International Nursing Students Perception Regarding Educational Environment Challenges using Dundee Ready Education Environment Measure Assessment Questionnaire

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Abstract

Background: International nursing students often face significant challenges within their educational environments, impacting their learning experiences. learning challenges is used to describe problems that hinder learning and leading to learning deficits. The focus on barriers that impede learning than on determining the nature of learning deficits. **Aim:** This study aimed to assess international nursing student's perception regarding educational environment challenges using Dundee Ready Education Environment Measure assessment questionnaire. **Design:** Descriptive exploratory research design was used to achieve the aim of the present study. **Setting:** The current study was carried out at the nursing faculty of Helwan University. **Sample:** A convenience sample were recruited in this study were 214 students It is divided as follows: 90 students undergraduate.22 students in master degree.102 students in doctoral degree. **Tools:** Structured interview questionnaire, that include students' perception of learning, students' perception of the professors, students' perception of their Academic ability, students' perception of the Atmosphere, students' perception of the social condition. **Results:** The results showed that (84.4% & 90.3 %) of the studied undergraduate and post- intranational nursing students have a low level of educational environmental challenges, while the minority (2.2% & 4%) of them have a high level respectively. **Conclusion**: The findings showed that most undergraduate and postgraduate intranational nursing students perceived low levels of educational environment challenges across all domains. Additionally, there were no significant differences between the two groups, reflecting consistent perceptions. **Recommendations:** Implement regular evaluations and feedback mechanisms to monitor students' perceptions and promptly address any emerging challenges in learning, teaching, academic support, atmosphere, and social integration

Keywords: Educational environment, Learning challenges, Students' perception

Introduction

Nursing education is a crucial component of healthcare systems worldwide, ensuring that nursing professionals acquire the necessary knowledge, skills, and competencies to provide high-quality patient care. It involves a combination of theoretical instruction and practical training, enabling students to integrate scientific knowledge with clinical expertise. Additionally international nursing students face unique challenges and experiences that shape their perception of nursing education. Their perspectives are influenced by factors such as cultural adaptation, language barriers, differences in teaching methods, and clinical practice variations. Many international nursing students perceive their education as both an opportunity for professional growth and a challenging journey requiring significant adaptation **(Khazhymurat et al., 2023)** and **(Koo et al., 2023)**

Today's increasingly globalized world, the field of nursing education has witnessed a growing number of international students seeking academic and professional advancement across borders. These students bring with them diverse cultural, linguistic, and educational backgrounds, which enrich the academic environment but also pose significant challenges particularly in adapting to new learning contexts. Among the critical factors influencing their academic success is the nature of the educational environment they encounter **(Kamau et al.,2023).**

The educational environment refers to the overall conditions, structures, and interactions that influence students' learning experiences within an academic setting. It encompasses physical, psychological, social, and pedagogical factors that shape how students acquire knowledge and skills. The educational environment is not limited to the classroom but extends to clinical placements, online learning platforms, faculty-student relationships, institutional policies, and the broader academic culture. **(Arifin et al., 2024).**

International nursing students' perception of their educational environment plays a crucial role in shaping their learning experiences and academic success. Perception reflects how students interpret and evaluate the quality of learning, teaching, academic support, atmosphere, and social integration. Using validated tools such as the Dundee Ready Educational Environment Measure (DREEM) provides valuable insights into the challenges students face and highlights areas that require improvement to create a more supportive and effective educational environment. **(Maitanmi et al., 2024).**

The Dundee-Ready Education Environment Measure (DREEM) is a globally recognized tool used to assess the educational environment in healthcare and medical education settings. Developed by Roff et al. (1997), DREEM provides a comprehensive evaluation of students' perceptions of their learning environment, covering five key domains: students' perceptions of learning, teachers, academic self-perception, atmosphere, and social self-perception **(Al Fryan et al.,2024)**

In nursing education, the DREEM tool plays a crucial role in measuring the effectiveness of the curriculum and identifying areas for improvement. Studies have shown that a positive learning environment is associated with better student engagement, reduced stress, and improved academic performance **(Pazoki et al.,2024).**

Significance of the study

The Higher Education Minister Dr / Ayman Ashour highlighted the diverse origins of students, emphasizing increased enrolments at the academic year 2023-2024 from countries such as Syria, Saudi Arabia, Yemen, Oman, India, and Nigeria in recent years. targeted nationalities, including China, Malaysia, Iraq, Qatar, and Bahrain for future efforts to attract more students to study at Egyptian universities have a total of 979,485 students whom accepted this year across all higher education institutions. Around 72 % from the students accepted into the humanist sciences, 14% into the medical sciences ,9 % engineering and 5% sciences **(Ahram online, 2023).**

