Single	153	24.8
	Engaged	22	3.6
	Married	440	71.2
	Divorced	3	0.5
Total		618	100.0
Years of experience	1-5	177	28.6
	6-10	146	23.6
	11-20	153	24.8
	21-30	84	13.6
	31-40	50	8.1
	41-50	6	1.0
Total		616	100.0
Area of practice	Academia	81	13.1
	Administration and research	37	6.0
	Community	217	35.1
	Hospital	232	37.5
	Industry	51	8.3
Total		618	100.0
Academic qualification	First degree	408	66.0
	Masters	174	28.2
	PhD	36	5.8
Total		618	100.0

cadre	Junior cadre	215	34.8
	Intermediate cadre	159	25.8
	Senior cadre	243	39.4
Total		617	100.0

The distribution of respondents according to their respective pharmacy schools is shown in **Table 2**. Obafemi Awolowo University had the highest number of respondents (63, 10.2%), while the lowest number came from three newer pharmacy schools: Delta State University, Igbenedion University Okada, and Nnamdi Azikiwe University, each contributing 25 respondents (4.0%).

Table 2. Respondent distribution across pharmacy schools

S/N	Name of school	N	Percentage
1	Obafemi Awolowo University, Ile-Ife	63	10.2
2	Ahmadu Bello University, Zaria	50	8.1
3	University of Benin	53	8.6
4	University of Nigeria	55	8.9
5	University of Ibadan	55	8.9
6	University of Lagos	62	10.0
7	University of Jos	34	5.5
8	University of Uyo	33	5.3
9	Olabisi Onabanjo University	30	4.9
10	University of Maiduguri	26	4.2
11	Niger Delta University	30	4.9
12	Madonna University	26	4.2
13	University of Port-Harcourt	26	4.2
14	Delta State University	25	4.0
15	Nnamdi Azikiwe University	25	4.0
16	Igbinedion University	25	4.0
Total		**618**	**100.0**

Table 3 illustrates the respondents' perceptions regarding their satisfaction with various aspects of their work environment. A significant portion of respondents expressed dissatisfaction with their salary (61.0%) and indicated a lack of motivation to work additional hours (47.8%). Additionally, a large percentage of participants were unhappy with the compensation for their efforts (64.9%) and believed that their salary structure was unjustified (62.5%). Many also felt that their income did not motivate them (55.4%) and that their working conditions were subpar (50.8%). These factors reflect issues with the work context. However, when it came to the work content, respondents were generally more satisfied, with 60.5% agreeing that their job was fulfilling. Furthermore, 43.7% were satisfied that their promotions were not delayed, and 56.3% felt their job allowed time for other activities.

Table 3. Perception of work environment satisfaction

Variables	Strongly disagree N (%)	Disagree N (%)	Neutral N (%)	Agree N (%)	Strongly agree N (%)
My salary is satisfying	206 (33.3%)	171 (27.7%)	71 (11.5%)	126 (20.4%)	44 (7.1%)
My job is fulfilling	77 (12.5%)	108 (17.5%)	59 (9.5%)	251 (40.6%)	123 (19.9%)
I have time for other activities	74 (12.0%)	143 (23.1%)	53 (8.6%)	272 (44.0%)	76 (12.3%)
I work a convenient schedule	91 (14.7%)	183 (29.6%)	52 (8.4%)	227 (36.7%)	65 (10.5%)
My promotions are not held up	83 (13.4%)	121 (19.6%)	144 (23.3%)	184 (29.8%)	86 (13.9%)
My practice setting is satisfying	100 (16.2%)	165 (26.7%)	71 (11.5%)	201 (32.5%)	81 (13.1%)
My pay comes in due time	77 (12.5%)	103 (16.7%)	49 (7.9%)	231 (37.4%)	158 (25.6%)
I am personally motivated to work extra hours	137 (22.2%)	158 (25.6%)	78 (12.6%)	161 (26.1%)	84 (13.6%)
The salary scheme in my practice setting is justified	208 (33.7%)	178 (28.8%)	69 (11.2%)	115 (18.6%)	48 (7.8%)

My efforts are compensated by my salary	213 (34.5%)	188 (30.4%)	73 (11.8%)	108 (17.5%)	36 (5.8%)
My income is a source of motivation	181 (29.3%)	161 (26.1%)	80 (12.9%)	146 (23.6%)	50 (8.1%)
My working conditions are good	141 (22.8%)	173 (28.0%)	69 (11.2%)	180 (29.1%)	55 (8.9%)

Table 4 presents the results of the correlation analysis examining the relationship between demographic factors and pharmacists' work environment. A strong correlation was found between the work environment and age (P = .000), marital status (P = .001), years of experience (P = .000), and cadre (P = .000). Conversely, there was a weak correlation with academic qualification (P = .088), and no significant relationship was observed between gender and the work environment (P = .290).

