

Relation between Cultural Intelligence and Academic Communication among Nursing Students

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Abstract

Background: Cultural diversity has become an integral part of educational settings, particularly in the nursing profession, in which cultural intelligence plays a pivotal role in helping nursing students augment their academic communication skills. **Aim of the study:** To assess the relation between cultural intelligence and academic communication among nursing students. **Research design:** A descriptive-correlational design was applied. **Setting:** The study was conducted at the Faculty of Nursing at Tanta University. **Subjects:** The total sample was 1085 nursing students in each academic year of 2023-2024. **Tools:** Three tools were used: nursing students' cultural intelligence questionnaire, nursing students' academic communication skills questionnaire, and nursing students' academic communication obstacles questionnaire. **Results:** More than half (51.2%) of nursing students had a moderate perception level of cultural intelligence. More than half (58.6%) of nursing students had a moderate level of academic communication skills. The students' barriers were the most common obstacles to academic communication. **Conclusion:** There was a highly positive significant correlation between nursing students' cultural intelligence and their academic communication skills. **Recommendations:** The faculty of nursing should integrate cultural intelligence into the nursing curriculum focused on knowledge and skills to develop cultural competence, as well as nursing students should seek learning opportunities to learn about different cultures through reading books and attending cultural events.

Keywords: Academic communication, Cultural intelligence, Nursing students.

Introduction

Every area of life has been revolutionized by digital technologies; this exposes educational organizations and nursing students to culturally diverse workforces that demand efficient management and motivates them to develop more resilient coping strategies for emerging obstacles (**Monteiro & Joseph, 2023**). Therefore, it is imperative to cultivate nursing students' cultural intelligence to thrive in the modern globalized world (**Larsen, Mangrio, & Persson, 2021**).

Cultural intelligence (CQ) is defined as one's ability to learn new styles of cultural interaction and respond properly in unfamiliar cultural situations (**Rajaram, 2023**). Through CQ, nursing students can collaborate to create an effective academic environment (**Phanphairoj, 2021**). CQ benefits nursing students by refining their academic performance in diverse environments through effective adjustment and augmented personal trust (**Li & Middlemiss, 2022**).

CQ consists of four interrelated components: metacognitive, cognitive, motivational, and behavioral. Metacognitive cultural intelligence (MCQ) is a set of intellectual processes that enable nursing students to acquire and comprehend cultural knowledge and self-control over their thought patterns to learn about a variety of cross-cultural scenarios (**Fietz, Hillmann & Guenther, 2021**). Cognitive cultural intelligence (CCQ) refers to general knowledge, frameworks of cultures, and cultural differences. It includes gathering and preserving information about distinct cultures for future use (**Senel, 2020**).

Motivational cultural intelligence (MoCQ) is the ability of nursing students to focus their attention and energy on understanding and navigating culturally diverse environments (**Livermore, Van Dyne & Ang, 2022**). Behavioral cultural intelligence (BCQ) reflects nursing students' ability to adapt their conduct to suit various cultural circumstances (**Bakhtiari, Hanifi & Varjoshani, 2023**).

The faculty of nursing plays a vital role in producing graduates who possess not just the academic credentials but also the skills necessary to compete in the global marketplace. One of the most important abilities of university nursing students is communication (**Wawrosz & Jurasek, 2021**). Academic communication includes effectively and successfully presenting ideas, thoughts, and knowledge in a scholarly setting (**Goyanes & de-Marcos, 2020**). Academic communication refers to highly structured communication techniques that are typically limited to use in educational settings, which enable nursing students to overcome concerns and misunderstandings while also sharing their thoughts and experiences (**Munna & Kalam, 2021**). Furthermore, it is significantly beneficial to nursing students' engagement and success in academic life (**Fuchshuber & Greif, 2022**).

Academic communication involves verbal and nonverbal forms in addition to listening skills. Nursing students can convey messages to others by speaking and exchanging knowledge verbally (**Gottardello & Karabag, 2022**). The art of communicating nonverbally involves using body language and gestures in place of spoken words.

These movements may or may not be accompanied by words, which are performed deliberately or involuntarily (Lee, Dastpish, Freemon & Parks, 2023).

However, academic communication obstacles in the classroom can significantly impede nursing students' learning experiences and hinder their academic progress (Eskicumali, Kara, Arslan & Uzun, 2020). Academic communication obstacles may appear in the form of physical, psychological, language, faculty, and student-related barriers. Physical barriers include unsuitable temperatures in the classroom terraces that hinder interactions.