As mentioned by Al-Daken et al., (2024) who studied international nursing students challenges at educational and clinical environment, and summarized that that from the participant's point of views were follow as, the most important challenge in the educational environment were educator follow traditional ways of teaching in their nursing care, no application of theoretical aspects of the nursing process in practice, there is a gap between practice and education system, the use of practice were follow as :there is a major difference what they were taught in class is similar what they practice at clinical environment, international student not received constructive feedback from nurse educator/clinical facilitator

As reported by Mohamed Elsawy et al.,(2023) , international nursing students in Egypt often face challenges related to cultural adaptation and academic integration. A study conducted at Cairo University highlighted that expatriate nursing students experience significant culture shock, which negatively impacts their academic engagement. The research emphasized the importance of resilience in mitigating these effects, suggesting that enhancing students' resilience can improve their academic performance and overall experience.

Aim of the study

This study aimed to assess international nursing student's perception regarding educational environment challenges using Dundee Ready Education Environment Measure assessment questionnaire through the following:

1-Assess the international nursing student's perception of learning?

2- Assess the international nursing student's perception of teachers?

3- Assess the international nursing student's academic self-perceptions?

4- Assess the international nursing student's perception of atmosphere?

5- Assess the international nursing student's social self-perceptions?

Research questions:

What are the international nursing student's perception regarding educational Environment challenges using Dundee Ready Education Environment Measure assessment questionnaire?

Research design:

Descriptive exploratory research design was used to achieve the aim of the present study

Setting:

The current study was carried out at the Faculty of Nursing, Helwan University, located in Helwan City, south of Cairo, Egypt. The university is an accredited educational institution recognized for implementing the credit hour system, assessing students through the Grade Point Average (GPA), and applying distance learning management systems to support student education.

Sampling:

Type of the sample A convenience sample was recruited in this study from the previous mentioned setting who agree to participate in this study. Based on retrospective statistical data, it was found the number of international nursing students who had They joined the Faculty of Nursing, Helwan University (2023) were 214 students It is divided as follows: -

- 90 students undergraduate.

- 22 students in master degree.

- 102 students in doctoral degree.

Tools for data collection:

Data was collected using the following tool: -

Tool 1. Personal characteristics.

It developed by the investigator and included (5) closed ended questions such as gender age, educational years, nationality, financial governmental support and faculty grade.

Tool II. DREEM questionnaire:

Dundee Ready Education Environment Measure assessment questionnaire was adopted from **(Roff, et al., 1997).** It is a widely used diagnostic tool to assess the educational environment of medical, nursing, and healthcare education challenge.

The tool includes 50 items distributed across five key domains:

First Domain: Students' Perceptions of Learning challenge.

Second Domain: Students' Perceptions of Teachers challenge.

Third Domain: Students' Perceptions of Academic challenge.

Fourth Domain: Students' Perceptions of Atmosphere challenge.

Scoring system: -

I. The scoring system for each item.

They used a 5-point Likert scale that rating students' responses as (1) strongly disagree, (2) disagree, (3) neutral, (4) agree and (5) strongly agree. 1-2 on the 5-point Likert scale ($< 60\%$) are classified as low, 3 on the 5-point Likert

scale (≥ 60% to < 75%) as moderate, and 4 & 5 on the 5-point Likert scale (≥ 75%) as high (**Abdelhamid et al., 2023**) and **(statistics).**

II. The total scoring system

Structured interviewed questionnaires consisted of (50) items (with a total score of (250). The total grades for each item were summed up and then converted into a percentage score. They were classified in to three level (**Abdelhamid et al., 2023**) and **(statistics).**

- Low level, it is computed if the total score is less than 60%. It means that the score ranged from 50-149.
- Moderate level, it is computed if total score is equal or more than 60 % to less than 75%. It means that the score ranged from 150-187.5).
- High level, it is computed if total score is equal or more than 75 %. It means that the score ranged from 189-250.

B-Tool's Validity and Reliability.

- **Validity:**

The face and content validity were done through a panel of three experts from Medical Surgical Nursing Department, Faculty of Nursing, Helwan University to assess tool comprehensiveness, accuracy, clarity, relevance and appropriateness to the study.

Reliability:

Reliability for the utilized tools was tested to determine the extent to which the items of the tools are inter-correlated to each other. The Cronbach's alpha model is one of the most popular reliability statistics in use today and considered as a model of internal consistency that is used to estimate reliability of test scores. The statistical equation of Cronbach's alpha reliability coefficient normally ranges between 0-1. The table clarifies this range (**Malkewitz et al., 2023**).