Table 4. Relationship between demographic characteristics and work environment

Item	Correlation coefficient	Sig. (2-tailed)	N
Age in years	0.165	0.000	617
Gender	0.043	0.290	617
Marital status	0.133**	0.001	618
Years of experience	0.241**	0.000	616
Area of practice	-0.078	0.052	618
Academic qualification	0.088**	0.028	618
Cadre	0.178**	0.000	617

Table 5 illustrates the Kruskal-Wallis test results, assessing whether demographic characteristics influence the work environment. Significant differences were found based on age ($\chi^2(3) = 17.346$, P = .001), marital status ($\chi^2(3) = 12.558$, P = 0.006), years of experience ($\chi^2(5) = 47.701$, P = .000), area of practice ($\chi^2(4) = 9.652$, P = .047), academic qualification ($\chi^2(2) = 9.228$, P = .010), and cadre ($\chi^2(2) = 32.641$, P = .000). These results indicate that variations in these demographic factors affect pharmacists' satisfaction with their work environment. However, a Mann-Whitney test found no significant effect of gender on satisfaction (P = .290). Among the least satisfied groups were those under 40 years of age (mean rank = 288.22), those who were single (mean rank = 274.79), those with 1-5 years of experience (mean rank = 258.09), those with 41-50 years of experience (mean rank = 192.83), those in hospital practice (mean rank = 288.01), those with a first degree (mean rank = 301.30), and those in the junior cadre (mean rank = 261.53).

Table 5. Kruskal-Wallis one-way analysis of variance for the work environment and demographic parameters

Demographic factor	Category	N	Mean rank	Asymp. Sig.
Age	< 40	373	288.22	0.001
	40-50	141	337.91	
	51-60	74	345.28	
	> 60	29	343.12	
	Total	617		
Marital status	Single	153	274.79	0.006
	Engaged	22	310.05	
	Married	440	320.58	
	Divorced	3	450.50	
	Total	618		
Years of experience	1-5	177	258.09	0.000
	6-10	146	291.28	
	11-20	153	342.81	
	21-30	84	368.83	
	31-40	50	344.78	
	41-50	6	192.83	
	Total	616		
Area of practice	Academia	81	343.69	0.047
	Administrative & Research	37	308.53	
	Community	217	315.22	
	Hospital	232	288.01	
	Industry	51	329.32	

	Total	618		
Academic qualification	First Degree	408	301.30	0.010
	Masters	174	313.76	
	PhD	36	381.83	
	Total	618		
Cadre	Junior	215	261.53	0.000
	Intermediate	159	344.73	
	Senior	243	327.62	
	Total	617		

The overall job satisfaction level of respondents was analyzed. Out of 618 respondents, 265 were neutral, 146 were satisfied (combining strongly agree and agree), and 207 were dissatisfied (combining strongly disagree and disagree). Among the 353 respondents who expressed an opinion on their satisfaction, 146 (41.4%) were satisfied, while 207 (58.6%) were not satisfied. The 95% confidence interval for the "not satisfied" group ranged from 53.3% to 63.8%, with a significance of p = .001 **(Table 6)**. This suggests that a significant proportion of pharmacists were not satisfied with their work environment. The factors influencing satisfaction included age, marital status, years of experience, area of practice, cadre, and academic qualifications. Most respondents worked in hospital or community pharmacy settings, which suggests that these two practice areas are most preferred by pharmacists in Nigeria, as also noted in studies by Abdu-Aguye *et al.* [23] and Gargalicano *et al.* [24]. It was also observed that many respondents held only a first degree, possibly because many pharmacists start earning soon after graduation, which might discourage further studies.

Table 6. Exact binomial test with Clopper-pearson 95% confidence interval for job satisfaction level

Category	N	%	Test prop.	Exact Sig. (2-tailed)
Level of job satisfaction				
Group 1 (Satisfied)	146	41.4%	0.50	0.001
Group 2 (Not Satisfied)	207	58.6%	0.50	
Total	353	100%		

Confidence interval for group 2 (not satisfied)

- Lower bound: 0.533
- Upper bound: 0.638

The study revealed that a majority of pharmacists were dissatisfied with their jobs, particularly in areas such as salary, motivation, and working conditions. Most respondents were unwilling to work extra hours, dissatisfied with their pay, believed their salary structure was unfair, and reported poor working conditions. These findings are in line with previous research by Carvajal and Popovici [17] and Yean *et al.* [25], who noted that job dissatisfaction can lead to lower motivation, tardiness, and negative views toward management. Mott [26] also highlighted that dissatisfaction is often associated with lower productivity and increased turnover.

