Community and Interculturality in Dialogue. 2025; 5:98
doi: 10.56294/cid202598

ORIGINAL

Humanized Care of Nursing Students of the Adventist Technological Institute of Ecuador, Santo Domingo de los Tsáchilas

Cuidado Humanizado de los Estudiantes de Enfermería del Instituto Superior Tecnológico Adventista del Ecuador, Santo Domingo de los Tsáchilas

Raquel Anabel Cabrera Ponce[1], Melany Yelixa Solorzano Sabando[1], Miguel Ángel Enríquez Jácome[1], Jenrry Fredy Chávez-Arizala[1]

[1]Instituto Superior Tecnológico Adventista del Ecuador. Santo Domingo de los Tsáchilas, Ecuador.

Cite as: Cabrera Ponce RA, Solorzano Sabando MY, Enríquez Jácome M Ángel, Chávez-Arizala JF. Humanized Care of Nursing Students of the Adventist Technological Institute of Ecuador, Santo Domingo de los Tsáchilas. Community and Interculturality in Dialogue. 2025; 5:98. https://doi.org/10.56294/cid202598

Submitted: 12-03-2024 **Revised:** 07-06-2024 **Accepted:** 27-09-2024 **Published:** 01-01-2025

Editor: PhD. Márcio Flávio Moura De Araújo

ABSTRACT

Caring is a human activity that is defined as a relationship and a process whose purpose goes beyond simply treating illnesses. In the field of nursing, care is considered the essence of the profession. Humanized care is essential in the ethical and social values of nurse-patient care, implying the application of ethical principles and the student's self-perception. This process is based on the connection and shared experiences between the nurse and the patient. The objective of this research was to determine the level of applicability of humanized care in relation to the sociodemographic data of the Nursing students of the Adventist Technological Institute of Ecuador, Santo Domingo de los Tsáchilas 2021. No relationship was found between the age of the students and the perception of humanized care (X^2 = 6,382; P = 0,1759). There was also no association between gender and humanized care (X^2 = 1,787; P = 0,4092). The students' degree did not show a relationship with humanized care (X^2 = 3,414; P = 0,1814). However, there is a significant relationship between the level of the student cycle and humanized care (X^2 = 17,615; P = 0,024) at the regular level. The results suggest that academic development influences the ability to provide more humanized care.

Keywords: Humanized Care; Students; Nursing; Care; Sociodemographics.

RESUMEN

Cuidar es una actividad humana que se define como una relación y un proceso cuyo propósito va más allá de simplemente tratar enfermedades. En el ámbito de la enfermería, el cuidado es considerado la esencia de la profesión. El cuidado humanizado es esencial en los valores éticos y sociales de la atención enfermero-paciente, implicando la aplicación de principios éticos y la autopercepción del estudiante. Este proceso se basa en la conexión y experiencias compartidas entre la enfermera(o) y el paciente. El objetivo de esta investigación fue determinar el nivel de aplicabilidad del cuidado humanizado en relación a los datos sociodemográficos, de los estudiantes de Enfermería del Instituto Superior Tecnológico Adventista del Ecuador, Santo Domingo de los Tsáchilas 2021. No se encontró relación entre la edad de los estudiantes y la percepción del cuidado humanizado (X^2 = 6,382; P = 0,1759). Tampoco hubo asociación entre el género y el cuidado humanizado (X^2 = 1,787; P = 0,4092). La carrera de los estudiantes no mostró relación con el cuidado humanizado (X^2 = 3,414; P = 0,1814). Sin embargo, existe una relación significativa entre el nivel del ciclo estudiantil y el cuidado humanizado (X^2 = 17,615; P = 0,024) en el nivel regular. Los resultados sugieren que el desarrollo académico influye en la capacidad para brindar un cuidado más humanizado.

Palabras clave: Cuidado Humanizado; Estudiantes; Enfermería; Cuidado; Sociodemográficos.

