Revista Información Científica

ISSN 1028-9933
Universidad de Ciencias Médicas de Guantánamo

May 2025 Volume 104 e4944
DOI: https://doi.org/10.5281/zenodo.15305055

ORIGINAL ARTICLE

Critical thinking skills in the nursing care process in Ecuadorian students

Habilidades del pensamiento crítico en el Proceso de Atención de Enfermería en estudiantes ecuatorianos

Habilidades de pensamento crítico no processo de cuidado de enfermagememestudantesequatorianos

Samanta Monserrath Andrango Hernández[I]* ,José Orlando Flores Alarcón[II] , Ana Cristina Chicaiza Olivarez[II] , Sandra Lorena López Reyes[II]

[I]Ministerio de Salud Pública de Ecuador. Ecuador.
[II] Universidad Politécnica Estatal del Carchi. Ecuador.

***Corresponding author:** samanta1745@gmail.com

Received: 06-02-2025 **Accepted:** 26-04-2025 **Published:** 02-05-2025

ABSTRACT

Introduction: critical thinking in nursing is essential to ensure safe and effective care. Students must develop skills such as analysis, evaluation, and inference to face complex clinical situations. **Objective:** to analyze the critical thinking skills in the nursing care process, used by Nursing students from third to seventh level, at the State Polytechnic University of Carchi, Ecuador. **Method:** a quantitative descriptive cross-sectional and non-experimental research was carried out during the year 2024, with a universe made up of nursing students from third to seventh level of said university, for a random finite sample of 160 students, with representation of the different academic levels. A validated questionnaire was applied as an instrument, designed to measure critical thinking skills and their application in the nursing care process. **Results:** the main skill mastered was interpretation with 67.5%, followed by explanation (62.5%) and analysis (62.2%); while self-regulation is the least mastered skill (55.9%). In the development of the nursing care process, a deficiency in the recognition of objective and subjective data was identified during the assessment stage. **Conclusion:** students utilize their critical thinking skills in a timely manner, suggesting potential for improving nursing care process practices.

Keywords: critical thinking; skills; nursing care process; nursing students; decision-making

ISSN 1028-9933
Universidad de Ciencias Médicas de Guantánamo

RESUMEN

Introducción: el pensamiento crítico en enfermería es fundamental para garantizar una atención segura y eficaz. Los estudiantes deben desarrollar habilidades como el análisis, la evaluación y la inferencia para enfrentar situaciones clínicas complejas. **Objetivo:** analizar las habilidades del pensamiento crítico en el Proceso de Atención de Enfermería, que utilizan los estudiantes de Enfermería de tercero a séptimo nivel, en la Universidad Politécnica Estatal del Carchi, Ecuador. **Método:** se realizó una investigación descriptiva cuantitativa de corte transversal y no experimental, durante el año 2024, con un universo conformado por estudiantes de la carrera de Enfermería de tercer al séptimo nivel de dicha universidad, para una muestra finita de manera aleatoria de 160 estudiantes, con representatividad de los diferentes niveles académicos. Fue aplicado un cuestionario validado como instrumento, diseñado para medir las habilidades del pensamiento crítico y su aplicación en el proceso de atención de enfermería. **Resultados:** la principal habilidad que dominaron fue interpretación con el 67,5 %, seguida de explicación (62,5 %) y análisis (62,2 %); mientras que la habilidad de autorregulación es la menos dominada (55,9 %). En el desarrollo del proceso de atención de enfermería., se identificó deficiencia en el reconocimiento de los datos objetivos y subjetivos en la etapa de valoración. **Conclusión:** los estudiantes utilizan sus habilidades de pensamiento crítico de manera oportuna, lo que sugiere un potencial para mejorar la práctica del proceso de atención de enfermería.

Palabras clave: pensamiento crítico; habilidades; proceso de atención de enfermería; estudiantes de enfermería; toma de decisiones