C-Pilot study:

A pilot study was done on (10%) of the sample (22students) to test applicability, feasibility and clarity of questions and time needed to complete the study tools. The subjects who were included in the pilot study were included in the study sample because no modification was done after conducting the pilot study.

D-Field work

- The Purpose of the study was simply explained to the student who agreed to participate in the study prior to any data collection.
- The tools of data collection were filled in and completed by the researcher. It took about 25-35 minutes for each student.
- The data was collected from student through Structured interview questionnaire.
- Data collection was done 2 days per week (Monday & Tuesday). Start in May 2024, it took 4 hours from (9 am to 1 pm) for 4 months in the previously mentioned setting.
- They were utilizing proper way of communications and explaining the purpose of the study before beginning of the answer.
- Data collections were obtained from 12-13 students per day. Every 4 students together.
- The researcher clarified the objective and aim of study to the subjects included in the research study.
- The verbal consent was taken from the students after explaining the objective.

Ethical Considerations:

An official approval was obtained from the Dean of the Faculty of Nursing Helwan University. A written approval was obtained from the Scientific **Ethics Research Committee No 39 on 13 February 2024** of the Faculty of Nursing Helwan University Committee. The researcher obtained an oral consent from study subjects. All data was confidential and used only for their benefits and for research purpose. A list of participants' patients was separated from the collected data. The study subjects were informed that, they had the freedom to withdraw from the study at any time.

III. Administrative item:

An approval was issued from the Faculty of Nursing at Helwan University to conduct the study, requesting permission for data collection from the studied sample.

IV. Statistical item:

Data entry and analysis were performed using SPSS statistical package version 25. Categorical variables were expressed as number and percentage while continuous variables were expressed as (mean ±SD). Chi-Square ($x2$) was used to test the association between row and column variable of qualitative data. NOVA, (F) test was used to compare mean in normally distributed quantitative variables at more than two groups. Pearson correlation was done to measure correlation between quantitative variables. For all tests, a two-tailed p-value ≤ 0.05 was considered statistically significant, P-value ≤ 0.01 was considered highly statistically significant. While p-value > 0.05 was considered not significant.

V-Result:

Table (1) it describes that more than one-thirds (31.1%) of age's the studied undergraduate nursing student were ranged from 19 < 20 years with a total mean of (20.7±1.6). Moreover, it shows that more than half (60% & 57.8%) and more than two-fifths (42.2%) of them being from Arabic countries, had a financial governmental support and associated with grade two respectively.

Table (2) it describes that more than have (57.3%) of the studied post-graduate nursing student were a female with a male to female ratio= 0.7:1. Additionally, more than one-thirds (34.7%) of age's the studied post-graduate nursing student were ranged from 25 < 30 years with a total mean of (32.21±6.1). Moreover, it shows that more than three-fifths (67.7% & 68.5%) of them being from Arabic countries and had a financial governmental support respectively. finally, more than four fifth of them associated with stage of post-graduate master program.

Table (3) represents the dimensions of educational environmental challenges among the studied intranational nursing students. It shows that, learning educational environmental challenges gained a higher mean percentage of (44.1%) and ranked as the first dimensions (worse one) of the educational environmental challenges among the studied intranational nursing students. While teacher educational environmental challenges gained the lower mean percentage of (33.5%) and ranked as the last dimensions. In addition to the absence of a highly statistically significant difference between dimensions of the educational environmental challenges, at P = 0.2.1.

Figure (1) illustrates level of perception of educational environmental challenges among the studied undergraduate and post- international nursing students. It describes that majority (84.4% & 90.3 %) of the studied undergraduate and post- international nursing students have a low level of educational environmental challenges, while the minority (2.2% & 4%) of them have a high level respectively. In addition to, absence of a statistically significant difference between the studied undergraduate and post- international nursing students at P= 0.33.

Figure (2) illustrates level of level of perception of educational environmental challenges among the studied intranational nursing students. It describes that majority (87.9%) of the studied nursing personnel have a low level of educational environmental challenges among the studied intranational nursing students, while the minority (4.2%) of

them have a high level. In addition to, presence of a highly statistically significant difference between level of educational environmental challenges

Table (4) represents that, there was a highly statistically significant relation between personnel characteristics (Age in years, nationality, financial governmental support and faculty grade) and level of perception of educational environment challenges among the studied under-graduate international nursing student at P = 0.01. Additionally, it describes that the studied under-graduate international nursing student with age equal or more than 22 years old, who being Arabic nationality, have a financial governmental support and being in three or four faculty grades perceive a low level of educational environment challenges.

