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RESEARCH ARTICLE

Assessment of emotional intelligence and perceived stress in pharmacy students at a Nigerian university

Chigozie Gloria Anene-Okeke, Chiamaka Edith Eze, Ezinwanne Jane Ugochukwu, Chinelo Nneka Aguiyi-Ikeanyi

Department of Clinical Pharmacy and Pharmacy Management, Faculty of Pharmaceutical Sciences, University of Nigeria, Nsukka, Enugu State, Nigeria

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Correspondence
Chinelo Nneka Aguiyi-Ikeanyi
Department of Clinical Pharmacy and Pharmacy Management
Faculty of Pharmaceutical Sciences
University of Nigeria
Nsukka, Enugu State
Nigeria
chinelo.aguiyi@unn.edu.ng

Abstract

Background: Emotional intelligence (EI) is essential in personal lives and professional relations. Its influence on academic performance has been demonstrated. This study assessed EI and perceived stress in undergraduate pharmacy students at a Nigerian university. **Methods:** A cross-sectional study was conducted in a Nigerian federal university among pharmacy students enrolled via convenient sampling. EI was measured through the Schutte Self-Report Emotional Intelligence Test (SSEIT), a 33-item validated instrument with four subscales consisting of 30 positive questions and three negative questions. Perceived stress was assessed using the Perceived Stress Scale (PSS-10), a 10-item validated stress assessment tool. **Results:** A total of 740 questionnaires were returned and analysed. More than half of the respondents were female (55.3%), single (94.1%), and between 22 and 25 years old (59.1%). About 25% of pharmacy students were in the 200 level. The means of EI and perceived stress were 126.2 ± 15.9 and 20.5 ± 5.0, respectively. Most students had high EI (53.0%) and high perceived stress (58.2%). **Conclusion:** Pharmacy students demonstrated high emotional intelligence and perceived stress.

Introduction

Emotional Intelligence (EI) is gaining popularity, especially in building robust and healthy relationships in personal lives and professional settings. The ability to maintain self-control, endure, persevere, and motivate oneself is known as emotional intelligence (Khan *et al.,* 2023). Emotional intelligence has been described as the ability to identify, use, understand, and manage emotions positively to relieve stress, communicate effectively, empathise with others, and recognise one's strengths and weaknesses, thereby overcoming challenges, defusing conflicts, and achieving healthy relationships with others (Colman, 2008; Mohamad & Jais, 2016; Cherry, 2022; Segal *et al.,* 2018). Emotional intelligence is essential in healthcare practice as healthcare continues to evolve towards interdisciplinary teamwork, as it influences academic and professional success (Romanelli *et al.,* 2006).

Stress is a state of worry or mental tension (World Health Organisation, 2023). It occurs when people are subjected to conditions they cannot ordinarily withstand (Alshagga *et al.,* 2015). Individuals are predisposed to stress in different circumstances; however, responses to stress differ according to coping strategies (Schonert-Reichl, 2019).

Several studies have reported high levels of stress among students, affecting their physical and mental health (Lundberg, 2003; Al-Dubai *et al.,* 2013) and the quality of patient care. Stress among students of the health professions has predominantly been described among Doctor of Pharmacy students in the USA (Marshall *et al.,* 2008; Chen *et al.,* 2013; Gomathi *et al.,* 2013; Waghachavare et al., 2013; Gallagher *et al.,* 2014; Sun & Zoriah, 2015). Several factors have been identified as a source of stress for students in clinical settings, including academic demands, exams, the inability to cope, helplessness, increased psychological pressure, mental tension, increased workload, and transition from pre-clinical to clinical training (Tyssen *et al*., 2001; Garber *et al.,* 2019). A study comparing stress among medical, nursing, dentistry, and pharmacy students revealed that

pharmacy students were more psychologically distressed than their peers from other disciplines (Henning *et al.,* 1998). The perceived stress experienced by pharmacy students in public universities is typically induced by academic and environmental stressors (Alshagga *et al.,* 2015; Okoro *et al.,* 2021). In recent times, the academic calendar of most universities in Nigeria has been disrupted by the closure of schools following industrial action in public institutions and national lockdown due to the COVID-19 pandemic, resulting in reduced break periods at the end of each term and session. Students in Nigerian universities have undergone a lot of stress because of the lack of adequate time to rest and prepare for resuming academic activities. Thus, stress may have affected their academic performance and health and may have induced suicide tendencies (Dogra *et al.,* 2011).