Psychological barriers reflect nursing students' anxiety, stress, illness, and introversion that inhibit their willingness to participate actively in classroom discussions. Faculty barriers indicate their poor self-confidence and ability weakness in scientific material during the teaching process (Hood, Barrickman, Djerdjian, Farr, Magner et al., 2021). Language barriers emerge due to an absence of mutual linguistic competence between educators and nursing students, making it challenging to express ideas accurately (Gaynor, 2020). Student-related barriers point to their unwillingness to lecture and low motivation for students' education (Alenezi, Wardat & Akour, 2023).

Significance of study

The multicultural composition of the community in a university environment obligates the nursing students to meet and interact with individuals from various cultural backgrounds (Cerdin & Akkan, 2023). Therefore, nursing students require special skills, in

particular CQ, because it's essential academic competence for the 21st century. It permits nursing students to understand, create good relationships with others, communicate effectively, evaluate their own and others' behaviors, and effectively listen. Actually, demonstrating culturally intelligent behavior is necessary to overcome the challenges posed by cross-cultural exchanges. Thus, this study will be directed at studying cultural intelligence and academic communication among nursing students.

Aim of the study

To assess the relation between cultural intelligence and academic communication among nursing students.

Research Questions

1. What are the levels of cultural intelligence and academic communication among nursing students?
2. What is the relation between cultural intelligence and academic communication among nursing students?

Research design:

A descriptive-correlational design was used in the present study.

Study setting:

The current study was carried out at Tanta University's Faculty of Nursing includes seven departments Medical and Surgical Nursing, Critical Care and Emergency, Nursing Obstetric, Pediatric Nursing, Community Health Nursing, Psychiatric and Mental Health Nursing, and Nursing Administration Department.

Subjects:

The study's subjects were selected by proportionate stratified random

sampling. In this study, each academic year was designated as a distinct stratum, and the selection of the sample was executed in accordance with the relative number of nursing students enrolled in each academic year of 2023/2024. The total study sample was calculated using the Epi. Info. Software statistical package, where N = population size (3887), Z = confidence level at 95% (1.96), and d = margin of error proportion (0,05). The total sample was 1085 out of 3887 nursing students from different academic years enrolled during data collection time.

Tools of data collection:

The study's data was collected using the following three tools:

Tool I: Nursing Students' Cultural Intelligence Questionnaire (NSCQQ)

This tool was developed by the investigator guided by relevant literature reviews (Khan & Hasan, 2016; Bucker, Furrer & Lin, 2015) to assess the nursing students' perceptions of CQ. It consisted of two parts as follows:

Part (1): Nursing students' personal data: This part included age, gender, academic year, residence, system of studying, and previous academic achievement.

Part (2): Cultural Intelligence Questionnaire: It included 17 items divided into four dimensions as follows:

- **Metacognitive cultural intelligence:** It included 4 items.
- **Cognitive cultural intelligence:** It included 5 items.
- **Motivational cultural intelligence:** It included 4 items.
- **Behavioral cultural intelligence:** It included 4 items.

Scoring system:

Nursing students' responses were measured on a five-point Likert Scale ranging from (5) strongly agree to (1) strongly disagree. The total scores were calculated by cut-off points as follows:

- High cultural intelligence level >75%.
- Moderate cultural intelligence level 60% - 75%.
- Low cultural intelligence level <60%.

Tool II: Nursing Students' Academic Communication Skills Questionnaire.

This tool was developed by the investigator guided by related literature reviews (Eskicumali et al., 2020; Alhomari, 2017) to assess nursing students' academic communication skills. It included 32 items divided into three dimensions as follows:

- **Verbal communication skills:** It included 14 items.
- **Nonverbal communication skills:** It included 13 items.
- **Listening communication skills:** It included 5 items.

Scoring system:

Nursing students' responses were measured on a five-point Likert Scale ranging from 5-1, where (5) Strongly agree to (1) Strongly disagree. The total scores were calculated by cut-off points as follows:

- High level of academic communication skills >75%.
- Moderate level of academic communication skills 60% - 75%.
- Low level of academic communication skills <60%.

Tool III: Nursing Students' Academic Communication Obstacles Questionnaire.

This tool was developed by the investigator based on relevant literature

reviews (**Bukhari, Kalhor, Lashari, Soomro, Batool et al., 2023; Gula, 2022**) to assess the nursing students' academic communication obstacles. It included 27 items divided into five dimensions as follows:

Physical barriers included 6 items.

Psychological barriers included 4 items.

Language barriers included 4 items.