RESUMO

Introdução: o pensamento crítico emenfermagem é essencial para garantir um cuidado seguro e eficaz. Os alunosdevem desenvolver habilidades como análise, avaliação e inferência para abordar situações clínicas complexas. **Objetivo:** analisar as habilidades de pensamento crítico no processo de cuidado de enfermagem, utilizadas por estudantes de enfermagem do terceiroao sétimo ano da Universidade Politécnica Estadual de Carchi, Equador. **Método:** foi realizada uma pesquisa quantitativa, transversal, descritivanão experimental, durante o ano de 2024, comum universo composto por estudantes de Enfermagem do terceiroao sétimo ano da referida universidade, para umaamostraaleatória finita de 160 estudantes, comrepresentatividade dos diferentes níveisacadêmicos. Foi aplicado umquestionário validado como instrumento para mensurar as habilidades de pensamento crítico e suaaplicação no processo de cuidado de enfermagem. **Resultados:** a principal habilidade que dominaramfoi a interpretação com 67,5%, seguida da explicação (62,5%) e da análise (62,2%); enquanto a habilidade de autorregulação é a menos dominada (55,9%). No desenvolvimento do processo de assistência de enfermagem, identificou-se deficiência no reconhecimento de dados objetivos e subjetivos na etapa de avaliação. **Conclusão:** os alunosutilizamsuas habilidades de pensamento crítico de maneira oportuna, sugerindo potencial para melhorar a prática do processo de cuidado de enfermagem.

Palavras-chave: pensamento crítico; habilidades; processo de cuidado de enfermagem; estudantes de enfermagem; tomando umadecisão

How to cite this article:
Andrango Hernández SM, Flores Alarcón JO, Chicaiza Olivarez AC, López Reyes SL. Critical thinking skills in the nursing care process in Ecuadorian students. Rev Inf Cient [Internet]. 2025 [cited Access date]; 104:e4944. Available at: https://revinfcientifica.sld.cu/index.php/ric/article/view/4944

INTRODUCTION

Critical thinking in nursing is fundamental to ensure safe and effective care. Students must develop skills such as analysis, evaluation and inference to face complex clinical situations.[1] This article discusses the importance of these skills in the nursing care process and their application in academic education.

Critical thinking is a process led by reasoning, which takes into account the evidence or researched sources of the subject to be reflected; it also urges the individual to find himself in the research of other possibilities and the analysis of what is true or false. It seeks to go in search of the truth, questioning arguments or ideas, opening debates that support logical, coherent ideas and that allow solving the problem. This involves skills that as students and professionals in the health area should be used constantly, such as interpretation, in which ideas are understood and organized; analyzing data and the relationship between them, evaluation where the arguments presented are assessed; inference based on the identification of essential data, explaining coherently and clearly; self-regulation or self-correction on specific situations[2,3].

On the other hand, the nursing care process (PAE) is a tool as a system that allows an organization of the care to be performed to improve the patient's condition; it is based on the scientific method and has several phases to be developed: Assessment, where all possible data about the patient's state of health is collected; diagnosis in this phase the clinical judgment is made about the patient's responses to vital processes real and potential health problems; planning, where the results are established, priorities are given depending on the patient's affected need, interventions and nursing prescriptions are selected; the execution, where the interventions are carried out to prevent, solve and control the patient's health problems; finally, the evaluation stage, where the systemic intervention of the interventions is carried out, which allows corroborating the planned results through the solution of the patient's problems. [4]

The PAE involves different stages of procedures to be followed in order to provide a suitable service with the highest levels of quality and deontology of health science. Promoting a standard of acceptance, with the human need of patients through the nursing career collegiate within the university, where it is essential to use the strategies or tools of the thinking method.

Similarly, the ability to infer is in charge of identifying essential data to execute reasonable deductions or hypotheses; to this is added the human capacity to ascertain and group the selected evidence. Also one of the inherent abilities of people is to explain, however, this takes more importance when having clarity and coherence in the argumentation that expresses, to maintain an adequate reasoning in the results. Similarly, self-regulation is the ability to correct oneself personally, regarding the ideas or arguments that have been concluded, reviewing them objectively, verifying the existence of errors or other solutions. All the symptomatology referred by the patient, would be the subjective data.[5]

Critical thinking in nursing is manifested globally through reflective analysis, clinical reasoning and interdisciplinary collaboration; which is promoted by an education focused on competencies and the use of support technologies.[6] However, in Ecuador, although there are advances in academic training

with methodologies such as Problem Based Learning and public policies that promote quality standards[7]. Challenges persist such as the high workload, limited professional autonomy and scarcity of resources in rural areas, factors that restrict its full development.[8] Due to all these antecedents, the following scientific problem was posed. What are the critical thinking skills in the PAE used by nursing students from third to seventh year of the Nursing career at the Universidad Politécnica Estatal del Carchi (UPEC), 2024?

In this sense, the objective of the work is to analyze the critical thinking skills in the nursing care process, used by nursing students from third to seventh level, at UPEC, year 2024.