Coping strategies include mental, psychological, and behavioural inputs to reduce and eliminate the impact of stressful circumstances on overall health (Park & Adler, 2003; Okwuduba *et al.,* 2021). Time management and relaxation are among the coping strategies adopted by pharmacy students (Okoro *et al.,* 2021). While some students may cope well with positive reinforcement of their goals, others may face stress-induced physical and psychological symptoms (Shaikh *et al.,* 2004). Most premedical and undergraduate basic science medical students adopt active emotional and problem-focused coping as stress-coping strategies (Shankar *et al.,* 2014). Several studies have demonstrated the relationship between EI and academic performance, with students with higher EI levels having more resources and strategies to cope with stressful situations (MacCann *et al.,* 2020; García-Martínez *et al.,* 2021; Augusto-Landa *et al.,* 2024). Despite the positive strategies adopted to mitigate stress, there is a need for pharmacy educators to implement holistic initiatives to help students face stressful events (Okoro *et al.,* 2021).

Emotional intelligence training in pharmacy is in its infancy in most Nigerian universities and inexistent in most pharmacy schools (Nelson *et al.,* 2015). As pharmacy students are future health workers, there is a need to assess their EI and perceived stress. To the best of the authors' knowledge, no study has examined EI as a predictor of stress management and coping skills among pharmacy students in Nigeria. Evidence from this study may lead to reviewing or redesigning undergraduate pharmacy curricula and incorporating courses to help students manage stress through improving their mental health and EI.

This study assessed emotional intelligence and perceived stress in undergraduate pharmacy students at the University of Nigeria Nsukka.

Methods

Design and setting

This cross-sectional study used convenient sampling to assess EI and perceived stress in pharmacy students at the Faculty of Pharmaceutical Sciences, University of Nigeria, Nsukka (UNN), Enugu State, Nigeria, between June and October 2023.

The faculty comprises seven departments and is currently running two programmes, i.e., Bachelor of Pharmacy (B.Pharm.) and Doctor of Pharmacy (Pharm.D.). Undergraduate students are offered science courses (first year), clinical courses, management courses, laboratory practical classes, and clinical rotations (final year).

Study population and sample size

All pharmacy students who had completed clinical courses were eligible to participate after giving verbal consent. The sample size of 311 pharmacy students was determined using the Raosoft sample size calculator at a confidence interval of 95% and a margin of error of 5%. However, 800 pharmacy students were used for this study to make up for non-respondents and ensure adequate representation of the study population.

Instrument for data collection

A self-administered structured questionnaire was used for data collection.

The Schutte Self-Report Emotional Intelligence Test (SSEIT), a 33-item questionnaire validated in Nigeria (Aniemeka *et al.,* 2020), was used to determine emotional intelligence among pharmacy students. This tool consists of 30 positive questions and three negative questions distributed across four subscales: "*perception of emotion*," "*managing own emotions*," "*managing others' emotions*," and "*utilisation of emotion*." Emotional intelligence was rated on a 5-point Likert scale from strongly disagree (1 point) to disagree (2 points), neutral (3 points), agree (4 points), and strongly agree (5 points). The scores range from 33 to 165, with higher scores indicating higher emotional intelligence. The median score was used as a cut-off point to categorise into high EI and low EI. SSEIT questionnaire reliability and internal consistency were determined using Cronbach's alpha.

The Perceived Stress Scale (PSS-10), a 10-item validated stress assessment instrument (Solis et al., 1983), was used to determine perceived stress among pharmacy students. Responses were rated on a 5-point scale: never (0), almost never (1), sometimes (2), fairly often (3), and very often (4). The score ranged from 0 to 40 and was divided into three tiers: low stress (0-13),

moderate stress (14-26), and high stress (27-40). The median score was used as a cut-off point to categorise into high perceived stress and low perceived stress.

