From Silence to Voice: Predictors of Classroom Engagement Among Nursing Students in Sindh

Rubina Dean[1], Fatima Soomro[2], Shaneela Khowaja[3], Parveen Akhtar[4], Amber Halepoto[5] and Faryal Victoria Parvaiz[6]

https://doi.org/10.62345/jads.2025.14.3.55

Abstract

Classroom engagement is central to effective nursing education, yet many students remain silent due to psychological, linguistic, and contextual barriers. Evidence from low- and middle-income countries remains limited, highlighting the need to explore predictors of participation in nursing classrooms. This cross-sectional study investigated predictors of classroom engagement and barriers to participation among 200 undergraduate nursing students in Sindh, Pakistan, using validated questionnaires on student engagement, classroom environment, and perceived barriers. Data were analysed with descriptive statistics, Pearson correlation, multiple regression, and one-way ANOVA. Most students were female (67.5%) and aged 18–23 years (82.5%). Confidence emerged as the strongest predictor of participation ($\beta = .38$, $p < .01$), followed by interactive teaching ($\beta = .29$, $p < .01$) and classroom environment ($\beta = .25$, $p = .01$). Barriers included shyness (70.0%), fear of peer judgment (60.0%), and language difficulties (52.5%). Participation increased significantly with academic year ($F = 4.12$, $p = .007$), with fourth-year students reporting higher engagement than first-year students. Findings reinforce Bandura's Social Cognitive Theory by demonstrating the reciprocal role of self-efficacy, environment, and pedagogy in shaping classroom behaviour. Multi-level interventions, including confidence-building, language support, interactive pedagogy, and curricular reforms, are needed to move nursing students "from silence to voice" in higher education.

Keywords: Student Engagement, Classroom Participation, Nursing Education, Language Barriers.

Introduction

Classroom participation is a cornerstone of practical nursing education. Engaged students not only achieve better academic performance but also develop communication, critical thinking, and clinical reasoning skills essential for professional practice (Chan et al., 2021). However, many nursing students remain silent during discussions, particularly in low- and middle-income countries (LMICs), where cultural norms, language barriers, and institutional challenges restrict active engagement (Lo, 2020). To address these challenges, it is important to ground the study in

[1]*Senior Lecturer, People's Nursing School, Liaquat University of Medical and Health Sciences, Jamshoro. Corresponding Author Email: fatima.soomro@lumhs.edu.pk*
[2]*People's Nursing School, Liaquat University of Medical and Health Sciences, Jamshoro.*
[3]*People's Nursing School, Liaquat University of Medical and Health Sciences, Jamshoro.*
[4]*People's Nursing School, Liaquat University of Medical and Health Sciences, Jamshoro.*
[5]*Lecturer, People's Nursing School, Liaquat University of Medical and Health Sciences, Jamshoro.*
[6]*Jamshoro College of Nursing, Liaquat University of Medical and Health Sciences, Jamshoro, Pakistan.*

Compliance with ethical standards: There are no conflicts of interest (financial or non-financial). This study did not receive any funding.

a theoretical perspective that explains how individual and environmental factors interact to influence classroom behaviour.

Bandura's Social Cognitive Theory (SCT) offers a comprehensive framework for understanding student engagement. SCT posits that human behaviour is shaped through reciprocal determinism, the dynamic interaction between personal factors, environmental influences, and behaviours (Bandura, 1986). In the classroom context, students' confidence and self-efficacy (personal factors) influence their willingness to participate (behavioural outcome), while teaching strategies and peer responses (environmental factors) either encourage or inhibit such participation. For instance, when students believe in their ability to articulate ideas (high self-efficacy) and are supported by interactive pedagogy, they are more likely to engage actively. Conversely, when fear of peer judgment or language difficulties undermines self-efficacy, students may withdraw into silence, despite being academically prepared.

This theoretical framework also explains how faculty encouragement and classroom climate serve as mediating environmental factors that reinforce participation. Positive reinforcement, such as validation of student input, strengthens self-efficacy, creating a cycle of increasing engagement. On the other hand, dismissive responses or rigid pedagogies can weaken confidence and perpetuate disengagement. Thus, SCT provides a valuable lens for examining the predictors of classroom participation by highlighting how psychological confidence, pedagogical style, and environmental supports interact to shape nursing students' classroom behaviour.