The results showed that satisfaction with the work environment was influenced by factors such as age, marital status, years of experience, professional rank, and academic background, but gender did not play a significant role. This suggests that employers should pay attention to these demographic factors when shaping their work environment, as they can greatly impact employee satisfaction and productivity.

Young pharmacists, particularly those under 40, expressed the most dissatisfaction with their work, possibly due to their high expectations shaped by the rapid changes in the job market. This generation tends to seek dynamic roles that offer opportunities for creativity and growth and may not remain committed to jobs that

do not provide such opportunities. Furthermore, single pharmacists were generally less satisfied than their married counterparts, a trend supported by previous studies [27-29], although some studies like that of Inayat and Jahanzeb Khan [30] found no correlation between marital status and job satisfaction.

Another significant finding was the impact of practice area on job satisfaction. Pharmacists working in academia were the most satisfied, likely due to the professional development opportunities such as study leave, attending international conferences, and pursuing advanced degrees. These opportunities allow academic pharmacists to engage in more diverse and fulfilling work, which contrasts with the more routine tasks often found in hospital settings. This observation is consistent with the work of Iheanacho and Odili [31], who also found that academic pharmacists report higher job satisfaction compared to their hospital counterparts. The findings align with Cobaugh [32], who noted that academic pharmacy provides benefits not

found in other practice areas. In contrast, hospital pharmacists reported the lowest levels of job satisfaction, with factors like poor working conditions contributing to their discontent. Similar trends were observed in studies conducted in other regions, such as Berassa *et al.* [33], who found hospital pharmacists in Ethiopia to be dissatisfied due to challenging work environments.

In conclusion, the study emphasizes that pharmacists' satisfaction with their work environment is influenced by a variety of factors, including demographic characteristics, practice area, and generational expectations. This insight can help pharmacy managers and employers create more tailored work environments that address the specific needs of different pharmacist groups.

The study also highlighted the role of academic qualifications in shaping pharmacists' job satisfaction, with Ph.D. holders reporting the highest levels of satisfaction. This is likely because pharmacists with a Ph.D. are generally better compensated and have greater opportunities for professional advancement, especially within academia. Additionally, Ph.D. holders often assume managerial roles, which are typically accompanied by better working conditions and higher salaries. Similarly, those with Master's degrees reported higher satisfaction compared to first-degree holders, although their satisfaction was lower than that of Ph.D. holders. However, gender did not influence job satisfaction, aligning with findings from other studies that suggest no significant relationship between gender and satisfaction in the workplace. That said, some research (e.g., Uhlíř & Řehoř [27]) has indicated that gender may impact job satisfaction in certain contexts.

A key limitation of the study was the potential bias resulting from non-proportional sample sizes across different practice areas, though the Kruskal-Wallis test helped minimize this issue.

Recommendations for improvement

To enhance job satisfaction among pharmacists in Nigeria, the following interventions are suggested:

1. Improve working conditions: Efforts should be focused on improving working conditions, particularly in hospital settings, where dissatisfaction is most prominent.
2. Address salary concerns: Strategies should be developed to address the dissatisfaction surrounding salaries. This might include revisiting salary structures and ensuring timely payments.
3. Career development opportunities: There should be increased support for career development, particularly for younger pharmacists. This can be achieved through mentorship programs, training, and opportunities for professional growth.
4. Tailor policies to demographic Needs: Pharmacists' needs can vary based on factors such as age, marital status, and years of experience. Employers should tailor workplace policies to accommodate these differences.
5. Encourage higher education: The study found that pharmacists with advanced degrees, particularly Ph.D. holders, were more satisfied with their work environment. Encouraging and supporting higher education can be an important avenue for improving job satisfaction.
6. Employee engagement programs: Programs to foster motivation, commitment, and a sense of belonging in the workplace should be implemented. This could include recognition programs and providing opportunities for skill development.
7. Regular job satisfaction surveys: To track changes in job satisfaction and identify emerging issues, employers should conduct regular surveys. Feedback from these surveys can guide improvements in workplace policies.
8. Collaboration between industry and academia: Increased collaboration between pharmaceutical industry stakeholders and academic institutions can provide pharmacists with a broader range of opportunities, thus enhancing job satisfaction.

Conclusion

The study concludes that overall job satisfaction among pharmacists in Nigeria is low, with significant dissatisfaction in areas such as salary, working conditions, and career development opportunities. However, satisfaction varied across different practice settings, with pharmacists in academia being the most satisfied, while those in hospital settings reported the lowest levels of satisfaction. Factors such as age, marital status, years of experience, academic qualification, and cadre were found to influence satisfaction, while gender did not have a significant effect. The findings provide valuable insights for employers and policymakers to create work environments that are more supportive and fulfilling for pharmacists.

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