Table (5) represents that, there was a highly statistically significant relation between personnel characteristics (Gender, age in years, nationality, financial governmental support and faculty grade) and level of perception of educational environment challenges among the studied post-graduate international nursing student at P = 0.01. Additionally, it describes that the studied post-graduate international nursing student who being male, with age equal or more than 30 years old, who being Arabic nationality and have a financial governmental support perceive a low level of educational environment challenges.

Table (6) illustrates that there was a highly statistically significant positive strong correlation between dimension of educational environmental challenges (learning, teachers, academic, atmosphere and social challenges) among the studied international nursing students at r ranged 0.913 to 0.983 & P = 0.000.

Table (1): Frequency distribution of the studied undergraduate international nursing students regarding their personal characteristics (n= 90)

Personal characteristics		Under-graduate N=(90)	
		No	%
Age in year	▪ 19 < 20 years	28	**31.1**
	▪ 20 < 21 years	23	25.6
	▪ 21 < 22 years	17	18.9
	▪ ≥ 22 years	22	24.4
	▪ **Mean ± SD**	**20.7±1.6**	
Nationality	▪ Arabic countries	54	**60.0**
	▪ African countries	36	40.0
Financial governmental support	▪ Yes	52	**57.8**
	▪ No	38	42.2
Faculty grade	▪ 2 Year	38	**42.2**
	▪ 3 Year	32	35.6
	▪ 4 Year	20	22.2

Table (2): Frequency distribution of the studied post graduate international nursing students regarding their personal characteristics (n= 124)

Personal characteristics		Post-graduate N=(124)	
		No	%
Gender	▪ Male	53	42.7
	▪ Female	71	**57.3**
	▪ **Male to female ratio**	**0.7:1**	
Age in years	▪ 22 < 25 years	10	8.1
	▪ 25 < 30 years	43	**34.7**
	▪ 30 < 35 years	34	27.4
	▪ 35 < 40 years	23	18.5
	▪ ≥ 40 years	14	11.3
	▪ **Mean ± SD**	**32.21±6.1**	
Nationality	▪ Arabic countries	84	**67.7**
	▪ African countries	40	32.3
Financial governmental support	▪ Yes	39	31.5
	▪ No	85	**68.5**
Faculty grade	▪ Post-graduate master	102	**82.3**
	▪ Post-graduate PHD	22	17.7

Table (3): Ranking the dimensions of educational environmental challenges among the studied intranational nursing students (n=214)
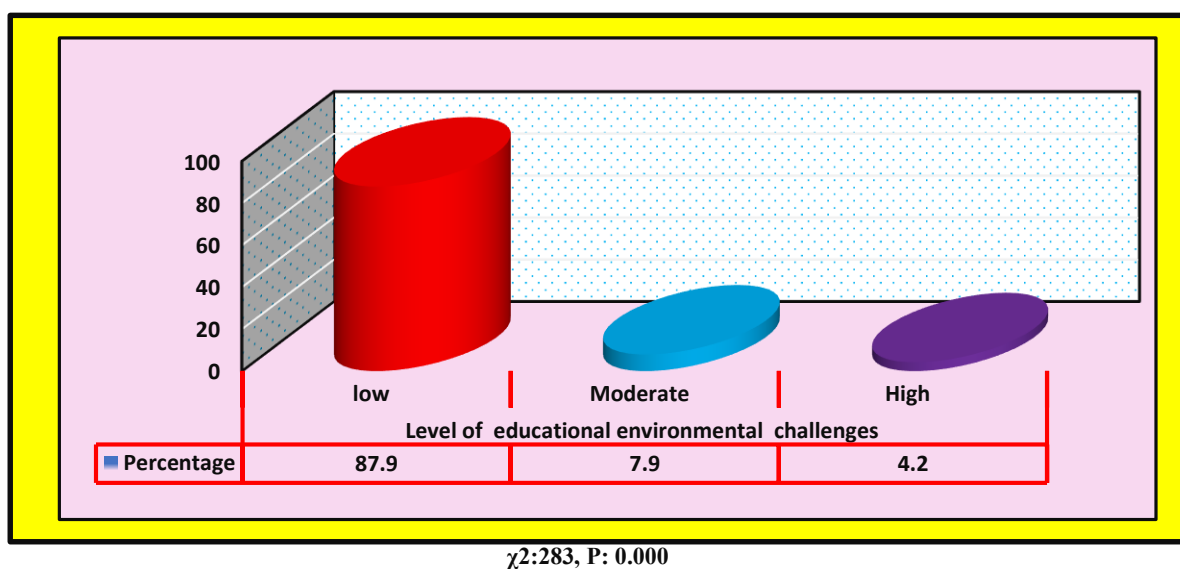
Educational environmental challenges:	Min	Max	$\bar{x}$ ± SD	Mean %	Rank	Kruskal Wallis test	P value
▪ Learning	12	60	26.44±10.9	44.1	1st		
▪ Teacher	11	55	18.40±9.4	33.5	5th		
▪ Academic	8	40	14.83±6.5	37.1	3rd	1.5	2.1
▪ Atmosphere	12	60	23.39±10.2	39.0	2nd		
▪ Social	7	35	12.95±5.7	37.0	4th		
Total	**50**	**250**	**96.69±42.1**	38.7	-	-	-