Faculty barriers included 8 items.

Students' barriers included 5 items.

Scoring system:

Nursing students' responses were measured on a five-point Likert Scale ranging from (5) always to (1) never. A sum of scores for each respondent was calculated to determine the most frequent barriers influencing academic communication among nursing students based on the number of participants' responses.

Method:

1. Official permission was obtained from the Dean of the Faculty of Nursing and all heads of academic departments.
2. **Ethical considerations:**
 - a) An approval from the Scientific Research Ethical Committee at the faculty of nursing was obtained with the code number (323)-11-2023.
 - b) The nature of the study wasn't causing harm to the entire sample.
 - c) Informed consent was obtained from nursing students after an explanation of the study's aim.
 - d) Confidentiality and anonymity were maintained regarding data collection and participants had the right to withdraw.
3. Tools I, II, and tool III were translated into Arabic and presented to a jury of five experts in the area of specialty to check their content validity and clarity of the questionnaire. The experts were

two professors and three assistant professors of nursing administration from the Faculty of Nursing at Tanta University.

4. The experts' responses were represented in a four-point rating scale ranging from (4) strongly relevant to (1) not relevant. Necessary modifications were made, including clarification, omission of certain items, and adding others, and simplifying work-related words.
 - The face validity value of tool (I) was 99.12%, for tool (II) was 100.00% and for tool (III) was 99.26%.
 5. A pilot study was carried out on 10% of nursing students (n= 109), who were excluded from the main study's sample. It was carried out after the experts' opinions and before starting the actual data collection to test the clarity, sequence, applicability, and relevance of the questions, as well as determine the needed time to complete the questionnaire.
 6. The reliability value of tool (I) was 0.899 and for tool (II) was 0.903, and for tool (III) was 0.896.
 7. The estimated time needed to complete the questionnaire from nursing students ranged from 15 to 20 minutes.
 8. **Data collection phase:** The data were collected from nursing students by the investigator in different areas during teaching hours to distribute the questionnaire. The subjects recorded the answers in the presence of the investigator to ascertain that all questions were answered. The data was collected from 1/3/2024 until 1/6/2024.
- Statistical analysis:**
The data was fed to the computer and analyzed using IBM SPSS software package version 20.0. (Armonk, NY: IBM Corp). The reliability of tools was

tested using the Cronbach Alpha Coefficient test. Qualitative data were described using numbers and percent. The Shapiro-Wilk test was used to verify the normality of distribution. Quantitative data were described using range (minimum and maximum), mean, standard deviation, and median. The Chi-square test was used for categorical variables to compare different groups, while the Student T-test was utilized for normally distributed quantitative variables to compare between two studied groups. The significance of the obtained results was judged at the 5% level.

Results

Table 1 shows the frequency and distribution of nursing students' personal data. As noticed in this table, more than half (52.0%) of nursing students were in the age group ranging from 18 to 20 years with a mean score of 20.33 ± 1.55 , and more than two-thirds (66.2%) of them were females. The highest percent (26.7%) of nursing students enrolled in the second academic year and more than half (56.7%) of them were from rural areas. Furthermore, slightly more than half (51.6%) of nursing students registered on the non-credit hours system and more than one-third (40.8%) of them had an excellent grade as the previous academic achievement.

Figure 1 portrays the overall perception levels of nursing students' cultural intelligence. It is clear that more than half (51.2%) of nursing students had a moderate perception level of CQ, while less than half (46.4%) of them had a low perception level of cultural intelligence. On the other hand, a minority (2.5%) of

nursing students had a high perception level of CQ.

Table 2 illustrates nursing students' levels of cultural intelligence dimensions. It is observed that the majority (86.5%) of nursing students had a low level of CCQ. While 66.5%, 55.8%, and 48.5% of nursing students had moderate levels in dimensions of behavioral, motivational, and metacognitive CQ, respectively.

Figure 2 illustrates the overall levels of nursing students' academic communication skills. As shown in this figure, more than half (58.6%) of nursing students had a moderate level of academic communication skills. Moreover, more than one-third (38.6%) of them had a high level and a minority (2.8%) of them had a low level of academic communication skills.

Table 3 depicts levels of nursing students' dimensions of academic communication skills. The table illustrates that 61.7%, 50.4%, and 43.8% of nursing students had a moderate level of verbal, non-verbal, and listening communication skills, respectively.