In Pakistan, nursing education faces added complexities, including reliance on English as the primary medium of instruction, overcrowded classrooms, and lecture-dominated teaching methods. While these structural challenges create barriers, SCT suggests that confidence-building, interactive pedagogy, and supportive classroom environments can empower students to move "from silence to voice." Guided by this framework, the present study examines demographic, psychological, and contextual predictors of classroom engagement among undergraduate nursing students in Sindh, Pakistan. Specifically, it aims to identify key predictors of engagement, describe common barriers to participation, and assess variations across academic years.

Methodology

Study Design

A cross-sectional design was employed to examine predictors of classroom engagement among undergraduate nursing students. This design was appropriate for identifying associations between psychological, pedagogical, and contextual factors at a single point in time.

Setting and Participants

The study was conducted at People's Nursing School, Liaquat University of Medical and Health Sciences (LUMHS), Jamshoro, a leading public-sector institution in Sindh, Pakistan. A total of 200 Bachelor of Science in Nursing (BSN) students were recruited using purposive sampling, ensuring proportional representation from all four academic years.

Inclusion criteria were: (i) enrollment in the BSN program with at least one semester completed, (ii) ability to understand English, and (iii) willingness to provide informed consent.

Exclusion criteria included: (i) exclusive enrollment in online programs, (ii) academic leave during the study period, and (iii) incomplete questionnaires with more than 20% missing data.

Sample Size

The sample size was estimated using Cochran's formula with a 95% confidence level, a 5% margin of error, and a population proportion of 0.5. After applying the finite population correction for 200

students, the minimum required sample size was 135. To improve reliability and account for potential non-response, 200 students were ultimately included in the analysis.

Instruments

Data were collected using two validated instruments:

Student Engagement Survey – adapted from the National Survey of Student Engagement (NSSE) and Course Experience Questionnaire (CEQ), measuring academic preparation, self-efficacy, verbal confidence, and participation.

Classroom environment cshecklist – assessing physical, social, and technological aspects of the classroom environment (e.g., seating, inclusivity, noise, access to resources). A panel of experts for content validity reviewed both instruments. Pilot testing with 10 students confirmed clarity, yielding Cronbach's α values greater than 0.80 across all scales.

Data Collection Procedure

Following institutional ethical approval, data were collected between July and September 2025. Students were approached in classrooms and informed about the study objectives. Written informed consent was obtained prior to participation. Questionnaires were administered in either paper or electronic format, depending on the availability of institutional resources.

Data Analysis

The data were analysed using IBM SPSS Statistics version 29. Descriptive statistics (frequencies, percentages, means, and standard deviations) summarised demographic and study variables. Pearson's correlation was used to test associations between predictors and participation; multiple linear regression identified independent predictors of engagement. One-way ANOVA with Tukey's post hoc test was conducted to assess differences in participation across academic years. A p-value $< .05$ was considered statistically significant.

Ethical Considerations

The study was approved by the Research Ethics Committee of Liaquat University of Medical and Health Sciences (Approval No. LUMHS/REC/-898, dated July 22, 2025). Anonymity and confidentiality were maintained through coded responses and secure data storage. Students were informed of their right to withdraw at any stage without academic penalty.

Results

A total of 200 undergraduate nursing students from the People's Nursing School, LUMHS, participated in the study, resulting in a 100% response rate. The results are presented in four parts: (a) demographic characteristics, (b) student classroom engagement profile, (c) barriers to participation, and (d) statistical analyses including correlations, regression, and comparisons across academic years.

Demographic Characteristics of Students

The demographic profile of participants is presented in Figure 1 and Table 1. Most were female (67.5%) and aged 18–23 years (82.5%). By study year, 30.0% were in the first, 25.0% in the second, 27.5% in the third, and 17.5% in the fourth. Nearly half (42.5%) lived in hostels, 35.0% with family, and 22.5% independently. Over half (52.5%) belonged to nuclear families, with 30.0% from extended and 17.5% from single-parent households. A majority (60.0%) reported a

monthly income of less than 50,000 PKR. Fathers were most often educated to the primary level or below (35.0%), while mothers were mainly homemakers (75.0%).