Students' sociodemographic characteristics, such as age, class level, and gender, were also collected.

Data collection

The questionnaire was distributed between June and July 2023 to 800 consenting pharmacy undergraduate students during lectures in clinical pharmacy and pharmacy management across various departments. Students were instructed to complete the questionnaire independently before the start of the lecture. The questionnaires were retrieved immediately after completion to prevent external information sourcing or peer interaction.

Data analysis

The data collected were coded and entered into a Microsoft Excel spreadsheet, then exported and analysed using IBM Statistical Statistical Package for Social Sciences (SPSS) for Windows, Version 27.0 (IBM Corp., Armonk, NY, USA).

The three negatively worded questions (5, 28, and 33) of the SSEITT were reverse-coded during analysis. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarise participants' sociodemographic characteristics. The associations between EI, perceived stress, and sociodemographic characteristics were assessed using a Chi-square test for categorical variables and Pearson correlation for continuous variables. Significance was set at $p < 0.05$.

Results

A total of 800 questionnaires were distributed, of which 740 were usable, yielding a response rate of 93%. The Cronbach's alpha value of the SSEIT questionnaire was 0.890. Of the 740 respondents, 409 (55.3%) were female, and 437 (59.1%) were aged between 22 and 25 years. Most participants (701; 94.7%) were single, and 473 (63.9%) resided off-campus. The monthly income of parents or guardians was between ₦50,000 and ₦100,000 for 219 (29.6%) respondents. Additional details are presented in Table I.

Table I: Sociodemographic characteristics of pharmacy students (N=740)

Variable	Frequency (%)
Gender	
Male	331 (44.7)
Female	409 (55.3)
Age	
18-21	178 (24.1)
22-25	437 (59.1)
26-29	101 (13.6)
>30	24 (3.2)
Marital status	
Single	701 (94.7)
Married	39 (5.3)
Place of residence	
Off-campus	473 (63.9)
Hostel	248 (33.5)
Boys quarters	19 (2.6)
Level	
200L	189 (25.5)
300L	180 (24.3)
400L	187 (25.3)
500L	184 (24.9)
Degree	
B.Pharm.	373 (50.4)
Pharm.D.	367 (49.6)
Club	
None	356 (48.1)
ISPOR	334 (45.1)
Leaders academic club (LAC)	27 (3.6)
Rotaract	2 (3)
ISPOR and LAC	21 (2.8)
Parent educational level	
None	19 (2.6)
Primary	55 (7.4)
Secondary	147 (19.9)
Tertiary	328 (44.3)
Postgraduate	191 (25.8)
Parent or guardian monthly income	
Below ₦50,000	111 (15)
₦50,000-100,000	219 (29.6)
Above ₦100,000	410 (55.4)

ISPOR: International Society for Pharmacoeconomics Outcomes and Research

Analysis of EI scores revealed that two statements tied for the highest mean score (4.23 ± 0.83): "*compliment others when they have done something well*" and "*Some of the major events of my life have led me to re-evaluate what is important and not important*." The statement "*When I am in a positive mood, solving problems is easy for me*" followed closely with a score of 4.19 ± 0.86. The median EI score was 27, with the majority of students (53.0%) demonstrating high EI. Further details are presented in Table II.

Table II: Schutte Self-Report Emotional Intelligence Test (SSEIT) (N=740)