Figure 3 describes the ranking of the mean percent scores for dimensions of academic communication obstacles as perceived by nursing students. As observed from this figure, the students' barriers were ranked as the highest mean percent score (63.39%), followed by the psychological barriers (32.42%), then the language barriers (26.47%), and after that the faculty barriers (25.01%). While physical barriers were ranked as the lowest mean percent score of 20.12%.

Table 4 displays the relations between nursing students' overall levels of cultural intelligence and their personal

data. There were statistically significant relations between nursing students' overall levels of CQ and their age, academic year, system of studying, and gender.

Table 5 depicts relations between nursing students' overall levels of academic communication skills and their personal data. As clear, there were statistically significant relations between nursing students' overall levels of academic communication skills and their age, academic year, and system of studying.

Table 6 exhibits relations between nursing students' total scores of academic communication obstacles and their personal data. The table shows statistically significant relations between nursing students' total scores of academic communication obstacles and their age, academic year, and system of studying.

Table 7 clarifies correlations between cultural intelligence, academic communication skills, and academic communication obstacles. As noticed from this table, there was a highly positive statistically significant correlation between nursing students' CQ and their academic communication skills ($r=0.341$, $p<0.001$). On the other scene, there was a highly negative statistically significant correlation between nursing students' CQ and their perceptions of academic communication obstacles ($r= -0.264$, $p<0.001$). Furthermore, it's obvious that there was a highly negative statistically significant correlation between nursing students' academic communication skills and their perceptions of academic communication obstacles ($r= -0.258$, $p<0.001$).

Table (1): Frequency and distribution of nursing students' personal data (n = 1085)

Nursing students' Personal data	No.	%
Age (years)		
18 – 20	564	52.0
20 – 22	452	41.7
>22	69	6.3
Mean ± SD.	20.33 ± 1.55	
Gender		
Male	367	33.8
Female	718	66.2
Academic year		
First	235	21.7
Second	290	26.7
Third	280	25.8
Fourth	280	25.8
Residence		
Urban	470	43.3
Rural	615	56.7
System of studying		
Credit hours	525	48.4
Non-credit hours	560	51.6
Previous academic achievement		(n=850)
Excellent	347	40.8
Very good	193	22.7
Good	243	28.6
Satisfactory	60	7.1
Fail	7	0.8

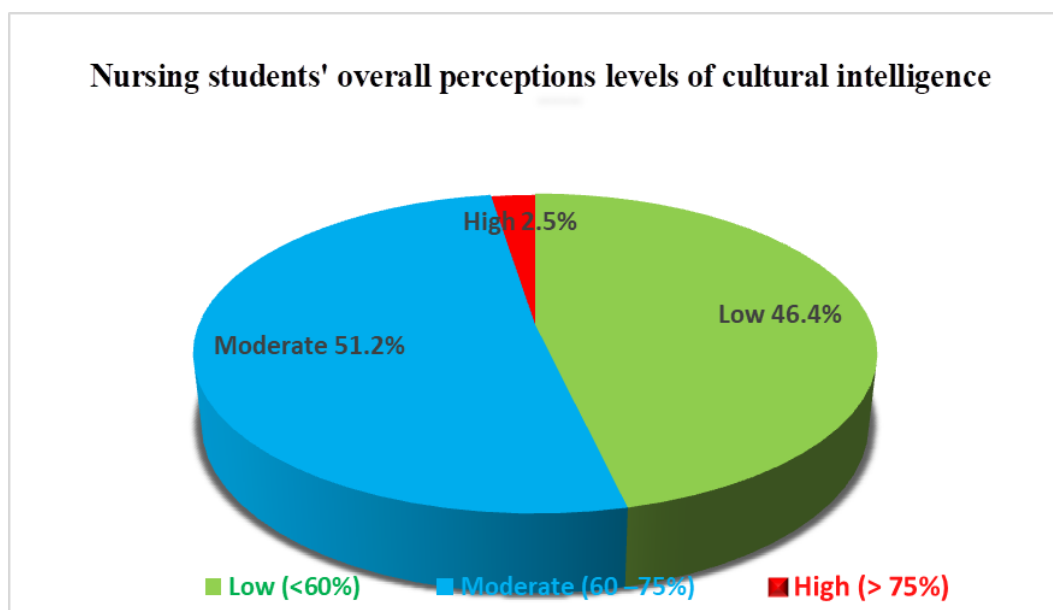


Figure (1): Overall perception levels of nursing students' cultural intelligence

Table (2): Nursing students' levels of cultural intelligence dimensions

Cultural Intelligence Dimensions	No.	%
Metacognitive cultural intelligence		
High (> 75%)	146	13.5
Moderate (60 –75%)	527	48.5
Low (<60%)	412	38.0
Cognitive cultural intelligence		
High (> 75%)	7	0.7
Moderate (60 –75%)	139	12.8
Low (<60%)	939	86.5
Motivational cultural intelligence		
High (> 75%)	297	27.5
Moderate (60 –75%)	606	55.8
Low (<60%)	182	16.7
Behavioral cultural intelligence		
High (> 75%)	201	18.6
Moderate (60 –75%)	722	66.5
Low (<60%)	162	14.9