Figure 1: Gender distribution of the Nursing Students

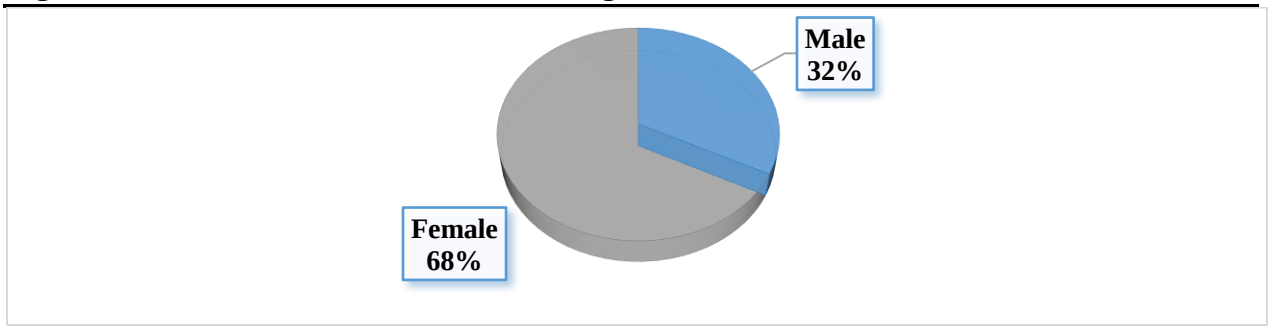


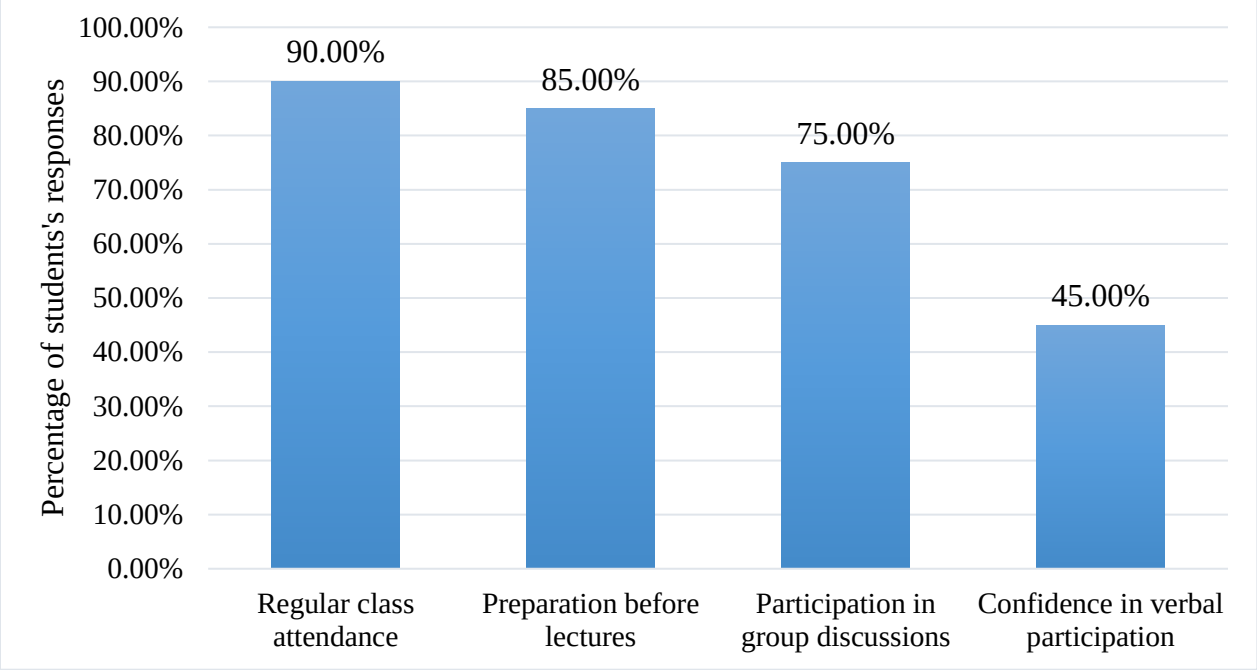
Table 1: Demographic and Family Background of Nursing Students (N = 200)

