RESEARCH ARTICLE

Academic motivation in undergraduate nursing students: an analytical cross-sectional study

Muhammad Zeeshan Aslam[1], Khairulnissa Ajani[2], Wajeeha Zahid[3], Zeenar Salim[4], Salman Muhammad Soomar[5]

Abstract

Objective: To assess the motivation level of undergraduate nursing students, and to explore the factors that affect their academic motivation.

Method: The analytical, cross-sectional study was conducted from September to December 2021 at Aga Khan University School of Nursing and Midwifery, Karachi, and comprised undergraduate nursing students enrolled in the four-year Bachelor of Science in Nursing programme. Data was collected using a self-developed questionnaire which explored the motivation level of the subjects. Data was analysed using SPSS 26.

Results: Of the 233 subjects with mean age 21.1±1.56 years, 201(86.3%) were females, and 61(26.2%) were in the final year of the academic programme. Year I students had the highest mean motivation score 5.85±1.04, while final year students had the lowest score 5.66±1.23, and there was significant difference with respect to extrinsic motivation ($p<0.05$). Most students had joined the nursing profession because of their family's wishes 97(41.6%).

Conclusion: As motivation decreased in the final year, and the students were extrinsically motivated, faculty members' role becomes vital in promoting intrinsic motivation through the use of different teaching-learning strategies.

Key Words: Academic motivation, Undergraduate nursing students, Intrinsic motivation, Extrinsic motivation, Motivational factors.

(JPMA 75: 1537; 2025) **DOI: https://doi.org/10.47391/JPMA.20628**

Introduction

To be motivated means to have the drive or the desire to do something. A person who does not have inspiration or impetus to act is considered unmotivated, while a person who is energised to do something is considered motivated.[1] Academic motivation is the driving force that stimulates and energises students to attain specific goals to improve their academic performance. It can be divided into intrinsic motivation, which is doing something for inherent pleasure, and extrinsic motivation, which is doing something to attain external reward.[2] Academic motivation is considered among the most critical factors that determine whether a student will be able to complete the programme.[3] The significance of academic motivation can be judged by the fact that motivated students are highly adaptable under challenging situations, and show a positive attitude towards their studies. In this way, they become more creative and spend their energies on much-needed tasks.[4] Motivated students feel more autonomous and competent to make better choices.[2] They are more persistent under challenging situations, and experience less depression.[5-6] Academic motivation can be divided into intrinsic and extrinsic motivation as well as amotivation when both are absent.[2,7] Intrinsic motivation is about doing something for joy or satisfaction.[5,8] Intrinsically motivated students voluntarily participate in learning activities because they find them exciting and enjoyable.[2,5] They are more satisfied and have a high level of academic achievement .[8] In contrast, extrinsic motivation is about doing something to obtain incentives or avoid punishment.[2,9] Extrinsically motivated nursing students are more engaged in activities to obtain good grades because they want to obtain good jobs and secure their future.[7,10]

In nursing education, academic motivation is highly important. It enhances the cognitive process, and motivates students to give more attention to their studies and learn the concepts deeply rather than just superficially going through the motions of learning.[6,11] Nursing students must be motivated to acquire enough knowledge and skills to provide holistic patient care.[12] As nursing students deal with human lives, a lack of motivation may produce incompetent nurses that may lead to a destructive effect on public health, resulting in a loss of capital.[13]

[1,2,4] School of Nursing and Midwifery, Aga Khan University Hospital, Karachi, Pakistan. [3]Department of Community Health Sciences, Aga Khan University Hospital, Karachi, Pakistan.[5]Department of Emergency Medicine, Aga Khan University Hospital, Karachi, Pakistan.

Correspondence: Muhammad Zeeshan Aslam. .

Email: zeeshanaslam2929@gmail.com

ORCID ID: 0009-0003-8285-1182

Submission complete: 20-08-2024 **First Revision received:** 17-01-2025

Acceptance: 18-06-2025 **Last Revision received:** 17-06-2025

The current study was planned to assess the motivation level of undergraduate nursing students, and to explore the factors that affect their academic motivation.