Question	SD	D	N	A	SA	Mean ±SD
1. I know when to speak about my personal problems to others	36(4.9)	41(5.5)	61(8.2)	322(43.5)	280(37.8)	4.04(1.06)
2. When I am faced with obstacles, I remember times I faced similar obstacles and overcame them	13(1.8)	39(5.3)	59(8.0)	391(52.8)	238(32,2)	4.08(0.87)
3. I expect that I will do well on most things I try	12(1.6)	18(2.4)	62(8.4)	375(50.7)	273(36.9)	4.19(0.81)
4. Other people find it easy to confide in me	28(3,8)	53(7.2)	149(20.1)	337(45.5)	173(23.4)	3.78(1.01)
5. I find it hard to understand the non-verbal messages of other people	54(7.3)	152(20.5)	171(23.1)	263(35.5)	100(13.5)	3.27(1.15)
6. Some of the major events of my life have led me to re-evaluate what is important and not important	15(2.0)	13(1.8)	57(7.7)	355(48.0)	300(40.5)	4.23(0.83)
7. When my mood changes, I see new possibilities	53(7.2)	94(12.7)	184(24.9)	276(37.3)	133(18.0)	3.46(1.14)
8. Emotions are one of the things that make my life worth living	25(3.4)	91(12.3)	195(26.4)	282(38.1)	147(19.9)	3.59(1.04)
9. I am aware of my emotions as I experience them	12(1.6)	33(4.5)	103(13.9)	389(52.6)	203(27.4)	4.00(0.86)
10. I expect good things to happen	18(2.4)	29(3.9)	85(11.5)	289(39.1)	319(43.1)	4.16(0.95)
11. I like to share my emotions with others	67(9.1)	149(20.1)	188(25.4)	240(32.4)	96(13.0)	3.20(1.17)
12. When I experience a positive emotion, I know how to make it last	21(3.0)	59(8.0)	203(27.4)	292(39.5)	164(22.2)	3.70(1.00)
13. I arrange events others enjoy	22(3.0)	97(13.1)	223(30.1)	277(37.4)	121(16.4)	3.51(1.01)
14. I seek out activities that make me happy	6(8)	26(3.5)	87(11.8)	344(46.5)	277(37.4)	4.16(0.82)
15. I am aware of the non-verbal messages I send to others	17(2.3)	56(7.6)	168(22.7)	334(45.1)	165(22.3)	3.78(0.95)
16. I present myself in a way that makes a good impression on others	9(1.2)	32(4.3)	111(15.0)	377(50.9)	211(28.5)	4.01(0.85)
17. When I am in a positive mood, solving problems is easy for me	6(8)	27(3.6)	96(13.0)	299(40.4)	312(42.2)	4.19(0.86)
18. By looking at their facial expressions, I recognise the emotions people are experiencing	15(2.0)	46(6.2)	162(21.9)	338(45.7)	179(24.2)	3.84(0.93)
19. I know why my emotions change	19(2.6)	61(8.2)	202(27.3)	314(42.4)	144(19.5)	3.68(0.96)
20. When I am in a positive mood, I can come up with new ideas	15(2.0)	27(3.6)	104(14.1)	339(45.8)	255(34.5)	4.07(0.90)
21. I have control over my emotions	17(2.3)	74(10.0)	176(23.8)	307(41.5)	166(22.4)	3.72(1.00)
22. I easily recognise my emotions as I experience them	10(1.4)	36(4.9)	124(16.8)	373(50.4)	197(26.6)	3.96(0.87)
23. I motivate myself by imagining a good outcome to tasks I take on	10(1.4)	29(3.9)	83(11.2)	341(46.1)	277(37.4)	4.14(0.86)
24. I compliment others when they have done something well	9(1.2)	21(2.8)	62(8.4)	310(41.9)	338(45.7)	4.28(0.83)
25. I am aware of the non-verbal messages other people send	19(2.6)	61(8.2)	185(25.0)	314(42.4)	161(21.8)	3.73(0.98)
26. When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself	23(3.1)	71(9.6)	202(27.3)	311(42.0)	133(18.0)	3.62(0.99)
27. When I feel a change in emotions, I tend to come up with new ideas	23(3.1)	80(10.8)	216(29.2)	299(40.4)	122(16.5)	3.56(0.99)
28. When I am faced with a challenge, I give up because I believe I will fail	39(5.3)	76(10.3)	101(13.6)	174(23.5)	350(47.3)	3.97(1.22)
29. I know what other people are feeling just by looking at them	51(6.9)	111(15.0)	258(34.9)	238(32.2)	82(11.1)	3.26(1.06)
30. I help other people feel better when they are down	19(2.6)	26(3.5)	88(11.9)	414(55.9)	193(26.1)	4.00(0.87)
31. I use good moods to help myself keep trying in the face of obstacles	13(1.8)	32(4.3)	99(13.4)	368(49.7)	228(30.8)	4.04(0.88)
32. I can tell how people are feeling by listening to the tone of their voice	17(2.3)	43(5.8)	126(17.0)	390(52.7)	164(22.2)	3.87(0.90)
33. It is difficult for me to understand why people feel the way they do	65(8.8)	179(24.2)	189(25.5)	195(26.4)	112(15.1)	3.15(1.20)
Median score of EI	27					
Low emotional intelligence	348	47.0				
High emotional intelligence	392	53.0				