Variable	Category	n (%)
Age (years)	< 18	15 (7.5%)
	18–23	165 (82.5%)
	24–29	20 (10.0%)
Year in program	First year	60 (30.0%)
	Second year	50 (25.0%)
	Third year	55 (27.5%)
	Fourth year	35 (17.5%)
Living arrangement	Hostel	85 (42.5%)
	Family	70 (35.0%)
	Independent/shared housing	45 (22.5%)
Family structure	Nuclear	105 (52.5%)
	Extended/joint	60 (30.0%)
	Single parent	35 (17.5%)
Monthly household income	< 50,000 PKR	120 (60.0%)
	50,000–100,000 PKR	60 (30.0%)
	> 100,000 PKR	20 (10.0%)
Father's education	Primary or below	70 (35.0%)
	Secondary/matric	40 (20.0%)
	Higher secondary	30 (15.0%)
	Bachelor's degree	45 (22.5%)
	Master's degree or above	15 (7.5%)
Father's occupation	Government service	50 (25.0%)
	Semi-government service	20 (10.0%)
	Private sector	40 (20.0%)
	Self-employed	35 (17.5%)
	Unemployed	55 (27.5%)
Mother's occupation	Homemaker	150 (75.0%)
	Government employee	20 (10.0%)
	Private sector	15 (7.5%)
	Self-employed	10 (5.0%)
	Semi-government employee	5 (2.5%)

Student Classroom Engagement Profile

Engagement indicators are summarized in Figure 2**.** The majority of students reported regular class attendance (180, 90.0%) and preparation before lectures (170, 85.0%). Group discussion participation was also high (150, 75.0%). However, verbal confidence was much lower, with only 90 (45.0%) feeling comfortable speaking in class. Frequent distraction was reported by 60 (30.0%) students.

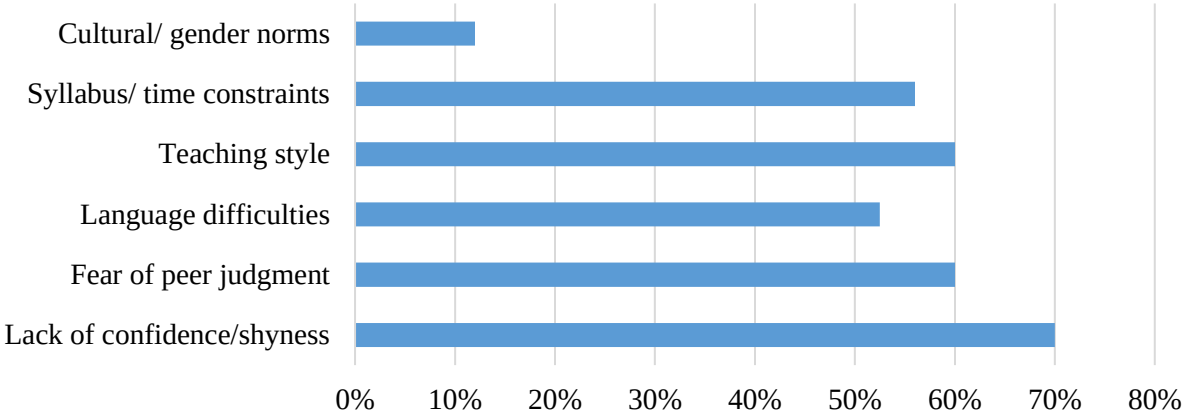
Figure 2: Student Classroom Engagement Indicators (N = 200)



Barriers to Participation: Student Perspective

Perceived barriers are shown in figure 3**.** The most common challenges included lack of confidence/shyness (140, 70.0%), fear of peer judgment (120, 60.0%), and language difficulties (105, 52.5%). Teaching style (120, 60.0%) and syllabus/time constraints (112, 56.0%) were also reported as significant barriers. Cultural and gender norms were cited by only 24 (12.0%) students.