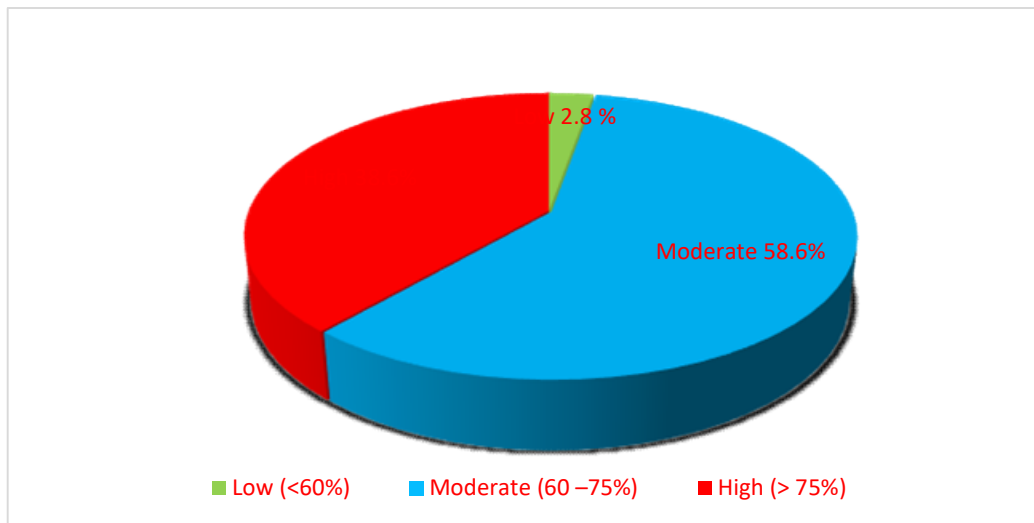


Figure (2): Overall levels of nursing students' academic communication skills

Table (3): Levels of nursing students' dimensions of academic communication skills

Dimensions of academic communication skills	No.	%
Verbal communication skills		
High (> 75%)	384	35.4
Moderate (60 –75%)	669	61.7
Low (<60%)	32	2.9
Non-verbal communication skills		
High (> 75%)	376	34.7
Moderate (60 –75%)	547	50.4
Low (<60%)	162	14.9
Listening communication skills		
High (> 75%)	434	40.0
Moderate (60 –75%)	475	43.8
Low (<60%)	176	16.2