SD: strongly disagree; D: disagree; N: neutral; A: agree; SA: strongly agree; EI: emotional intelligence

Table III presents the results of the perceived stress survey. The item "*How often have you felt nervous and stressed?*" had the highest mean score of 2.47 ± 1.09, followed by "*How often have you been upset because of something that happened unexpectedly?*" with a mean score of 2.29 ± 1.14. The median perceived stress score was 20, with the majority of students (58.2%) reporting high levels of perceived stress.

Table III: Perceived stress of pharmacy students (N= 740)

Statements	Never	Almost never	Sometimes	Fairly often	Very often	Mean ±SD
1. How often have you been upset because of something that happened unexpectedly?	54 (7.3)	98 (13.2)	314 (42.4)	127 (17.2)	147 (19.9)	2.29 (1.14)
2. How often have you felt that you were unable to control the important things in your life?	58 (7.8)	116 (15.7)	296 (40.0)	155 (20.9)	115 (15.5)	2.20 (1.12)
3. How often have you felt nervous and "*stressed*"?	20 (2.7)	115 (15.5)	279 (37.7)	147 (19.9)	179 (24.2)	2.47 (1.09)
4. How often have you felt confident about your ability to handle your personal problems?	151 (20.4)	160 (21.6)	269 (36.4)	131 (17.7)	29 (3.9)	1.63 (1.10)
5. How often have you felt that things were going your way?	70 (9.5)	169 (22.8)	330 (44.6)	129 (17.4)	42 (5.7)	1.87 (0.99)
6. How often have you found that you could not cope with all the things that you had to do?	79 (10.7)	132 (17.8)	302 (40.8)	160 (21.6)	67 (9.1)	2.00 (1.08)
7. How often have you been able to control irritations in your life?	91 (12.3)	186 (25.1)	294 (39.7)	135 (18.2)	34 (4.6)	1.77 (1.05)
8. How often have you felt that you were on top of things?	73 (9.9)	143 (19.3)	320 (43.2)	144 (19.5)	60 (8.1)	1.96 (1.05)
9. How often have you been angered because of things that were outside of your control?	49 (6.6)	129 (17.4)	300 (40.5)	154 (20.8)	108 (14.6)	2.19 (1.09)
10. How often have you felt difficulties were piling up so high that you could not overcome them?	85 (11.5)	122 (16.5)	273 (36.9)	168 (22.7)	92 (12.4)	2.08 (1.15)
Median	20					
Low perceived stress	308 (41.6)					
High perceived stress	432 (58.2)					

Table IV illustrates the association between students' sociodemographic characteristics, EI, and perceived stress. The majority of females (58.7%) demonstrated statistically significant high EI compared to their male counterparts [X^2 = 3.905 (1), p = 0.048]. Additionally, second-year (200-level) students exhibited significantly higher levels of perceived stress compared to students from other academic levels [X^2 = 8.303 (4), p = 0.040].