Subjects and Methods

The analytical, cross-sectional study was conducted from September to December 2021 at Aga Khan University School of Nursing and Midwifery, Karachi. After approval from the institutional ethics review committee, the sample size was calculated using the One Population Mean formula[14], keeping bond of error 3%, mean of 7.3±2.99. The sample was raised using stratified sampling technique. Those included were undergraduate nursing students enrolled in the four-year Bachelor of Science in Nursing (BScN) programme. Those excluded were students who had failed the semester and were repeating/re-taking the course, or were on leave during the data-collection period.

After taking informed consent from the subjects, data was collected using a self-developed questionnaire that consisted of 39 items divided into three sections; nine items exploring sociodemographic details, 28 items covering academic motivation, and two items evaluating factors affecting students' motivation. The tool's content validity index (CVI) was 0.89 for relevance and 0.88 for clarity. The Cronbach's alpha value was 0.90. The tool overall aimed at assessing the mean motivation score of types and subtypes of academic motivation which was proposed by the self-determination theory.[2] Each item in Section 2 was marked on a 7-point Likert scale, ranging from 1 for "Does not correspond" to 7 for "Corresponds a lot". The section was subdivided into intrinsic motivation (INT), four subgroups of extrinsic motivation, including Extrinsic Motivation Integrated Regulation (EMInR), Extrinsic Motivation Identified Regulation (EMIdR), Extrinsic Motivation Introjected Regulation (EMIjR), and Extrinsic Motivation External Regulation (EMExR), and amotivation (AMOT).

The questionnaire was sent to the students on their official email accounts, and the subjects were 20-30 minutes to return the questionnaire fully filled.

Data was analysed using SPSS 26. Qualitative variables were expressed as frequencies and percentages, while quantitative variables were reported as mean ± SDs. Analysis of variance (ANOVA) was applied to explore the mean motivation score of undergraduate nursing students among all the four academic years, and t-tests were applied to explore the mean motivation score among different genders. Chi-square test was applied to explore the factors that enhanced and hindered academic motivation. P<0.05 was considered significant.

Results

Of the 233 subjects with mean age 21.1±1.56 years, 201(86.3%) were females, 61(26.2%) were in the final year

Table-1: Sociodemographic characteristics.

Age mean ±SD	**21.1 ±1.56**	
	N	**%**
Gender		
Male	32	13.7
Female	201	86.3
Academic Year		
Year I	56	24
Year II	58	24.9
Year III	58	24.9
Year IV	61	26.2
Ethnicity		
Punjabi	6	2.6
Sindhi	23	9.9
Pashtun	27	11.6
Northern	124	53.2
Others	54	22.7
Family Income per year		
Less than 100,000	165	70.8
Between 100,000 and 200,000	45	19.3
Between 200,000 and 300,000	11	4.7
More than 300,000	12	5.2
Extracurricular Activities per week		
<3 hours	133	57.1
3-5 hours	61	26.2
4-5 hours	25	10.7
5-8 hours	14	6
Motivation for Admission		
My choice	88	37.8
Family members	97	41.6
Friends	38	16.3
Others	10	4.3
Main reason for choosing nursing profession		
Easy to find a job after graduation	88	37.8
I feel this is a noble profession	97	41.6
It was my family's wish	38	16.3
Others	10	4.3
Strategies that enhance motivation		
Didactic Lectures	7	3
Interactive strategies	50	21.5
Simulation	41	17.6
Seminars/Presentations	11	4.7
Clinical Practice	116	49.8
Laboratory	8	3.4
Reason for finding class more motivating		
Gives an opening to express your doubts/opinions	36	15.5
Helps to understand better	70	30
Learns knowledge to be applied in reality	107	45.9
Ensures participation	19	8.2
Help in effective learning	1	0.4

SD: Standard deviation.

Table-2: Mean domain and total motivation scores across the academic programme.

	Mean (±SD)					
	Year I	Year II	Year III	Year IV	Total score	P-Value
INT	5.52 (±1.36)	5.54 (±1.21)	5.37 (±1.19)	5.46 (±1.28)	5.47 (±1.26)	0.78
EMInR	6.34 (±1)	6.09 (±1.26)	6.19 (±1.06)	6.06 (±1.36)	6.17 (±1.17)	0.28
EMIdR	6.44 (±0.83)	6.35 (±0.96)	6.51 (±0.77)	6.33 (±1.03)	6.41 (±0.90)	0.42
EMIjR	6.39 (±0.8)	6.13 (±1.01)	6.28 (±0.78)	6.26 (±0.96)	6.27 (±0.89)	0.28
EMExR	6.52 (±0.76)	6.21 (±1.03)	6.33 (±0.89)	6.01 (±1.12)	6.27 (±0.95)	0.00*
AMOT	2.56 (±1.74)	2.29 (±1.4)	2.21 (±1.37)	2.59 (±1.85)	2.41 (±1.59)	0.25