INTRODUCTION

Dehumanization refers to the loss of the defining characteristics of human beings and can be seen as a result of a rational, scientistic approach that ignores human sensitivity. Among the causes of dehumanization are excessive workload and a stressful work environment, which affect personal aspects such as self-esteem, values, spirituality, and principles.[1]

Caring is a human activity defined as a relationship and a process whose purpose goes beyond treating illness. In nursing, caring is considered the profession's essence, involving the patient and the nurse, who acts as a facilitator to promote health and personal development.[2] Florence Nightingale, in her work "Notes on Nursing," emphasizes the importance of technical, scientific, and humanistic quality care. She stresses the need for humanized care that includes active listening to the patient and family, kindness, and communication. However, this aspect needs to be addressed in practice due to various factors that lead to dehumanization.[3]

On the other hand, humanized care originates from the word "humanity," which implies sensitivity, compassion, and kindness toward others. This indicates that humanized care is value-based and health-oriented, aiming to promote and protect health, cure disease, and ensure an environment conducive to a healthy and harmonious life in the physical, emotional, social, and spiritual dimensions. This contributes to the nurse's daily practices to maintain the patient's physical and emotional stability.[4] Providing humanized care is done more than occasionally. However, daily practice should incorporate values and virtues to foster a closer, kinder, humbler, and more compassionate relationship with others. This term reflects the desire for something to be positive, by human nature, and that respects the dignity of each person.[5]

This research aimed to determine the applicability of humanized care in relation to the sociodemographic data of nursing students of the Instituto Superior Tecnológico Adventista del Ecuador, Santo Domingo de los Tsáchilas 2021.

METHODS

The present research had a quantitative approach because data collection was used to test its hypothesis based on numerical measurement and statistical analysis; a non-experimental design, since the phenomena are observed as they occur in their natural context without manipulation; a correlational level, due to the extent to which the relationship between humanized care and sociodemographic data is explained; a cross-sectional approach because of the time in which the information was collected.

It refers to the set of elements to be investigated; these elements can be objects, events, situations, or a group of people. The study population comprised 86 students in the Nursing Technology and Technician career at the Instituto Superior Tecnológico Adventista del Ecuador for 2021.

The sample was non-probabilistic by convenience because the students who have already completed pre-professional practices are part of the study to measure their perception of humanized care. For this reason, the sample consisted of 42 students, of which 18 were nursing technologists and 21 were nursing technicians.

Inclusion criteria:

1. Nursing students with work experience.
2. Nursing students who have completed pre-professional internships
3. Nursing students who have had contact with a patient.

Exclusion Criteria:

1. Subjects who did not meet the inclusion criteria.
2. Subjects who did not wish to take part in the study.

The Humanized Care Self-perception Questionnaire was applied to nursing students, which consists of 30 items, 15 of which are negative, so recalibration had to be done to measure the reliability of the instrument; the items are in Likert format with intensities -3 to +3, of which three levels were obtained, which are low, medium and high, which can be seen in the presentation of results.

Surveys are the most common data collection technique widely used as a research procedure, allowing one to obtain and elaborate data quickly and efficiently. This technique for collecting information was developed through the Coates Carolie Humanized Care Self-Perception Questionnaire, where the researcher requires the participants, in this case, the students, to obtain these results and be able to respond to the research objectives.

Coates developed the Caring Efficacy Scale (CES) to measure and evaluate nursing education programs.[6] The original version of the instrument, made in 1980, was adapted for application in 1992, consisting of 30 Likert format items with intensities -3 to +3, balanced in positive and negative items. The other instrument to be validated in this study was Nyberg's Caring Assessment (NCA), developed in 1990 by Nyberg during his doctoral study at the University of Colorado.[7] This essentially measures the attributes of caring, also based on the philosophy of the Transpersonal Theory of Human Caring, and attempts to capture subjective aspects of

https://doi.org/10.56294/cid202598

caring, emphasizing the attitude of deep respect for the needs of others, such as sensitivity to their spiritual needs, communication, and hope. Adapted to Spanish by Poblete et al, in Peru,[8] it was adapted by Casimiro and Palma in their research entitled "Calidad de cuidados humanizados que brinda el profesional de enfermería en los servicios de hospitalización de un hospital público de Huánuco2016",[9] where it obtained a Cronbach's coefficient of 0,87. The CES is composed of 30 items, balanced between 15 negative and 15 positive, Likert format with scores from -1 to +3, where:

- -3; Strongly Disagree
- -2; Moderately disagree
- -1; Slightly disagree
- +3; Strongly agree
- +2; Moderately agree
- +1; Slightly agree.