Table IV: Association of sociodemographic characteristics, EI, and perceived stress (N=740)

Variable	Low EI	High EI	X^2(df)	*p*-value	Low PS	High PS	X^2(df)	*p*-value
Gender			3.905(1)	**0.048**			0.748 (1)	0.387
Male	169(48.6)	162(41.3)			132 (42.9)	199 (46.1)		
Female	179(51.4)	230(58.7)			176 (57.1)	233 (53.9)		
Age			4.578(3)	0.205			5.440 (3)	0.142
18-21	93(26.7)	85(21.7)			63 (20.5)	115 (26.6)		
22-25	204(58.6)	233(59.4)			196 (63.6)	241 (55.8)		
26-29	43(12.4)	58(14.8)			41 (13.3)	60 (13.9)		
>30	8(2.3)	16(4.1)			8 (2.6)	16 (3.7)		
Marital status			0.595(1)	0.440			0.006 (1)	0.938
Single	332(95.4)	369(94.1)			292 (94.8)	409 (94.7)		
Married	16(4.6)	23(5.9)			16 (5.2)	23 (5.3)		
Place of residence			2.087(2)	0.352			1.545 (2)	0.462

Variable	Low EI	High EI	X^2(df)	*p*-value	Low PS	High PS	X^2(df)	*p*-value
Off-campus	219(62.9)	254(64.8)			189 (61.4)	284 (65.7)		
Hostel	117(33.6)	131(33.4)			111 (36.0)	137 (31.7)		
Boys' quarters	12(3.4)	7(1.8)			8 (2.6)	11 (2.5)		
Level			3.107(3)	0.375			8.303 (3)	**0.040**
200L	99(28.4)	90(23.0)			66 (21.4)	123 (28.5)		
300L	79(22.7)	101(25.8)			82 (26.6)	98 (22.7)		
400L	86(24.7)	101(25.8)			72 (23.4)	115 (26.6)		
500L	84(24.1)	100(25.5)			88 (28.6)	96 (22.2)		
Degree			0.892(1)	0.345			0.502	0.479
B.Pharm.	169(48.6)	204(52.0)			160 (51.9)	213 (49.3)		
Pharm.D.	179(51.4)	188(48.0)			148 (48.1)	219 (50.7)		
Club				4.981(4)	0.289		2.358	0.670
None		159(45.7)	197(50.3)		151 (49.0)	205 (47.5)		
ISPOR		167(48.0)	167(42.6)		140 (45.5)	194 (44.9)		
Leaders academic club		12(3.4)	15(3.8)		10 (3.2)	17 (3.9)		
Rotaract		2(0.6)	0(0.0)		0 (0.0)	2 (100.0)		
ISPOR and LAC		8(2.3)	13(3.3)		7 (2.3)	14 (3.2)		
Parent educational level								
None		9(2.6)	10(2.6)	0.720(4)	0.949	10 (3.2)	9 (2.1)	1.393 (4)	0.845
Primary		28(8.0)	27(6.9)			21 (6.8)	34 (7.9)		
Secondary		66(19.0)	81(20.7)			63 (20.5)	84 (19.4)		
Tertiary		153(44.0)	175(44.6)			134 (43.5)	194 (44.9)		
Postgraduate		92(26.4)	99(25.3)			80 (26.0)	111 (25.7)		
Parent or guardian monthly income								
Below ₦50,000		55(15.8)	56(14.3)	1.341(2)	0.511	46 (14.9)	65 (15.0)	0.093 (2)	0.955
₦50,000-100,000		108(31.0)	111(28.3)			93 (30.2)	126 (29.2)		
Above ₦100,000		185(53.2)	225(57.4)			169 (54.9)	241 (55.8)		

EI: emotional intelligence; PS: perceived stress

Discussion

Emotional intelligence is crucial in pharmacy practice, where pharmacists frequently encounter diverse patient care situations and emotionally distressed patients. These interactions could lead to interpersonal conflicts, ethical dilemmas, and stressful work environments (Butler *et al.,* 2022). Enhancing EI in pharmacy graduates could address communication and interpersonal skill challenges perceived by patients and other healthcare professionals (Jaeger, 2003). EI encompasses self-awareness, self-regulation, empathy, and social skills. For example, self-awareness enables individuals to recognise when stressed, while social skills help them effectively communicate their feelings (Schutte *et al.,* 2007).

Research has demonstrated a relationship between emotional abilities and health and well-being (Hertel *et al.,* 2009). People with high EI, adept at understanding and controlling their own and others' emotions, tend to enjoy advantages in their professional and personal lives and be more productive than those with lower EI (Segal *et al.,* 2018).