* $p < 0.05$

INT: Intrinsic motivation, EMInR: Extrinsic motivation integrated regulation, EMIdR: Extrinsic motivation identified regulation, EMIjR: Extrinsic motivation introjected regulation, EMExR: Extrinsic motivation external regulation, AMOT: Amotivation, SD: Standard deviation.

Table-3: Mean motivation score with respect to gender.

	Male	Female	Total score	P-Value
INT	5.3 (±1.36)	5.5 (±1.24)	5.40 (±1.30)	0.46
EMInR	6.01 (±1.49)	6.19 (±1.13)	6.10 (±131)	0.21
EMIdR	6.26 (±1.19)	6.43 (±0.86)	6.34 (±1.02)	0.04*
EMIjR	6.23 (±1.03)	6.27 (±0.87)	6.25 (±0.95)	0.91
EMExR	5.99 (±1.18)	6.3 (±0.94)	6.15 (±1.06)	0.07
AMOT	2.28 (±1.59)	2.43 (±1.64)	2.36 (±1.61)	0.39
Total score	5.56 (±1.29)	5.74 (±1.08)		

* $p < 0.05$

INT: Intrinsic motivation, EMInR: Extrinsic motivation integrated regulation, EMIdR: Extrinsic motivation identified regulation, EMIjR: Extrinsic motivation introjected regulation, EMExR: Extrinsic motivation external regulation, AMOT: Amotivation, SD: Standard deviation.

of the academic programme, 124(53.2%) participants belonged to the northern areas of Pakistan, and 165(70.8%) were from low-income families. Besides, 133(57.1%) participants responded that they spent <3 hours on extracurricular activities during the week, 97(41.6%) said they chose nursing because it is a noble profession, and 97(41.6%) joined nursing because they were motivated by their family members. Further, 116(49.8%) of the students reported that clinical practice was the most interesting teaching-learning strategy that enhanced their level of motivation, and 107(45.9%) said the fact that the learned knowledge could be applied in real-life scenarios was the main reason that made classes interesting (Table 1).

The mean EMExR value was 6.27±0.95 which was significantly different from the other subscales among the groups ($p<0.05$). EMIdR obtained the highest total mean score of 6.41±0.90, indicating that the students of all the four years had extrinsic motivation. AMOT had the lowest mean motivation score 2.41±1.59. Year I students had the highest mean motivation score 5.85±1.04, while the final-year students had the lowest mean motivation score 5.66±1.23) (Table 2).

With respect to gender, females were more motivated 5.74±1.08 than male students 5.56±1.29, and the difference was significant in terms of EMIdR ($p<0.05$), indicating that the students were extrinsically motivated (Table 3).

The factors that enhanced academic motivation were identified as effective teaching-learning strategies 80(34.33%) and a combination of theory, lab and clinical exposure 67(28.76%) (Figure 1).