The items do not constitute distinct dimensions since it is a unidimensional instrument that "measures the perception of self-efficacy concerning humanized care, based on Watson's Transpersonal Theory of Human Care".[8]

Cronbach's alpha internal consistency measure was used to measure the instrument's reliability level. In the case of the measurement of constructs through scales, in which there are no right or wrong answers, but rather each subject marks the value of the scale that best represents his or her answer, Cronbach's alpha:

The formula as follows: $A=(N/n-1)^* (Vt-\Sigma Vi/Vt)$

Where:

- α = reliability coefficient
- n = number of items;
- Vt = total variance of the test; and.
- ΣVi = is the sum of the individual variances of the items;
- ΣVi = is the sum of the individual item variances.

The following table shows the values to be taken as a reference for the interpretation of the reliability coefficient.

Table 1. Values for Alpha Coefficient Interpretation

Interpretation of a reliability coefficient			
Download	**Regular**	**Acceptable**	**High**
0,25	0,5	0,75	0,90

Table 2 shows the results obtained through SPSS 21 for the reliability statistic: Cronbach's alpha.

Table 2. Reliability Statistic

Cronbach's alpha	N of elements
0,846	42

The data processing had two phases. The first was a database designed in an Excel spreadsheet, and the SPSS 23 statistical treatment was then performed. The descriptive data were explained through frequency tables; contingency or cross-correlation tables were made for the correlations of the variables under study, and the Chi-square statistic (X2) was used to prove a statistical association.

The basic principles of ethics considered when proposing the research were justice, non-maleficence, and autonomy of the Constitution of the Republic of Ecuador; therefore, before applying the survey to the nursing students, the objective of the study was explained, without demanding participation, respecting the confidentiality of the data obtained and the ethical aspect, without harming the institution or the wellbeing of the group under investigation.

RESULTS

Table 3 shows the sociodemographic characteristics of gender; it was observed that 81 % of the study participants were male, and 19 % were female. Regarding age, most of the students ranged between 17-24 years of age, equivalent to 61,9 %, followed by 28,6 % who were 25-30 years old, while 9,5 % of the students in the study were 31-51 years old. Regarding marital status, 83,3 % of the students are single; 16,7 % are married. Regarding the career of study, 66,7 % are in nursing technology, and 33,3 % are in the nursing technician

specialty. Finally, about the student cycle, 35,7 % of the students surveyed are in the fifth level, followed by 31 % in the fourth level, 14,3 % are students of the first cycle, 11,9 % in the second cycle, and finally, 7,1 % in the third level.

Table 3. Sociodemographic Data

Variable	Scale	No.	%
Sex	Male	34	81
	Female	8	19
Age	17 – 24	26	61,9
	25 – 30	12	28,6
	31 – 50	4	9,5
Marital Status	Single	35	83,3
	Married	7	16,7
Career	Nursing Technician	28	66,7
	Nursing Technologist	14	33,3
Level	First cycle	6	14,3
	Second cycle	5	11,9
	Third cycle	3	7,1
	Fourth cycle	13	31
	Fifth cycle	15	35,7

Table 4 shows that of the 100 % of students surveyed, 40,5 % have a regular level of humanized care; on the other hand, 28,6 % of students have a high level of humanized care and 31 % have a poor level of humanized care.

Table 4. Self-perception of Humanized Care

Level	No.	%
Deficient	13	31,0
Regular	17	40,5
High	12	28,6
Total	42	100,0

In table 5, when relating the perception of humanized care by age, 75 % have a high level, belonging to the group of mature adults; on the other hand, 50 % have a regular level, belonging to the group of adolescents; and finally, 33,3 % have a deficient level of care, which corresponds to the young adult age group.