In the present study, pharmacy students demonstrated high EI, with a mean EI score of 126.2 ± 15.9, which is consistent with findings from similar studies (Birks *et al.,* 2009; Por *et al.,* 2011; Jahanara, 2016; Margret & Lavanya, 2017; Ravikumar *et al.,* 2017). However, aligning with studies conducted among medical undergraduates in Mangalore and South India, the students exhibited high levels of perceived stress, with a mean score of 20.5 ± 5.0 (Brahmbhatt et al., 2013). The presence of high perceived stress despite high EI levels suggests that these students are not utilising their EI as a coping strategy to manage stress.

Although no correlation was found between EI and perceived stress in this study, consistent with findings from Puducherry, India (Jahanara, 2016), emotional intelligence has been previously adopted by medical students as a strategy for coping with stress.

The study revealed that gender was significantly associated with EI, with female students exhibiting

higher levels of EI than their male counterparts. This finding aligns with a similar study conducted among undergraduate students at an arts and sciences college in India (Sen *et al.,* 2020). The gender differences in EI could be attributed to the environment in which a child was raised and nurtured. In some societies, males who express emotions and feelings are perceived as weak, leading them to repress their feelings and potentially develop communication problems. In contrast, females typically express and communicate their feelings verbally and non-verbally (Pau *et al.,* 2003; Shetty *et al.,* 2013; Kumar *et al.,* 2016; Ranasinghe *et al.,* 2017).

This study also found a significant positive correlation between EI and sociodemographic factors such as age, gender, degree (B.Pharm. or Pharm.D.), and parents' or guardians' monthly income. However, no association was observed between EI and memberships in clubs or associations. This result contrasts previous findings indicating that students engaged in extracurricular activities or volunteering at youth organisations had higher EI. Such engagement in community services and structured activities is also believed to provide positive emotional experiences.

This study found that perceived stress was associated with the year of study. Second-year students reported higher levels of perceived stress compared to final-year students, who had the least stress. This difference could be attributed to adaptation and experience. Second-year students are relatively new to the school system and may still be adjusting to the demands of their courses. Previous research has identified time and relaxation as effective coping strategies for stress among pharmacy students (Okoro *et al.,* 2021). However, second-year students may lack the necessary experience to manage their time and finances. Financial stress is a significant contributor to overall stress levels, as demonstrated previously (Mane *et al.,* 2011).

A negative correlation was found between parents' or guardians' monthly income and perceived stress, suggesting that students' stress levels are not directly related to their family's financial situation but rather to their inexperience in financial management.

Additionally, a positive correlation was observed between perceived stress and extracurricular activities. This result indicates that students actively involved in several clubs and associations may experience higher stress levels, likely attributed to insufficient finances to fund these activities, membership dues, and the demanding schedules of pharmacy students, who must balance lectures and practical classes with extracurricular commitments.

Limitations

This cross-sectional study and captured responses at a single point in time. The findings may vary if the study were conducted at a different time, as respondents' perceptions and experiences could change. Also, the options presented in the questionnaire may have limited respondents' ability to express their feelings appropriately.

Conclusion

Pharmacy students demonstrated high emotional intelligence and high perceived stress. Gender was associated with emotional intelligence, while the year of study was correlated with perceived stress.

To address these findings, there is a need to create a stable academic calendar and review the undergraduate pharmacy curriculum to include programmes that strengthen emotional intelligence. These programmes should focus on helping students effectively apply emotional intelligence as a strategy for managing finances, stress, and time. By promoting greater psycho-emotional balance, students can better allocate resources towards self-regulation processes, ultimately improving their learning.

Conflict of interest

The authors declare no conflict of interest.

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Ethics approval and informed consent

Ethical clearance was obtained from the Research and Ethics Committee of Faculty of Pharmaceutical Sciences, University of Nigeria, Nsukka, Enugu State, Nigeria FPSRE/UNN/23/0010. Verbal informed consent

was obtained from all participants. They were made to understand that participation is voluntary and there was no consequence for non-participation. All information was kept confidential.

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