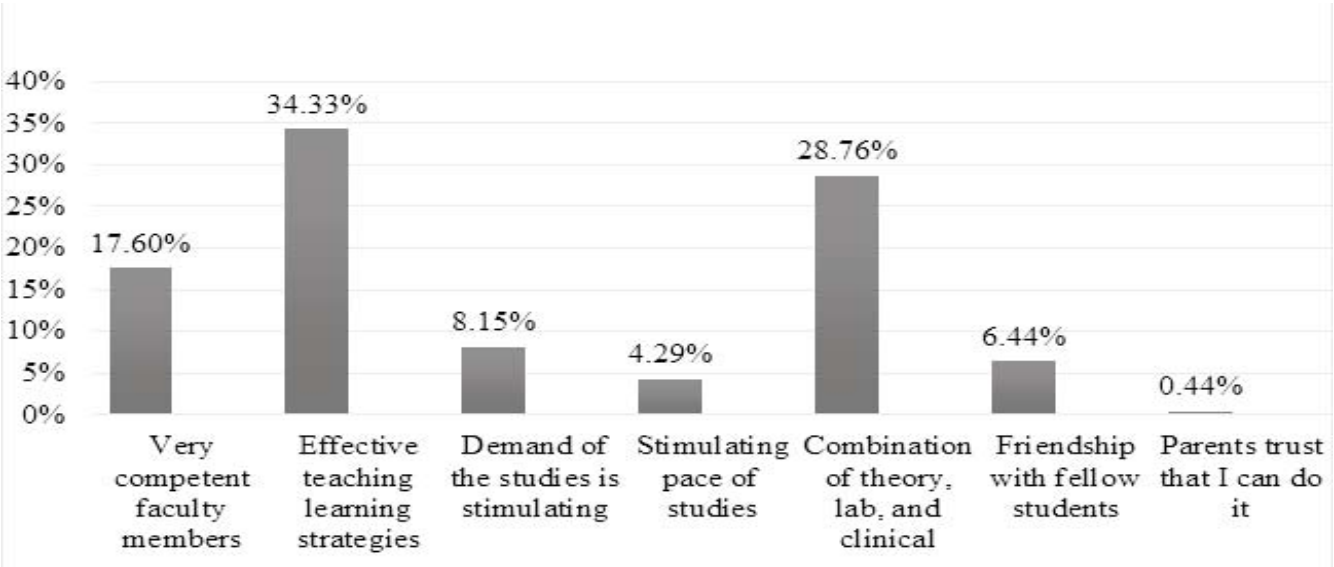

Figure-1: Factors enhancing motivation.

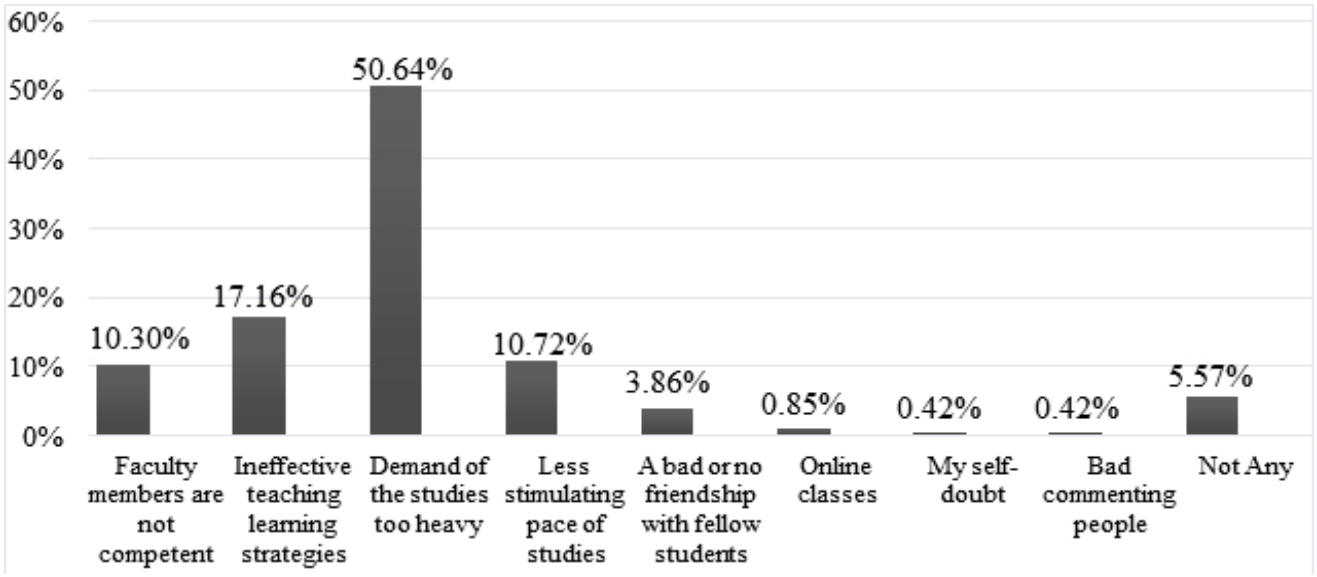

Figure-2: Factors hindering motivation.

The factors that hindered academic motivation were identified as studies that were too heavy 118(50.64%), and ineffective teaching-learning strategies 40(17.16%) (Figure 2).