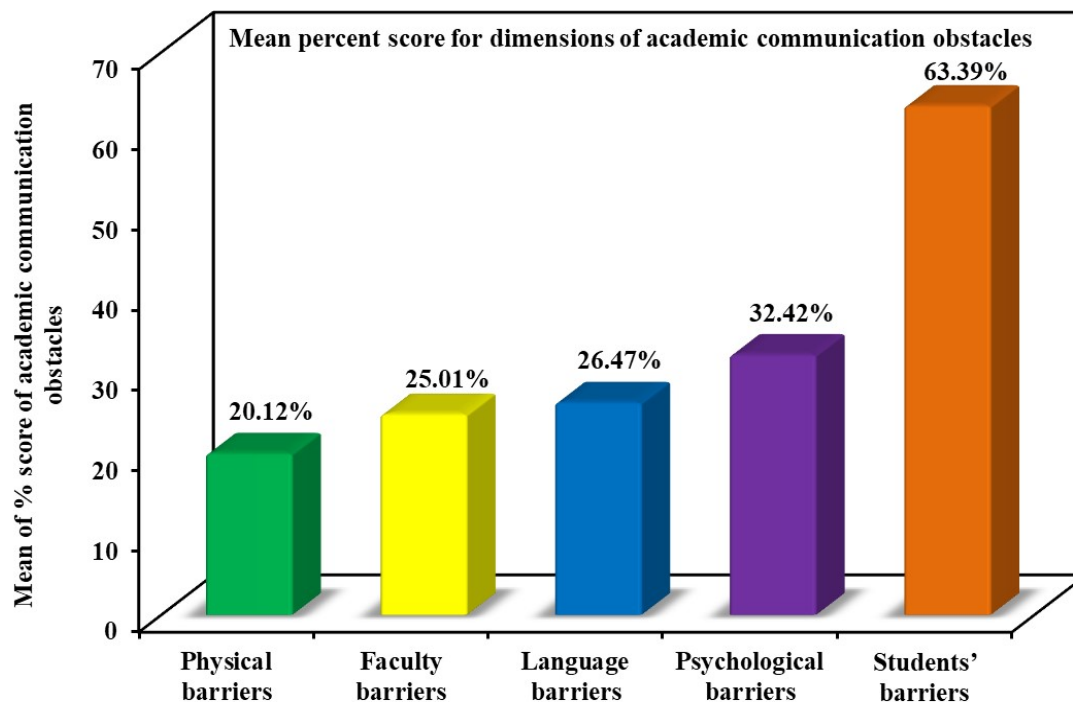


Figure (3): Ranking of mean percent scores for dimensions of academic communication obstacles as perceived by nursing students

Table (4): Relations between nursing students' overall levels of cultural intelligence and their personal data

Personal data	Overall levels of cultural intelligence						χ^2	p
	Low (n = 503)		Moderate (n = 555)		High (n = 27)			
	No.	%	No.	%	No.	%		
Age (years)								
18 – 20	310	55.0	240	42.6	14	2.5	41.373*	<0.001*
20 – 22	174	38.5	269	59.5	9	2.0		
>22	19	27.5	46	66.7	4	5.8		
Gender							6.134*	0.047*
Male	179	48.8	174	47.4	14	3.8		
Female	324	45.1	381	53.1	13	1.8		
Academic year							55.484*	<0.001*
First	125	53.2	108	46.0	2	0.9		
Second	168	57.9	110	37.9	12	4.1		
Third	118	42.1	160	57.1	2	0.7		
Fourth	92	32.9	177	63.2	11	3.9		
Residence							1.137	0.566
Urban	212	45.1	248	52.8	10	2.1		
Rural	291	47.3	307	49.9	17	2.8		
System of studying							38.159*	<0.001*
Credit hours	293	55.8	218	41.5	14	2.7		
Non-credit hours	210	37.5	337	60.2	13	2.3		

Table (5): Relations between nursing students' overall levels of academic communication skills and their personal data

Personal data	Overall level of academic communication skills						χ^2	p
	Low (n =30)		Moderate (n = 636)		High (n = 419)			
	No.	%	No.	%	No.	%		
Age (years)								
18 – 20	23	4.1	303	53.7	238	42.2	28.060*	<0.001*
20 – 22	7	1.5	301	66.6	144	31.9		
>22	0	0.0	32	46.4	37	53.6		
Gender							0.145	0.930
Male	11	3.0	216	58.9	140	38.1		
Female	19	2.6	420	58.5	279	38.9		
Academic year							301.688*	<0.001*
First	4	1.7	42	17.9	189	80.4		
Second	19	6.6	231	79.7	40	13.8		
Third	4	1.4	214	76.4	62	22.1		
Fourth	3	1.1	149	53.2	128	45.7		
Residence							0.569	0.752
Urban	15	3.2	275	58.5	180	38.3		
Rural	15	2.4	361	58.7	239	38.9		
System of studying							23.795*	<0.001*
Credit hours	23	4.4	273	52.0	229	43.6		
Non-credit hours	7	1.3	363	64.8	190	33.9		

Table (6): Relations between nursing students' total score of academic communication obstacles and their personal data

Personal data	N	Total score of nursing students' academic communication obstacles	Test of sig.	p
		Mean \pm SD.		
Age (years)				
18 – 20	564	60.47 \pm 9.82	F= 16.625*	<0.001*
20 – 22	452	63.55 \pm 7.43		
>22	69	63.32 \pm 6.19		
Gender			t= 0.623	0.533
Male	367	61.70 \pm 8.89		
Female	718	62.05 \pm 8.79		
Academic year			F= 14.479*	<0.001*
First	235	59.77 \pm 8.79		
Second	290	60.53 \pm 10.76		
Third	280	63.94 \pm 7.37		
Fourth	280	63.20 \pm 7.16		
Residence			t= 1.377	0.169
Urban	470	62.36 \pm 8.74		
Rural	615	61.61 \pm 8.87		
System of studying			t= 6.372*	<0.001*
Credit hours	525	60.19 \pm 9.93		
Non-credit hours	560	63.57 \pm 7.27		