*Significant p ≤ 0.05   **Highly significant p ≤ 0.
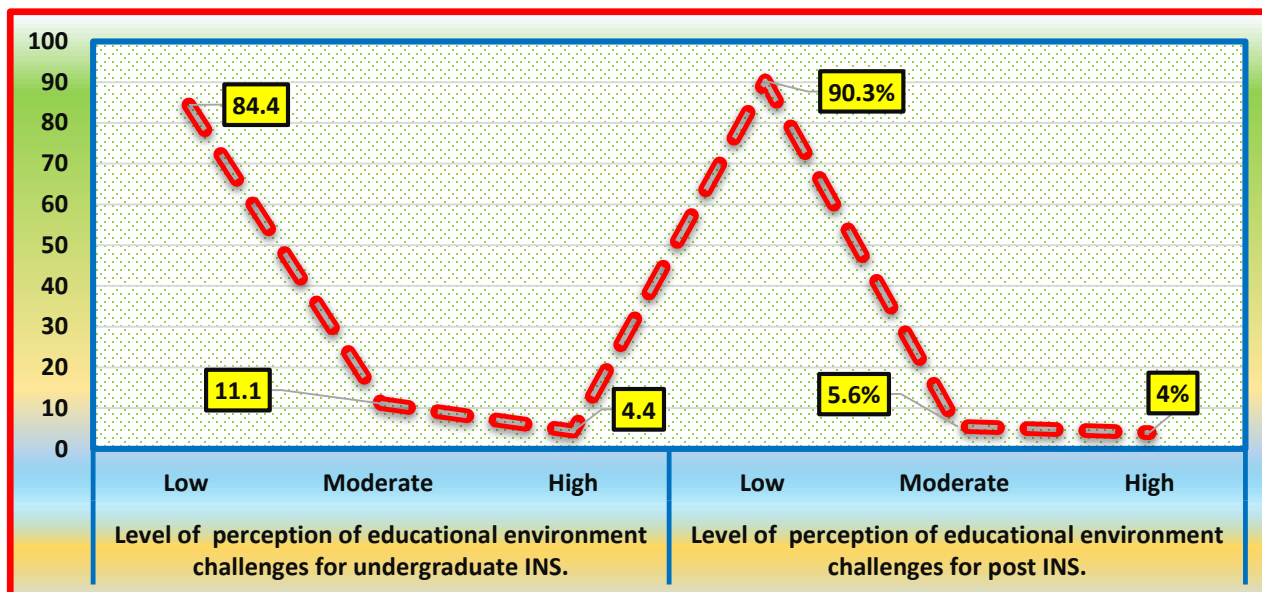
Figure (1): Percentage distribution of level of perception of educational environmental challenges among the studied undergraduate and post- international nursing students (n=214

χ2:283, P: 0.000

Figure (2): Percentage distribution of level of perception of educational environmental challenges among the studied international nursing students (n=214)

Table (4): Crosstab association between level of perception of educational environment challenges and personal characteristics among the studied under-graduate international nursing students (n= 90)