Discussion

The current study showed that Year I nursing students had the highest mean motivation score, and those in the final year had the lowest mean motivation score. This finding was consistent with earlier results[15,16] showing that motivation decreased in the final year of education. This decline in the last year might be due to several factors, including the negative educational atmosphere and students' perceptions about clinical learning, insufficient feedback, negative attitude of the staff towards the students, too few educational sessions, and poor organisation of the course, leading to affecting their learning negatively.[17]

The current study revealed that the students were extrinsically motivated, and the type of motivation that obtained the highest mean motivation score was EMIdR. Fatima et al.[18], El-Sayed et al.[19] and Sivrikaya[6] also found similar results. The current results indicated that students received an education that would prepare them for their future careers. EMIdR gives a new insight to the students that enhances their future. One factor that motivates them is strengthening their theory and practice, which improves their knowledge and skills to provide holistic patient care.[1] Moreover, the leadership also expects that the professionals will perform their work with a theoretical and practical foundation; this stimulates the students to meet these expectations and improve their competencies, which will help them enter the job market easily.[18]

Consistent with the findings of Fatima et al.[18] and Javaeed et al.[7], the current study found that the students of Year I were motivated by EMExR, with the highest mean motivation score. This finding indicated that external rewards or punishment affected students' behaviour. The factors behind this kind of motivation were "parents will be proud of me", "this course prepares me for a better future", and "able to get a well-paid job". The current demographic data also revealed that the majority of the students had joined the nursing profession on their family's wish, which indicated that the students were extrinsically motivated, and actively participated in the learning activities because they may have a fear of punishment from their parents if they failed the course.[2] Moreover, most of the students came from a low socioeconomic background and had financial constraints. After completing the degree, they could secure their future by getting a well-paid job, which would help them manage financial constraints and have a happy life.[18]

Referring to the comparison of motivation among genders, the current study found that female students were more motivated than male students. Earlier studies [6,20,21] also reported similar results. One of the reasons for this higher motivation in females is the history of nursing, which portrays the nursing profession as an extension of the domestic role of women. This is one of the main reasons why men accord less value to the nursing profession.[22] The gender differences might be due to the nursing profession being considered a female-dominated

profession, and male students perceive it as a wrong career choice, which can impact their academic motivation.[23] Moreover, most male students came from different areas. This was the first experience of co-education for many of them, which could have made it difficult for them to study with female students and under the supervision of female faculty, thus making them less motivated.[24]

The current results showed a low mean motivation score for INT, which indicated that very few students were intrinsically motivated. Intrinsic motivation enables students to have a better association with learning, and they experience less exhaustion.[8] Some authors propose that autonomy should be supported to enable students to make choices during the teaching-learning process.[1] The current findings suggest that there is a need to focus on the role of the faculty and their teaching-learning strategies. They should plan their teaching-learning strategies to promote intrinsic motivation, which is the most autonomous form of motivation that engages the students in different activities to gain knowledge rather than obtain an external reward.[25] Different teaching-learning strategies can improve intrinsic motivation, including problem-based learning, small group learning, gradual increases in students' responsibilities, allowing them to take elective courses, and participating in different research activities.[1.]

The students noted that "effective teaching-learning strategies" and "combination of theory, lab and clinical" were the factors that enhanced their academic motivation. Effective teaching-learning strategies enable students to understand the learning process and perform well in their studies. Hence, different teaching-learning strategies, adopting innovative ways, can be used to increase the engagement of nursing students. These strategies include case-based studies, concept mapping, flipped classrooms, research-based projects, interactive technologies, and practice work.[26] Moreover, a combination of theory, lab and clinical also enhances their motivation. After studying the theory, skills need to be practiced in the specified skills laboratory. These skills labs provide an opportunity to practice clinical procedures in a safe and fault-forging environment before applying the skills to actual patients. In the skills lab, structured teaching-learning concepts occur under supervision, which creates an atmosphere that reduces anxiety, increases confidence levels, and allows for the risk-free practice of different skills.[21]

In the current study, most students responded that the course was very demanding and rigorous. According to Silva et al.[27], academic workload can impact physical and mental health, which may cause anxiety and lead to stress if it persists longer. There can be many reasons that make the studies too demanding and rigorous, including hectic and demanding schedules.[28] Moreover, the results also revealed that the pace of the study was less stimulating. Studies have shown that the achievements get worse as the pace of the course increases, and a fast-paced course can reduce the motivation of the students and increase their stress level.[29]

The current study has practical implications that can guide educators and institutions in enhancing academic motivation among undergraduate nursing students. Among the strengths of the study is the fact that it is among the few in Pakistan to have explored the mean motivation score of undergraduate nursing students.