Table (7): Correlation between cultural intelligence, academic communication skills, and academic communication obstacles

Study's variables	r	P
Cultural intelligence vs. academic communication skills	0.341*	<0.001*
Cultural intelligence vs. academic communication obstacles	-0.264*	<0.001*
Academic communication skills vs. academic communication obstacles	-0.258*	<0.001*

Discussion

Nursing practices not only require scientific knowledge but also need technical, intellectual, cultural, and interpersonal skills. This indicates that clinical work, interpersonal communication, and knowledge make up nursing. Therefore, nursing students often struggle to communicate effectively with their mentors, colleagues, and patients owing to various cultures (**Badr & Shehata, 2021**). A culturally intelligent nursing student will be better equipped for effective academic communication, which is crucial for cross-cultural interaction and academic success (**Yue & Wei, 2023**).

Nursing students' perceptions of cultural intelligence

According to the current study findings, around half of nursing students had a moderate level of overall CQ. This result may be explained by nursing students often having high levels of academic stress due to a rigorous academic burden and a number of assignments, as well as frequent exams that limit their time to explore various knowledge and information about different cultures. Additionally, nursing curricula do not place enough emphasis on cultural competence, focusing more on technical and clinical skills, and leaving a little gap for the development of nursing students' cultural intelligence skills.

Along with the present study findings, many studies of **Sevinc & Ozdemir (2024)**, **Bakhtiari et al. (2023)**, **Atalla and Elseesy (2023)**,

Osmanovic, Grobschadl & Lohrmann (2023), **Erçelik, Çamlica & Özkan (2022)**, and **Phanphairoj (2021)**, demonstrated that the nursing students had a moderate level of CQ who had encountered others from various cultural backgrounds for any reason. In the same vein, **Göl & Erkin (2019)**, and **Shomoossi, Asor, Kooshan & Rad (2019)** found that nursing students had an acceptable level of cultural intelligence. Contradictory to these results, **Aboelenein & Mohamed (2022)**, **Segev, Mor, Zahav, & Neter (2022)**, **Skwiercz (2022)**, and **Putranto, Nuraeni, Gustomo & Ghazali (2018)** did not support the study's findings and displayed that the nursing students had a high score of CQ.

Nursing students' perceptions of academic communication

According to the study's findings, more than half of nursing students had a moderate level of academic communication skills. This is clarified by while a significant portion of nursing students possess an initial ability to communicate effectively in academic settings; there is still room for improvement in enhancing these skills to a more advanced level. However, effective academic communication is crucial in nursing education, as it directly impacts nursing students' ability to understand complex concepts, engage in collaborative learning, and deliver high-quality patient care. Nursing students may experience high levels of stress and time constraints due to the intensive

nature of their academic programs, which may limit their abilities to fully engage in opportunities to refine their academic communication skills.

This finding is in line with the studies of **Amir, Alan, Jusoh & Yaccob, (2024)**, **Mohammadi, Mohammadi & Hanjani (2023)**, and **Badr & Shehata (2021)**, which revealed that most nursing students had a moderate level of communication skills. In addition, **Jasim and Khalifa (2019)** reported that nursing students had a fair level of communication skills. On the other hand, **Bamoussa (2023)** displayed that the majority of nursing students had low scores regarding their level of communication skills. In this context, **Ahmed & Shalaby (2022)** noted that most of the study's participants had low levels, and no training courses were administered in communication skills. **Aktan & Khorshid (2021)** and **Sancar & Aktas (2019)** contradicted this finding and showed that nursing students had high levels of communication skills.

Nursing students' perceptions of academic communication obstacles

According to the study's findings, the nursing students-related barriers were ranked as the highest one, followed by the psychological barrier, then the language barrier, and after that the faculty barrier. At the same time, the physical barrier was ranked as the lowest. This could be attributed to peer pressure and conflict, which often exaggerate

nursing students' misunderstandings. Additionally, many factors such as motivational levels, varying levels of preparedness, and prior knowledge also create disparities in learning experiences among nursing students. Regarding the psychological barriers, it is observed that this result was attributed to some nursing students' problems such as anxiety, stress, and introversion personality, which could severely impact concentration and motivation levels. Concerning the language barrier, despite issues related to language proficiency, faculty members use unfamiliar vocabulary that is difficult for nursing students to understand, still considered as posing challenges for nursing students in academic settings.