Figure 3: Barriers to Classroom Participation Reported by Students (N = 200)



	Lack of confidence/ shyness	Fear of peer judgment	Language difficulties	Teaching style	Syllabus/ time constraints	Cultural/ gender norms
Perentage of students' responses	70%	60.00%	52.50%	60.00%	56.00%	12.00%

Bivariate Correlations

Correlation analysis indicated that student confidence was positively correlated with participation ($r = 0.46$, $p < .01$), as was faculty encouragement ($r = 0.41$, $p < .01$). Language difficulties were negatively correlated with participation ($r = –0.32$, $p = .03$).

Table 2: Correlations Between Key Predictors and Classroom Participation (N = 200)

Variable	r	p-value
Student confidence	0.46	< .01
Faculty encouragement	0.41	< .01
Language difficulties	–0.32	.03

Regression Analysis

Multiple linear regression identified student confidence ($\beta = 0.38$, $p < .01$), perceived interactive teaching ($\beta = 0.29$, $p < .01$), and classroom environment ($\beta = 0.25$, $p = .01$) as significant independent predictors of participation. Together, these explained 42.0% of the variance in participation (adjusted $R^2 = 0.42$).

Table 3: Multiple Linear Regression Predicting Classroom Participation (N = 200)

Predictor	β	95% CI	p-value
Student confidence	0.38	0.24–0.52	< .01
Perceived interactive teaching	0.29	0.14–0.44	< .01
Classroom environment	0.25	0.06–0.44	.01

Comparison Across Academic Years

One-way ANOVA revealed significant differences in participation by year of study ($F(3,196) = 4.12$, $p = .007$). Post hoc analysis showed that fourth-year students reported significantly higher participation than first-year students ($p = .01$). No significant differences were observed between second- and third-year students.

Table 4: One-Way ANOVA of Classroom Participation by Academic Year (N = 200)

Source	df	F	p-value
Between groups	3	4.12	.007
Within groups	196	—	—
Total	199	—	—

Discussion

This study examined the predictors of classroom engagement among undergraduate nursing students in Sindh, Pakistan, and demonstrated that a combination of psychological, pedagogical, and contextual influences shapes participation. The regression results showed that confidence ($\beta = 0.38$), interactive teaching ($\beta = 0.29$), and classroom environment ($\beta = 0.25$) collectively and significantly predicted participation, explaining 42% of the variance. This finding directly supports Bandura's Social Cognitive Theory (1986), which posits that self-efficacy, environmental reinforcement, and behaviour operate in continuous interaction. Students who felt confident and were exposed to interactive pedagogy in supportive classrooms engaged more actively, highlighting the importance of both personal and environmental determinants. Similar associations between self-efficacy and engagement have been reported among nursing students in Korea (Kim & Park, 2019) and in Saudi Arabia (Albaqawi et al., 2025), reinforcing the generalizability of these findings across contexts.

The correlation analysis further demonstrated that both confidence ($r = 0.46$, $p < 0.01$) and faculty encouragement ($r = 0.41$, $p < 0.01$) were positively associated with participation. At the same time, language difficulties were negatively correlated ($r = –.32$, $p = .03$). These results again align with SCT's notion of reciprocal determinism, where verbal persuasion and environmental facilitation build self-efficacy, but perceived barriers erode it. Similar patterns were observed in a Chinese study, where language anxiety and limited faculty support significantly hindered students' willingness to participate in classroom discussions (Luo et al., 2021). Conversely, a study in Ethiopia reported that faculty encouragement alone was insufficient to foster engagement when class sizes were large and teaching methods remained lecture-dominated (Mekonnen et al., 2020), suggesting that environmental interventions must be paired with strategies to enhance student self-belief.

Demographic characteristics also offer important insights. The majority of students were female (67.5%) and aged 18–23 years (82.5%), reflecting the feminisation of the nursing profession. Although gender was not a direct predictor in this study, research indicates that women in collectivist cultures may experience greater anxiety and reduced self-efficacy in mixed-gender academic environments (Omer et al., 2021). Additionally, 60% of students reported household incomes below 50,000 PKR, and most mothers were homemakers (75%), suggesting socioeconomic factors could limit exposure to confidence-building opportunities. SCT explains that such contextual realities influence not only personal self-efficacy but also outcome expectations; students from lower-income households may perceive fewer academic rewards for active participation. Comparable findings were noted in Nepal, where socioeconomic status

influenced the willingness of medical and nursing students to contribute in class (Paudel & Subedi, 2022).