However, the current study has its limitations as the subjects belonged to a single private-sector institution that may have limited the generalisability of the findings. Also, the study did not explore the long-term effects of motivation on academic performance and nursing practice.

In the light of the findings, faculty members should be encouraged to plan educational activities that promote intrinsic motivation. Different teaching-learning strategies can be used to enhance the involvement of students in educational activities. Marketing strategies and social media can be used to reach out to potential candidates who may be encouraged to join the nursing profession of their own choice, feeling motivated intrinsically. Besides, a culture of appreciation should be encouraged at the institutional level, and a formal letter of appreciation should be awarded as a tool of motivation. Lastly, group activities should be incorporated into the nursing curriculum because students' cooperation and group cohesiveness may enhance motivation.

Conclusion

Undergraduate nursing students, especially those in the final year of their academic programme, were found to be extrinsically motivated. The role of faculty members in such a scenario becomes vital in promoting intrinsic motivation through the use of different teaching-learning strategies.

Disclaimer: None.

Conflict of Interest: None.

Source of Funding: None.

References

1. Anh HP. The effect of classroom climate on student academic motivation mediated by academic self-efficacy at Hanoi Law University. Sci J Tan Trao Univ 2021;7:94-102. Doi: 10.51453/2354-1431/2021/488
2. Ryan RM, Deci EL. Intrinsic and extrinsic motivations: Classic definitions and new directions. Contemp Educ Psychol 2000;25:54-67. doi: 10.1006/ceps.1999.1020.
3. Berestova A, Kolosov S, Tsvetkova M, Grib E. Academic motivation as a predictor of the development of critical thinking in students. J Appl Res High Educ 2022;14:1041-54. doi: 10.1108/JARHE-07-2020-0243.
4. Saeedi M, Ghafouri R, Tehrani FJ, Abedini Z. The effects of teaching methods on academic motivation in nursing students: A systematic review. J Educ Health Promot 2021;10:1. doi: 10.4103/jehp.jehp_497_20.
5. Moussa MA, Amer AN. The Academic Motivation Scale: Evaluation evidence of intrinsic, extrinsic, and amotivation in Faculty of Education students. Int J Psychol Educ Stud 2024;11:283-94. doi: 10.52380/ijpes.2024.11.4.1139.
6. Sivrikaya AH. The relationship between academic motivation and academic achievement of the students. Asian J Educ Train 2019;5:309-15. doi: 10.20448/journal.522.2019.52.309.315.
7. Javaeed A, Asghar A, Allawat Z, Haider Q, Mustafa KJ, Ghauri SK. Assessment of academic motivation level of undergraduate medical students of Azad Kashmir, Pakistan. Cureus 2019;11:e4272. doi: 10.7759/cureus.4272.
8. Torbergsen H, Utvær BK, Haugan G. Nursing students' perceived autonomy-support by teachers affects their intrinsic motivation, study effort, and perceived learning outcomes. Learn Motiv 2023;81:101856. doi: 10.1016/j.lmot.2022.101856.
9. Ge JJ, Zhang P, Dong D. Can extrinsic motivational state hinder good behavior? The mediating role of ambition and competition in relationships of contingent rewards and punishments with work performance. Curr Psychol 2022;41:2162-83. doi: 10.1007/s12144-020-00704-1.
10. Hamm J, Ye PM. Factors affecting academic motivation in undergraduate nursing students: A scoping review. Nurse Educ Pract 2024;78:104135. doi: 10.1016/j.nepr.2024.104135.
11. Sharma SK, Rani R. Nurse-to-patient ratio and nurse staffing norms for hospitals in India: A critical analysis of national benchmarks. J Family Med Prim Care 2020;9:2631-7. doi: 10.4103/jfmpc.jfmpc_536_20.
12. Al-Osaimi DN, Fawaz M. Nursing students' perceptions on motivation strategies to enhance academic achievement through blended learning: A qualitative study. Heliyon 2022;8:e09952. doi: 10.1016/j.heliyon.2022.e09952.