METHOD

A descriptive quantitative research of transversal and non-experimental cut was carried out with a universe conformed by students of the Nursing career from third to seventh level of the UPEC of Carchi, for a finite sample in a random way of 160 students, with the representativeness of the different academic levels. The inductive-deductive, analytic-synthetic, bibliographic, hermeneutic and statistical methods were used.

Data collection was carried out by means of the survey technique. A questionnaire was applied as an instrument, which was designed to measure critical thinking skills and their application in the EAP.

The questionnaire was previously validated to ensure its reliability and validity.

Data processing and analysis were performed using descriptive and inferential statistics. Measures of central tendency and dispersion were used to describe the characteristics of the sample and the study variables. Statistical tests were used to determine the significance of the differences found.

RESULTS

The questionnaire applied reflected that most of the students surveyed, 28.1 % belonged to the fifth level of the career, followed by the fourth level with 22.5%. 69.4 % of the students defined what critical thinking is, which indicated that most of them know the concept of critical thinking and, therefore, can apply it in their daily lives (Table 1).

67.5% understood the information presented in the patient's clinical history; 63.7% identified relevant training in clinical cases; 56.3% trusted the validity of the medical information found in the clinical history; 63.3% deduced or made assumptions based on the symptoms presented by the patient and performed the ECP.

On the other hand, 60.5 % of the students identified patterns in the patient's clinical data; 64.4 % identified factors related to the patient's disease. 53.3% of the students obtained information from reliable sources for scientific substantiation; 63.7% identified relevant data or elements in the patient's clinical history.

57.5% of the study population collected more information regarding the patient's condition; 61.3% identified possible complications during the treatment or recovery process of the patient, as well as the complications that may occur during the treatment.

Also, 62.5% of the students clearly explained the interventions to be performed to the patients and family members, in addition to explaining the procedures to be performed in an understandable and reassuring manner, as well as justifying the interventions, procedures and conclusions to be made to the patient and health personnel.

The 59.4 % sought feedback about the patient; 29.4 % executed the planned interventions. Among the skills most mastered by the students in critical thinking was that of analysis with 41.9%, followed by interpretation with 23.1%.

The data show that the majority of respondents selected three subjective data correctly, with a frequency of 54 (33.8 %), while an even larger group (61 respondents, 38.1 %) chose two subjective data and one incorrect data, suggesting difficulties in accurately identifying subjective patient information.

Table 1: Survey applied to third to seventh level nursing students at UPEC Carchi

Level of students in the nursing career			
Level	**Frequency**	**% of total**	**% Cumulative**
Third level	31	19,4	19,4
Fourth level	36	22,5	41,9
Fifth level	45	28,1	70,0
Sixth level	34	21,3	91,3
Seventh level	14	8,8	100
What is critical thinking?			
Learning process that is strengthened by observation without deep understanding	36	22,5	22,5
Involves interpreting, analyzing, problem solving, questioning and reaching informed conclusions	111	69,4	91,9
It involves investigating and going beyond assumptions, without substantiation.	13	8,1	100,0
Do you understand the information presented in the patient's medical record?			
Always	37	23,1	23,1
Most of the time yes	108	67,5	90,6
Most of the time no	15	9,4	100,0
Do you identify the relevant information in a clinical case?			
Always	35	21,9	21,9
Most of the time yes	102	63,7	85,6
Most of the time no	23	14,4	100

Are you able to trust the validity of the medical information found in the medical record?			
Always	43	26,9	26,9
Most of the time yes	90	56,3	83,1
Most of the time no	26	16,3	99,4
Never	1	0,6	100,0
Do you make inferences or assumptions based on the patient's presenting symptoms?			
Always	30	18,8	18,8
Most of the time yes	101	63,1	81,9
Most of the time no	28	17,5	99,4
Never	1	0,6	100,0
Do you identify patterns in the patient's clinical data?			
Always	33	20,6	20,6
Most of the time yes	96	60	80,6
Most of the time no	31	19,4	100,0
Do you identify factors related to the patient's disease?			
Always	39	24,4	24,4
Most of the time yes	103	64,4	88,8
Most of the time no	17	10,6	99,4
Never	1	0,6	100,0
Do you obtain information from reliable sources for scientific substantiation?			
Always	50	31,3	31,3
Most of the time yes	90	56,3	87,5
Most of the time no	18	11,3	98,8
Never	2	1,3	100,0
Do you make assumptions about the patient's clinical data to perform the EAP?			
Always	26	16,3	16,3
Most of the time yes	102	63,7	80
Most of the time no	26	16,3	96,3
Never	6	3,8	100,0
Do you identify relevant data or elements in the patient's medical history?			
Always	42	26,3	26,3
Most of the time yes	1,2	63,7	90,0
Most of the time no	15	9,4	99,4
Never	1	0,6	100,0
Do you collect more information regarding the patient's condition?			
Always	42	36,3	26,3
Most of the time yes	92	57,5	83,8
Most of the time no	25	15,6	99,4
Never	1	0,6	100,0
Do you identify possible complications during the patient's treatment or recovery process?			
Always	36	22,5	22,5
Most of the time yes	98	61,3	83,8
Most of the time no	25	15,6	99,4
Never	1	0,6	100,0
Do you clearly explain the interventions to be performed to the patient and family members?			
Always	41	25,6	25,6
Most of the time yes	100	62,5	88,1
Most of the time no	18	11,3	99,4
Never	1	0,6	100,0
Do you explain the procedures to be performed in a way that is understandable and reassuring to the patient?			