Personal characteristics:		No.	Low 76 84.4		Moderate 10 11.1		High 4 4.4		χ^2	P-Value
			N	%	N	%	N	%		
Gender	▪ Male	34	32	35.6	2	2.2	0	0.0	4.3	0.11
	▪ Female	56	44	48.9	8	8.9	4	4.4		
Age in years	▪ 19 < 20	28	16	17.8	8	8.9	4	4.4	25.3	0.000 **
	▪ 20 < 21	23	23	25.6	0	0.0	0	0.0		
	▪ 21 < 22	17	15	16.7	2	2.2	0	0.0		
	▪ ≥ 22	22	22	24.4	0	0.0	0	0.0		
Nationality	▪ Arabic	54	52	57.8	2	2.2	0	0.0	14.9	0.001 **
	▪ African	36	24	26.7	8	8.9	4	4.4		
Financial governmental support	▪ Yes	52	50	55.6	2	2.2	0		13.3	0.001 **
	▪ No	38	26	28.9	8	8.9	4	4.4		
Faculty grade	▪ 2 Year	38	26	28.9	8	8.9	4	4.4	13.8	0.008 **
	▪ 3 Year	32	30	33.3	2	2.2	0	0.0		
	▪ 4 Year	20	20	22.2	0	0.0	0	0.0		

*Significant p ≤ 0.05   **Highly significant p ≤ 0.01

Table (5): Crosstab association between level of perception of educational environment challenges and personal characteristics among the studied post-graduate international nursing students (n= 124)

Personal characteristics:		No.	Low 112 90.3		Moderate 7 5.6		High 5 4.0		χ^2	P-Value
			N	%	N	%	N	%		
Gender	▪ Male	53	53	42.7	0	0.0	0	0.0	9.9	0.007**
	▪ Female	71	59	47.6	7	5.6	5	4.0		
Age in years	▪ 22 < 25	10	0	0.0	5	4.0	5	4.0	105	0.000**
	▪ 25 < 30	43	41	33.1	2	1.6	0	0.0		
	▪ 30 < 35	34	34	27.4	0	0.0	0	0.0		
	▪ 35 < 40	23	23	18.5	0	0.0	0	0.0		
	▪ ≥ 40	14	14	11.3	0	0.0	0	0.0		
Nationality	▪ Arabic	84	84	67.7	0	0.0	0	0.0	27	0.002**
	▪ African	40	28	22.6	7	5.6	5	4.0		

Financial governmental support	▪ Yes	39	39	31.5	0	0.0	0	0.0	6.1	0.04*
	▪ No	85	73	58.9	7	5.6	5	4.0		
Faculty grade	▪ Post-master	102	90	72.6	7	5.6	5	4.0	2.8	0.23
	▪ Post-PHD	22	22	17.7	0	0.0	0	0.0		

*Significant p ≤ 0.05   **Highly significant p ≤ 0.01

Table (6): Correlation matrix between of the dimension of educational environmental challenges among the studied international nursing students (n=214)

Dimensions:		Learning challenge	Teachers challenge	Academic Challenge	atmosphere challenge	Social challenge
Learning challenge	r	1	0.927	0.965	0.974	0.975
	p		0.000**	0.000**	0.000**	0.000**
Teachers challenge	r	0.927	1	0.918	0.930	0.913
	p	0.000**		0.000**	0.000**	0.000**
Academic challenge	r	0.965	0.918	1	0.983	0.983
	p	0.000**	0.000**		0.000**	0.000**
Academic challenge	r	0.974	0.930	0.983	1	0.979
	p	0.000**	0.000**	0.000**		0.000**
Social challenge	R	0.975	0.913	0.983	0.979	1
	P	0.000**	0.000**	0.000**	0.000**	

Discussion

In relation to personal data of under-graduate international nursing students:

The findings revealed that more than one-third of the studied undergraduate international nursing students were aged between 19 and less than 20 years. This indicates that the majority of students are relatively young and likely in the early stages of their academic journey, which may influence their ability to adapt to the challenges of studying in a new cultural and educational environment.

Additionally, the data showed that more than half of the students were from Arabic countries, suggesting a regional pattern in international student enrollment..

In relation to personal data of post graduate international Nursing students

The results showed that more than half of the studied post-graduate nursing personnel were female, indicating the continued feminization of the nursing workforce. This gender distribution is consistent with global trends in nursing, where females are the dominant demographic.

Additionally, more than one-third of the participants were aged between 25 and less than 30 years, suggesting that many are pursuing postgraduate education relatively early in their professional careers. The data also reveal that the majority of students were from Arabic countries and that received financial governmental support, highlighting the role of economic and regional accessibility in enabling postgraduate studies.

Relational findings between variable under the study

The crosstab analysis revealed a significant link between students' perception of educational environment challenges and their personal characteristics. Notably, students in earlier academic years reported higher levels of

perceived challenges, likely due to their limited experience and adjustment to the academic and clinical demands of nursing education **(Bakr & Husein, 2025).**

This result indicates a highly statistically significant relationship between personal characteristics specifically age, nationality, financial governmental support, and faculty grade and the level of perception of educational environment challenges among the studied undergraduate intranational nursing students

The findings suggest that students aged 22 years or older, of Arabic nationality, who receive financial governmental support, and who are in their third or fourth year of study tend to perceive a lower level of educational environment challenges.