13. Yun MR, Lim EJ, Yu B, Choi S. Effects of academic motivation on clinical practice-related post-traumatic growth among nursing students in South Korea: Mediating effect of resilience. Int J Environ Res Public Health 2020;17:4901. doi: 10.3390/ijerph17134901.
14. Hegarty N. Application of the academic motivation scale to graduate school students. J Hum Resour Adult Learn 2010;6:48-55.
15. Aktaş YY, Karabulut N. A survey on Turkish nursing students' perception of clinical learning environment and its association with academic motivation and clinical decision making. Nurse Educ Today 2016;36:124-8. doi: 10.1016/j.nedt.2015.08.018.
16. Pramilaa P. Self-motivation among B.Sc nursing students: A comparative study. Int J Nurs Educ 2016;8:82-6. doi: 10.5958/0974-9357.2016.00054.6.
17. Dolmans D, Wolfhagen I, Heineman E, Scherpbier AJ. Factors adversely affecting student learning in the clinical learning environment: A student perspective. Educ Health (Abingdon) 2008;21:32. doi: 10.4103/1357-6283.125992.
18. Fatima M, Ahmed S, Jokhio PB, Rind A, Haroon RM, Malhi LD. Evaluating nursing students' academic motivation through academic motivational scale: A cross-sectional study of two colleges. J Liaquat Univ Med Health Sci 2021;59:44-7.
19. El-Sayed MM, Taha SM, Abdelhay ES, Hawash MM. Understanding the relationship of academic motivation and social support in graduate nursing education in Egypt. BMC Nurs 2024;23:12. doi: 10.1186/s12912-023-01565-7.
20. Grande RA, Berdida DJ, Cruz JP, Cometa-Manalo RJ, Balace AB, Ramirez SH. Academic motivation and self-directed learning readiness of nursing students during the COVID-19 pandemic in three countries: A cross-sectional study. Nurs Forum 2022;57:382-92. doi: 10.1111/nuf.12723.
21. Bugaj T, Nikendei C. Practical clinical training in skills labs: Theory and practice. GMS J Med Educ 2016;33:Doc63. doi: 10.3205/zma001061.
22. Evans J, Frank B. Contradictions and tensions: Exploring relations of masculinities in the numerically female-dominated nursing profession. J Men's Stud 2003;11:277-92. doi: 10.3149/jms.1103.277.
23. Prosen M. Nursing students' perception of gender-defined roles in nursing: A qualitative descriptive study. BMC Nurs 2022;21:104. doi: 10.1186/s12912-022-00885-9.
24. Clark I. Co-education and gender: The end of the experiment? Educ Policy Anal Arch 2004;12:41. doi: 10.14507/epaa.v12n41.2004.
25. Malone TW, Lepper MR. Making learning fun: A taxonomy of intrinsic motivations for learning. In: Snow RE, Federico P, Montague WE, Farr MJ, eds. Aptitude, Learning and Instruction 3 Volume Set, 1st ed. London, UK: Routledge, 2021; pp 223-54.
26. Khan S, Iqbal S. Innovative ways of student engagement for active learning in science courses of nursing in the four year baccalaureate programme. J Pak Med Assoc 2021;71:1644-7. doi: 10.47391/JPMA.308.
27. Silva GO, Aredes ND, Galdino-Júnior H. Academic performance, adaptation and mental health of nursing students: A cross-sectional study. Nurse Educ Pract 2021;55:103145. doi: 10.1016/j.nepr.2021.103145.
28. Koudela-Hamila S, Santangelo PS, Ebner-Priemer UW, Schlotz W. Under which circumstances does academic workload lead to stress? J Psychophysiol 2022;36:74-87. doi: 10.1027/0269-8803/a000277.
29. Elizondo-Omaña RE, García-Rodríguez MD, Morales-Gómez JA, Guzmán-López S. Study pace as a factor that influences achievement in a human anatomy course. Anat Sci Educ 2006;6:134-8. doi: 10.1002/ase.1252.

AUTHOR'S CONTRIBUTION:
MZA: Concept, data analysis, investigation, methodology, validation, writing and original draft preparation.
KA: Concept, investigation, validation, writing and supervision in original draft preparation.
WZ & ZS: Methodology, writing and supervision.
SMS: Data analysis and writing.