The ANOVA results indicated that participation increased significantly with academic progression ($F = 4.12$, $p = .007$), with fourth-year students reporting higher engagement than first-year students. SCT's concept of mastery experiences offers a compelling explanation: as students accumulate successful participation and clinical exposure, they strengthen their self-efficacy, making engagement more likely. Studies in Iran and Turkey have confirmed that senior nursing students demonstrate greater self-efficacy and participation than their junior counterparts, mainly due to the repeated mastery experiences they undergo (Bazrafkan et al., 2023; Karabacak et al., 2019). This finding suggests that early interventions—such as structured peer mentoring, confidence-building workshops, and small-group interactive sessions—may help accelerate mastery experiences for junior students.

The barriers identified in this study—shyness (70%), fear of peer judgment (60%), language difficulties (52.5%), teaching style (60%), and syllabus overload (56%)—are consistent with international literature. For example, Lo (2020) noted that multilingual learning environments often suppress participation, while Alshareef et al. (2020) found that Saudi nursing students in English-medium institutions reported fear of making errors as a significant barrier to classroom interaction. Contradictory findings, however, emerge from high-income countries, where structural barriers, such as teaching style and curriculum overload, were less influential, and psychological readiness played a larger role (Balan et al., 2019). These differences highlight the contextual variation that SCT accounts for: while the triadic factors remain constant, the strength of each pathway varies across different cultural and institutional settings.

Taken together, the results confirm that confidence and supportive pedagogy are universal drivers of engagement, but cultural, socioeconomic, and linguistic realities strongly shape how these drivers manifest in Pakistan. By situating the findings within Bandura's Social Cognitive Theory, this study underscores that interventions must address all three reciprocal determinants—personal self-efficacy, behavioural reinforcement, and environmental support—to shift nursing students "from silence to voice sustainably."

Conclusion

Classroom participation among undergraduate nursing students is shaped by confidence, teaching style, and classroom environment, while barriers include language difficulties and fear of peer judgment. Engagement increased with academic progression, emphasising the role of experience. Multi-level interventions, student confidence support, faculty training, and institutional reforms are needed to create equitable and empowering learning environments that prepare students for professional practice.

Strengths and Limitations

The strengths of this study include the use of validated instruments, robust statistical analyses, and the integration of both psychological and contextual dimensions. However, limitations include its cross-sectional design, reliance on self-reported data, and restriction to a single institution, which may limit the generalizability of the findings. Future research should adopt longitudinal designs and involve multiple institutions to gain broader insights.

Implications for Nursing Education

This study highlights the need to add more multi-level strategies to strengthen classroom participation. At the student level, confidence-building and self-awareness programs should be

embedded in curricula. Faculty must adopt interactive teaching methods and create inclusive learning environments, while institutions should address curriculum overload, provide language support, and promote students' psychosocial well-being. Collectively, these measures can help nursing students move "from silence to voice."