This may reflect the benefits of increased maturity, academic experience, and financial stability in coping with the demands of the nursing education environment. It also highlights the importance of tailored support systems for younger students, those without financial aid, and those in the earlier stages of their academic journey.

Additionally, from the investigator's point of view, international female post-graduate nursing students face more challenges than males due to cultural norms, emotional stress, and role conflicts, which can hinder their **academic** and clinical performance. These gender-specific issues highlight the need for targeted support and interventions. Female students may also struggle with adapting to mixed-gender environments and limited social freedom. Providing gender-sensitive counseling and mentorship programs could help ease their transition and promote success.

On the same line the finding of current study was consisted with the study result conducted by **(Kalembo et al., 2025)** published at JBI evidence synthesis which evaluate (Factors that influence international nursing students' experiences and perceptions of their learning environments) found a highly statistically significant relationship between personal characteristics and the perception of educational environment challenges among undergraduate intranational nursing students. Students aged 22 years or older, of Arabic nationality, who received governmental financial support, and were in their third or fourth year of study were more likely to perceive fewer educational challenges. These findings align with previous research, which highlights the positive impact of age, academic experience, financial stability, and cultural compatibility on students' ability to cope with educational demands.

On the same line the finding of current study was consisted with the study result conducted by **(Mohamed Elsawy et al., 2024),** published at Egyptian Journal of Health Care which assessed challenges facing expatriate nursing students at Cairo university and found that female students are more likely to experience social isolation, homesickness, and anxiety related to gender roles and expectations. These studies align with the current findings, emphasizing the need for culturally and gender-sensitive support systems to enhance the academic experiences of international female nursing students**.**

On the other hand the study find was discordance with previous study carried out by **(Edgerton & McKechnie., 2023),** published at Frontiers in Psychology which evaluate (The relationship between student's perceptions of their school environment and academic achievement), found no significant relationship between age or academic year and students' perceptions of the educational environment, suggesting that such perceptions may be more influenced by institutional factors rather than individual characteristics.

Moreover, the study finding was discordance with previous research that carried out by **(Kalembo et al., 2025),** published at JBI evidence synthesis which analyzed factors that influence international nursing students' experiences and perceptions of their learning environments, the results indicated that male international nursing students reported facing more challenges than females in several areas, including communication barriers, cultural adjustment, and engagement in academic activities. This could be attributed to differences in coping strategies, social support systems, or varying expectations placed on male and female students in different cultures.

Regarding to relation between level of perception of educational environment challenges and personal characteristics among the studied post-graduate intranational nursing students. The present study revealed found a highly statistically significant relationship between personal characteristics gender, age, nationality, financial governmental support, and faculty grade and the level of perception of educational environment challenges among postgraduate intranational nursing students.

Male students, those aged 30 years or older, of Arabic nationality, and those receiving governmental financial support were more likely to report a low level of perceived challenges. This may be attributed to greater maturity, cultural compatibility, and financial stability, which can enhance students' ability to cope with academic pressures.

These factors likely contribute to increased confidence and reduced stress within the educational environment. Therefore, recognizing these influences is essential for developing targeted support systems for students who may be at greater risk of perceiving higher educational challenges.

From the investigator's point of view, it can be concluded that personal characteristics play a vital role in shaping postgraduate intranational nursing students' perception of educational environment challenges. Older, and more experienced students tend to perceive fewer challenges, likely due to greater maturity and professional readiness.

This underscores the need for nursing institutions to provide targeted support for younger, less experienced students to help them adapt more effectively and succeed in the demanding postgraduate educational environment.

On the same line, the finding of the current study was consisted with the study that conducted **(Mudzi & Sepeng.,2023)** published at (International Journal of Africa Nursing Sciences) which evaluate (Factors influencing postgraduate nursing students' study progress) confirming that personal characteristics such as age, gender, nationality, and financial support significantly influence postgraduate nursing students' perception of educational environment challenges. Students who are older, male, of Arabic nationality, and financially supported tend to perceive fewer challenges, likely due to greater maturity, cultural alignment, and reduced financial stress.

From another perspective the study find was discordance with previous study carried out by **(Edgerton & McKechnie., 2023),** published at Frontiers in Psychology which evaluate (The relationship between student's perceptions of their school environment and academic achievement) found minimal variation in perception based on demographic factors among postgraduate healthcare students, indicating that perceptions were more closely linked to curriculum design and faculty support rather than personal attributes. These contrasting findings suggest that the influence of personal characteristics may vary depending on the educational context, cultural setting, and institutional structure.