Additionally, the faculty barriers indicated challenges related to teaching methods. Effective communication in the classroom is hindered when a faculty member does not possess the necessary knowledge and skills, as well as uses inappropriate or unattractive teaching styles. Lastly, the physical barriers to academic communication were clarified by the majority of nursing students, who always experience poor internet connection and technical issues that make it difficult for them to access learning materials.

These findings are supported by **Bratchuk and Smith (2023)**, who supposed that laziness, fear of errors, poor communication practice, low knowledge of vocabulary, and fatigue were the most frequent barriers facing the study's students.

Kakepoto, Laghari & Laghari (2022) displayed that those students who hesitated, had a lack of knowledge, poor preparation, and poor listening skills might be dissatisfied with the educational process. Moreover, **Shevchenko, Tkachenko, Tkachenko & Nenko (2022)** detect that psychological barriers constituted the apparent type of barriers that hinder academic communication.

Additionally, **Bakar, Shah & Qingyu (2020)** described anxious students struggling with their communication styles and focused on psychological potential problems and issues in the communication process. These study's results were contradicted by those of **Muhajir, Anwar & Latif (2024)**, who explained that external factors, including the surrounding environment and the lecturer's personality, were not ranked as barriers to academic communication.

Correlation between nursing students' CQ and their academic communication skills

According to data analysis of the current study, there was a highly positive statistically significant correlation between nursing students' CQ and their academic communication skills. This might indicate that being culturally competent and sensitive could positively impact nursing students' abilities to effectively communicate in academic settings, in agreement with this finding, **Cieslak, Jaworski, Panczyk, Barzykowski, Majda, et al. (2024)** showed a considerable correlation between CQ

and the integration of formal and informal education. **Bakhtiari et al. (2023)** showed that the total score of CQ had a strong positive relationship with cultural competence. Contrary to this, **Dewi, Wilany, Sidabutar & Ria (2022)** ensured no significant relation between students' CQ and listening ability.

Correlation between nursing students' cultural intelligence and their perceptions of academic communication obstacles

The current study's results displayed a highly negative and strongly statistically significant correlation between nursing students' cultural intelligence and their perceptions of academic communication obstacles. This finding suggested that nursing students who possessed greater cultural awareness and adaptability were better equipped to navigate and overcome challenges in academic communication.

In the same scene, **Zhang and Zhou (2021)** concluded that students with low MCQ are a barrier to cross-cultural communication. These students found themselves struggling with interacting and understanding others. **Joo & Liu (2020)** illustrated that study's subjects with limited ability to act effectively in cross-cultural interactions could face communication barriers and negatively impact their ability to be culturally competent.

Conclusion

It was concluded that more than half of nursing students had a moderate perception level of CQ, and more than half of them had a moderate

level of academic communication skills. Furthermore, students-related barriers were the most common obstacles to academic communication. There was a highly positive and strongly statistically significant correlation between nursing students' CQ and their academic communication skills. Additionally, there was a highly negative and strongly statistically significant correlation between nursing students' CQ and their perceptions of academic communication obstacles, as well as between nursing students' academic communication skills and their perceptions of academic communication obstacles.

Recommendations:

Based on the current study results, these suggestions were made:

For the Faculty of Nursing

- Integrate CQ into the nursing curriculum by incorporating modules or topics focused on knowledge and skills to develop cultural competence.
- Promote cross-cultural interactions and facilitate opportunities for nursing students to engage with peers, faculty, and healthcare professionals from diverse cultural backgrounds through exchange programs and collaborative projects.
- Enhance academic communication training programs by offering workshops and training sessions aimed to improve academic communication competencies.
- Integrate assignments and activities that require students to communicate across cultural boundaries, such as group presentations reflective

essays, roleplays, debates, and projects.

For faculty members

- Demonstrate the application of professional values for education in the classroom and other educational settings using CQ.
- Be aware of and work to mitigate and compensate for the potential cultural bias in the teaching process among nursing students by promoting equitable relationships and encouraging respectful behavior.
- Recognize nursing students' different backgrounds and identify how it may impact their performance and interactions.

For nursing students

- Seeking self-learning opportunities about different cultures through reading books and articles, as well as attending cultural events.
- Participate in non-curriculum activities that facilitate cross-cultural environments by joining student organizations, or community events to promote intercultural interaction and understanding.
- Seek feedback from peers and instructors on communication effectiveness and work on areas for improvement.

For further research

- Evaluate the effectiveness of targeted interventions, such as CQ training programs or communication workshops for enhancing nursing students' participation and learning.
- Conduct a longitudinal study to understand how CQ and communication skills manifest in different healthcare-related educational programs.

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