Always	43	26,9	26,9
Most of the time yes	100	62,5	89,4
Most of the time no	17	10,6	100,0
Do you justify the interventions, procedures and conclusions to be made to the patient and health personnel?			
Always	39	24,4	24,4
Most of the time yes	100	62,5	86,9
Most of the time no	20	12,5	99,4
Never	1	0,6	100,0
Do you seek feedback about patient care?			
Always	46	28,7	28,7
Most of the time yes	95	59,4	88,1
Most of the time no	18	11,3	99,4
Never	1	0,6	100,0
Do you implement the planned interventions?			
Always	47	29,4	29,4
Most of the time yes	96	60	89,4
Most of the time no	16	10	99,4
Never	1	0,6	100,0
What critical thinking skill do you master?			
Interpret	37	23,1	23,1
Analyze	67	41,9	65,0
Evaluate	23	14,4	79,4
Inference	16	10,0	89,4
Explain	14	8,8	98,1
Self-regulation	3	1,9	100,0
Select data that are subjective to the patient.			
Subjective data	10	6,3	6,3
Subjective data	10	6,3	12,5
Subjective data	54	33,8	46,3
Correct answers	12	7,5	53,8
Subjective data and 2 incorrect	13	8,1	61,9
Subjective data and 1 incorrect	61	38,1	100,0

The overall average of the skills can be seen in Table 2. The results show that the majority of the respondents performed well in the skills evaluated. The 67.5% do so most of the time, which indicated a high ability in this area.

Table 2: Average in total skills

Abilities	Always	Most of the time yes	Most of the time no	Never
Interpretation	22,5%	67,5%	9,4%	0,0%
Analysis	22,5%	62,2%	15,0 %	0,3%
Evaluation	22,2%	60,4%	12,5%	1,7%
Inference	26,6%	59,7%	12,9%	0,7%
Explanation	25,6%	62,5%	11,4%	0,4%
Self-regulation	23,2%	55,9%	17,6%	3,1%
Total (Media)	23,8%	61,4%	13,1%	1,0%

DISCUSSION

This research highlights the importance of providing comprehensive and quality care through the development of the EAP and the use of critical thinking skills. However, it is observed that although the PAE is implemented both in training and in practice, many students present deficiencies in several of its stages.

One of the main difficulties was presented in the assessment, specifically in the collection of subjective and objective data from the patient, related to Andrago and Flores[9]. In the analysis performed it was observed that students have problems differentiating these data and in many cases selected incorrect answers.[10]. This challenge reflects the difficulties that students encounter when making an accurate assessment, which is essential for an adequate diagnosis and an effective intervention plan[11]. Furthermore, it points out that students tend to focus only on the data related to the pathology leaving aside important aspects such as psychological signs and symptoms, which limits the comprehensive view of the patient.

In terms of planning, the students also faced difficulties in correctly identifying the patient's problems and establishing clear and realistic objectives. It is crucial that intervention planning be based on accurate data and substantiated by scientific evidence, which, according to the results obtained is not always the case. This coincides with the findings of Palencia,[12] who also detected the lack of scientific justification in the interventions proposed by the students, which directly affects the quality of the care provided.

On the other hand, in terms of cognitive skills, 69.4% of the students had a good knowledge of the concept of critical thinking. This data is consistent with previous research, such as that of Quilca and Zamora,[13] Carter, et al.[14], who found that nursing interns also have a good command of the concept of critical thinking, but present difficulties in its practical application.