Correlational findings between variables under the study

The study revealed a highly significant strong positive correlation between all dimensions of educational environmental challenges among intranational nursing students. This indicates that learning, teaching, academic, student, and social challenges are closely linked. Difficulties in one dimension are often accompanied by challenges in others. These findings highlight the need for a comprehensive approach to improving the educational environment.

From the investigator's point of view, the strong positive correlations found between the dimensions of educational environmental challenges reflect the deeply interconnected nature of nursing students' academic experiences. When students struggle in one area such as learning or teacher support it often triggers or coincides with difficulties in other areas like academic workload, social adjustment, or access to student services. This reinforces the idea that interventions should not target isolated issues but rather adopt a comprehensive approach that addresses multiple dimensions simultaneously.

In a similar manner the finding of the current study was accordance with the study that carried out **by (Singh et al., 2023)** published at Learning Environments Research which assessed (Perspective of educational environment on students' perception of teaching and learning), found that poor perceptions in one area, such as teaching or academic self-perception,

often correlated with challenges in other areas like social support and learning atmosphere. These consistent findings support the conclusion that a well-rounded and supportive educational environment across all dimensions is essential for improving students' learning experiences and reducing perceived challenges.

Conversely the finding of the current study contraindication with the study that conducted by **(Cruz et al., 2024)** published at (Journal of Latinos and Education) which assessed (Student perception of the level of development of complex thinking: an approach involving university women in Mexico), and found that students' perceptions of their learning environment were more influenced by individual learning styles and personal coping mechanisms than by systemic or institutional factors. These contrasting results highlight that the relationship between educational environment dimensions may vary depending on cultural context, institutional setting, or student demographics.

Additionally, the study found a highly statistically significant strong negative correlation between educational environmental challenges and personal characteristics among intranational nursing students. Students who were older, in higher academic years, and receiving financial governmental support perceived fewer challenges.

From investigator's point of view, the strong negative correlation between educational environmental challenges and personal characteristics (age and faculty grade) indicates that age and academic level were a significantly ease students' perception of challenges. These factors contribute to better adaptation and coping skills.

On the same direction, the study findings were accordance with a study conducted by **(Tuncer & Tuncer.,2025)** published at Journal Of Education And Research In Nursing which reviewed the (First-Year Experiences of International Nursing Students at University), and showed that younger international nursing students reported higher levels of stress, difficulty adapting to the academic environment, and more frequent experiences of homesickness and social isolation. Their limited coping mechanisms and lack of prior exposure to independent learning and cross-cultural settings contributed to these challenges. These findings support the view that age plays a significant role in students' ability to adjust and perform successfully in international nursing programs.

On the other hand, the study finding was inconsistent with the previous study that conducted by **(Lorenzetti.,2023)** published at Journal of International Students which evaluate (Exploring international graduate students' experiences, challenges, and peer relationships: Impacts on academic and emotional well-being), revealed that older international nursing students reported facing more challenges compared to their younger counterparts. These challenges included difficulties balancing academic responsibilities with family obligations, increased pressure to succeed, and challenges in adapting to new technologies or modern teaching methods

Conclusion

The findings revealed that the majority of both undergraduate and postgraduate international nursing students perceived a low level of educational environment challenges across all domains, including learning, teacher, academic, atmosphere, and social aspects. Specifically, over 75% to 92% of the participants consistently reported low levels of challenges, while only a small minority perceived high levels. The mean scores across all domains also reflect this trend, remaining well below the maximum possible scores. Importantly, no statistically significant differences were found between the perceptions of undergraduate and postgraduate students in any domain, indicating a consistent and uniform perception of the educational environment challenges across academic levels.

Recommendations:

Educational authorities at Helwan University and nursing educators in the faculty should pay special attention to the issues and take assertive action to overcome the learning challenges in order to create a desirable learning and clinical environment climate.

1. Establish mentorship programs pairing international nursing students with senior students or faculty to foster academic and emotional support within the learning environment.

2. Offer workshops that help international students better understand the host country's healthcare culture and expectations, bridging the gap between their prior knowledge and current educational demands.
3. Periodic assessment of international nursing students' needs regarding nursing courses by academic teaching staff and faculty administrators and achieving these needs based on scientific base
4. Create Helwan University Hospital to provide a structured, high-quality clinical learning environment where students can apply theoretical knowledge in real-life settings under the supervision of skilled healthcare professionals.

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