References

- Abusubhiah, M., Dsouza, M. S., Al-Ghareeb, A., D'Souza, S., & Sreedharan, J. (2023). Self-efficacy in the context of nursing education and transition to practice: A systematic review. *BMC Nursing, 22,* 241. https://doi.org/10.1186/s12912-023-01334-3
- Albaqawi, H. M., Alquwez, N., Balbaid, M., Alosaimi, D., & Almazan, J. (2025). Exploring the impact of self-efficacy, social support, and learning environment on clinical performance anxiety in student nurses. *Scientific Reports, 15*(1), 93400. https://doi.org/10.1038/s41598-025-93400-y
- Alshareef, A. G., Alzahrani, F. A., Aldamigh, O. S., Alghamdi, R. A., & Alzahrani, A. A. (2020). Barriers to classroom participation among Saudi nursing students in English-medium programs. *BMC Nursing, 19,* 87. https://doi.org/10.1186/s12912-020-00485-7
- Arribas-Marín, J., Plumed-Moreno, C., & Hernández-Franco, V. (2024). Self-Efficacy in Nursing Competencies during Students' Clinical Practicum: The Development of a Self-Assessment Scale. *Nursing Reports, 14*(3), 2327–2339. https://doi.org/10.3390/nursrep14030173
- Balan, R., Clark, C., & Restall, G. (2019). Student participation and engagement in higher education: A study in Canadian nursing classrooms. *Journal of Nursing Education, 58*(3), 142–149. https://doi.org/10.3928/01484834-20190221-04
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Barkhordari-Sharifabad, M., Alipour, Z., & Jahantab, R. (2025). The role of reflective capacity in clinical self-efficacy of nursing students: A cross-sectional study. *BMC Medical Education, 25,* 614. https://doi.org/10.1186/s12909-025-07201-y
- Bazrafkan, L., Panahian, R., & Zarifsanaiey, N. (2023). The effect of flipped approach in teaching critical respiratory care among nurses during the COVID-19 era. *BMC Research Notes, 16,* 44. https://doi.org/10.1186/s13104-023-06311-4
- Chan, Z. C. Y., Wong, W. Y., & Lam, W. (2021). Student engagement and self-efficacy in nursing education: An integrative review. *Nurse Education Today, 104,* 104985. https://doi.org/10.1016/j.nedt.2021.104985
- Karabacak, Ü., Serbest, Ş., Kan Öntürk, Z., Olgun, N., & Eti Aslan, F. (2019). The relationship between self-efficacy perceptions and academic achievement of nursing students. *Nurse Education Today, 79,* 35–40. https://doi.org/10.1016/j.nedt.2019.05.010
- Kim, Y., & Park, H. (2019). Academic self-efficacy and classroom participation among nursing students: A cross-sectional study. *Journal of Professional Nursing, 35*(6), 447–452. https://doi.org/10.1016/j.profnurs.2019.07.002
- Lal, C., Imdad, P., Soomro, F., Khatoon, J., Ali, R., & Shahok, S. (2025). Impact of COVID-19 lockdowns on clinical skills and mental health of nursing undergraduates in Sindh, Pakistan. *Journal of Medical & Health Sciences Review, 2*(3). [In press]
- Lo, C. (2020). Language barriers and participation challenges among nursing students in multilingual contexts. *International Journal of Nursing Education Scholarship, 17*(1), Article 3. https://doi.org/10.1515/ijnes-2020-0003
- Luo, Y., Wang, H., & Yang, Y. (2021). The relationship between foreign language classroom anxiety, motivation, and participation in Chinese nursing students. *BMC Medical Education, 21,* 293. https://doi.org/10.1186/s12909-021-02720-3

- Mekonnen, B., Tadesse, T., & Fekadu, T. (2020). Factors influencing student classroom participation in Ethiopian universities: A cross-sectional study. *BMC Medical Education, 20,* 276. https://doi.org/10.1186/s12909-020-02179-3
- Omer, T. A., Alhosani, M., & Al Qubaisi, A. (2021). Gender differences in self-efficacy and academic engagement among nursing students in collectivist cultures. *Nurse Education Today, 103,* 104944. https://doi.org/10.1016/j.nedt.2021.104944
- Paudel, S., & Subedi, R. (2022). Socioeconomic status and academic engagement among Nepalese nursing and medical students. *BMC Nursing, 21,* 132. https://doi.org/10.1186/s12912-022-00888-0
- Soomro, N. N., Ali, T. S., Imdad, P., & Khowaja, K. A. (2025). Self-awareness and psychosocial correlates among undergraduate nursing students: A multicenter cross-sectional study. *Journal of Asian Development Studies, 14*(3), 204–211.
- Spaic, D., Juraschek, K., Tokic, A., & Fischer, M. R. (2025). The flipped classroom in medical education: Systematic review and meta-analysis. *Journal of Medical Internet Research, 27*(1), e60757. https://doi.org/10.2196/60757
- Yiin, S. J., Shen, K. P., Lai, C. L., & Liang, J. C. (2024). An evaluation of nursing students' learning self-efficacy: A multidimensional instrument development and structural validation. *Nurse Education Today, 135,* 106118. https://doi.org/10.1016/j.nedt.2024.106118
- Zhang, X., Zhou, C., Huang, C., & Chen, J. (2024). Effect of stress on study skills self-efficacy in nursing students: Mediating role of self-directed learning. *BMC Nursing, 23,* 122. https://doi.org/10.1186/s12912-024-02500-z