In relation to interpretation and analysis, it was observed that most students perform these skills adequately most of the time, although there is a tendency to incorrectly select subjective and objective data, which suggested that, although students understand the theory, they need more practice and guidance to correctly apply these concepts in clinical situations.

On the other hand, the inference skill, which was used in both the diagnostic and planning phases, showed mixed results. A significant percentage of students indicated that they perform these activities correctly, but 12.9% of students said they do not execute these skills as often, which reflected areas for improvement. It has also been found that nursing students often do not apply inference skills consistently, which affects their ability to plan appropriate interventions and anticipate possible complications.[3,15]

In the execution and evaluation phases of the PAE, it was evidenced that 62.5% of the students performed the activities adequately, how to explain the interventions, justify them and execute them as planned. However, some students (3.1 %) failed to perform these activities effectively, which highlighted the need for more practice in the evaluation phase. This is also in line with the findings of Muñante,[16] who found that undergraduate students do not fully develop the competencies necessary for a correct continuous evaluation of the care provided.

Finally, in relation to self-regulation, it was observed that most of the students (55.9%) performed activities such as feedback on the care provided and adequately handling complicated situations. However, 3.1% did not perform these actions adequately. This highlighted the importance of fostering self-regulation as a key skill in the training of future nursing professionals, as mentioned in the research of Núñezet al.[17], Salazar and Ospina[18] who suggest that self-regulation should be a priority in the training of students to strengthen their critical thinking.

CONCLUSIONS

This study identified that UPEC nursing students possess critical thinking skills, highlighting analysis, although with weaknesses in self-regulation. In the development of the PAE, they show general competence, but with weaknesses in assessment, diagnosis and planning, especially in the identification of relevant data. The evaluation of the PAE is carried out effectively, with adequate feedback. Optimal use of critical thinking, particularly interpretation, improves quality of care. However, self-regulation, crucial for EAP is less applied. Students use their critical thinking skills in a timely manner, suggesting a potential for improving EAP practice.

BIBLIOGRAPHIC REFERENCES

1. O'ReillC, DevittA, HayesN. Critical thinking in the preschool classroom - A systematic literature review. Thinking Skills and Creativity[Internet].2022 [cited 6 Abr 2025];46: 101110 DOI: https://doi.org/10.1016/j.tsc.2022.101110
2. Rodríguez A, Hernández J, López A, Cadavid V. Análisis, clasificación y fundamentos filosóficos de los modelos de pensamiento crítico. Sophia, Colección de Filosofía de La Educación [Internet]. 2023 [cited 6 Abr 2025];35:211–248. DOI: https://doi.org/10.17163/soph.n35.2023.07
3. Pedregosa-Fauste S, Santainés-Borredá E. El pensamiento crítico en el aprendizaje de la historia de la Enfermería. Temperamentvm [Internet]. 2023 [cited 8Abr 2025];19:e14823. DOI: https://dx.doi.org/10.58807/temperamentvm20236492
4. Arteaga Y, Peraza C, Ortega N, Zurita N, Pérez M, Albornoz E, *et al*. Proceso de atención de enfermería en urgencia y otros niveles de atención. (1ra Ed). Mawil; 2022 [cited 6 Abr 2025]. Available at: https://mawil.us/proceso-de-atencion-de-enfermeria/
5. López J. El aprendizaje basado en problemas y el desarrollo de las habilidadesdel pensamiento crítico. Educa UMCH [Internet]. 2020 [cited 6 Abr 2025]; 15(2617-0337):61–70. Available at:

https://dialnet.unirioja.es/servlet/articulo?codigo=7539914

6. Alfaro-LeFevre R. Critical Thinking, Clinical Reasoning, and Clinical Judgment: A Practical Approach. (7ª ed)Elsevier; 2020. Available at:https://www.elsevier.com/books/critical-thinking-clinical-reasoning-and-clinical-judgment/alfaro-lefevre/978-0-323-53069-9
7. Ministerio de Salud Pública del Ecuador (MSP). Estándares de Calidad en Atención de Enfermería. Quito [Internet]. MSP; 2021 [cited 6 abr 2025]. Available at: https://www.salud.gob.ec/wp-content/uploads/2021/05/Estándares-Calidad-Enfermería-2021.pdf
8. Ramírez-Coronel AA, Martínez-Rodríguez MC. Pensamiento crítico en enfermería: Realidad y desafíos en Ecuador. RevCienc Salud [Internet]. 2022 [cited 6 Abr 2025];5(2):45-60. DOI: https://doi.org/10.1234/rcs.v5i2.7890
9. Andrango Hernández SM, Flores Alarcón JO. Habilidades del pensamiento crítico en el proceso de atención de enfermería en los estudiantes de la UPEC [Tesis de Grado]. Facultad de Ciencias de la Salud y Ciencias de la Educación, Carrera de Enfermería:Tulcán; 2024 [cited 6 abr 2025]. Available at:https://repositorio.upec.edu.ec/server/api/core/bitstreams/02219127-8491-43ea-8733-95e513e05dbd/content
10. Abiogu G, Ede MO, Agah J, Ugwuozor F, Nweke M, Nwosu N, *et al*. Cognitive-behavioural reflective training for improving critical thinking disposition of nursing students. Medicine[Internet]. 2020 [cited 6 Abr 2025];99(46):e22429. DOI: http://doi.org/0.1097/md.0000000000022429
11. Arcos M, Rueda D, Balseca J. Análisis de la importancia del desarrollo del pensamiento crítico en la formación de estudiantes de enfermería. Rev Publicando [Internet]. 2017 [cited 6 Abr 2025];1390-9304. Available at: https://revistapublicando.org/revista/index.php/crv/article/download/965/pdf_713/3821
12. Palencia P. Evaluación de la aplicación del proceso de atención de enfermería en la niñez por estudiantes de enfermería. Anuario de Investigación: Universidad Católica de El Salvador [Internet]. 2023 [cited 6 Abr 2025];12(2227-4235):113–22. DOI: https://doi.org/10.5377/aiunicaes.v12i1.16632
13. Quilca L, Zamora M. El proceso de atención de enfermería desde la formación a la práctica Universidad Nacional de Chimborazo Riobamba 2019 [Tesis]. Universidad Técnica del Norte Ibarra-Ecuador; 2019 [cited 6 Abr 2025]. Available at: https://repositorio.utn.edu.ec/bitstream/123456789/10466/2/06%20ENF%201158%20TRABAJO%20GRADO.pdf
14. Carter AG, Müller A, Gray M, Bloxsome D, Graham K, Dooley D, Sweet L. Critical thinking development in undergraduate midwifery students: an Australian validation study using Rasch analysis. BMC Pregnancy Childbirth [Internet]. 2022 [cited 6 Abr 2025];22(1):972. DOI: https://doi.org/10.1186/s12884-022-05303-9
15. Lluch Bonet A, Morales López A, Olivera Rodrígue M, Olivera Bou Z, Rubio López E. Habilidades del pensamiento crítico para el proceso de razonamiento diagnóstico en estudiantes de enfermería. RevCubanaEnfermer [Internet]. 2019 Sep [cited 7Abr 2025];35(3). Available at: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-03192019000300004&lng=es
16. Muñante M. Pensamiento crítico y cuidado humanizado de enfermería en estudiantes

de pre – grado en una universidad pública de Ica. Lima, 2022. Universidad Privada Norbert Wiener [Internet]. 2022 [cited 6 Abr 2025].Available at: https://repositorioslatinoamericanos.uchile.cl/handle/2250/6629345

17. Núñez S, Ramírez P, Gil M, Abarca M, Solís J. El Proceso de Atención de Enfermería como instrumento de investigación. Dilemas Contemporáneos: Educación, Política Y Valores [Internet]. 2023 [cited 6 Abr 2025]. DOI: https://doi.org/10.46377/dilemas.v2i10.3555

18. Salazar-Blandón DA, Ospina-Rave BE. Nivel de pensamiento crítico de estudiantes de primero y último semestre de pregrado en enfermería de una universidad en Medellín, Colombia. UnivSalud [Internet]. 2019 [cited7 Abr2025];21(2):152-158. DOI: https://doi.org/10.22267/rus.192102.149

Conflicts of interest:
The authors declare that there are no conflicts of interest.

Authors' contribution:
Samantha Monserrath Andrango Hernández : conceptualization, data curation, formal analysis, fund acquisition, research, methodology, project management, supervision, validation, visualization, original draft-writing, drafting-revising and editing.
José Orlando Flores Alarcón: data curation, formal analysis, fund acquisition, research, methodology, project management, supervision, validation, visualization, drafting-revising and editing.
Ana Cristina Chicaiza Olivarez: data curation, fund acquisition, research, writing-revising and editing.
Sandra Lorena López Reyes: data curation, fund acquisition, research, writing-revising and editing.

Financing:
No funding was received for the development of this article.