Table 5. Humanized Care by Age

Age		Deficient	Regular	High	Total
17 – 24	n	8	13	5	26
	%	30,80 %	50,00 %	19,20 %	100,00 %
25 – 30	n	4	4	4	12
	%	33,30 %	33,30 %	33,30 %	100,00 %
31 – 50	n	1	0	3	4
	%	25,00 %	0,00 %	75,00 %	100,00 %
Total	n	13	17	12	42
	%	31,00 %	40,50 %	28,60 %	100,00 %

With respect to table 6, it was observed that the percentages vary according to the gender of the students, finding that 29,4 % are male and have a high level of self-perception of humanized care, while 50 % of the female gender have a low level of humanized care.

https://doi.org/10.56294/cid202598

Table 6. Humanized Care by Gender

			Deficient	Regular	High	Total
Sex	Male	n	9	15	10	34
		%	26,50 %	44,10 %	29,40 %	100,00 %
	Female	n	4	2	2	8
		%	50,00 %	25,00 %	25,00 %	100,00 %

As for table 7, nursing students were evaluated by career, where it was shown that 42,9 % of the nursing technologist career have a high level; and as for the nursing technician group, it had a percentage of 39,3 % deficient on the knowledge of humanized care.

Table 7. Humanized Care by Career

		Deficient	Regular	High	Total
Nursing Technician	n	11	11	6	28
	%	39,30 %	39,30 %	21,40 %	100,00 %
Nursing Technologist	n	2	6	6	14
	%	14,30 %	42,90 %	42,90 %	100,00 %
Total	n	13	17	12	42
	%	31,00 %	40,50 %	28,60 %	100,00 %

Finally, in table 8, according to the level of study by cycle, it was observed that the third level has 100 % of students who have a regular level of humanized care, followed by the first cycle, which has a high level of 83,3 %. In comparison, the second cycle has 60 % at a regular level; likewise, in the fourth cycle, there is a percentage of 53,8 % at a regular level, and, finally, the fifth cycle has a deficient level of 46,7 % in terms of the treatment of care to the patient. This shows that technical nurses have a higher perception of humanized care than technologists.

Table 8. Humanized Care by Cycle

Level of studies by cycle		Humanized Care			
Deficient		Regular	High	Total	
First cycle	n	1	0	5	6
	%	16,7 %	0,0 %	83,3 %	100,0 %
Second cycle	n	1	3	1	5
	%	20,0 %	60,0 %	20,0 %	100,0 %
Third cycle	n	0	3	0	3
	%	0,0 %	100,0 %	0,0 %	100,0 %
Fourth cycle	n	4	7	2	13
	%	30,8 %	53,8 %	15,4 %	100,0 %
Fifth cycle	n	7	4	4	15
	%	46,7 %	26,7 %	26,7 %	100,0 %
Total	n	13	17	12	42
	%	31,0 %	40,5 %	28,6 %	100,0 %
(X^2 = 17,615[a]; P = 0,024)					

DISCUSSION

The purpose of this research was to determine the level of applicability of humanized care about sociodemographic data in nursing students of ITSAE, Santo Domingo de los Tsáchilas 2021, in which a questionnaire was used to evaluate the self-perception of humanized care in students, and with it the analysis of sociodemographic data that allowed to meet the objectives of this research, these data gave a broader understanding of the population under study.

In the general results found, it was observed that there is a regular level of 40,5 % applicability of humanized care in the nursing students of the ITSAE, a fact that is currently evidenced through theories about the low level of practice of humanized care that has become a problem for health institutions since the nursing staff has given greater interest to the administrative and technical component than to the care and comfort of the patient.[10]

Regarding the first specific objective about the relationship of humanized care according to the age group

in nursing students of ITSAE 2021, it was determined that there is no significant relationship, a fact that agrees with what is described by Serrato (2019) when that age does not affect when providing humanized care to patients. On the other hand, the descriptive data show that people in the mature adult age group have a higher perception of humanized care, with 75 % in a row analysis. In contrast, the adolescent age group between 17 and 24 years old had a regular level of humanized care of 50 %, which agrees with what Valencia [11] mentioned when he pointed out that students between 21 and 25 years old have excellent conditions in terms of assistance to human needs, but that their weak point is when expressing their feelings.

Regarding the second specific objective, it was shown that humanized care is not related to the gender of the nursing students of ITSAE 2021, resulting in the fact that males self-perceive themselves with regular care at 44,10 % and females have the self-perception of poor care of 50 % when observing the descriptive results. This differs drastically from what was stated by Valencia,[11] when he identified that women have better conditions for the assistance of human needs and the behavior of the care provided.

In addition, the third specific objective related to the nursing students' careers and the level of humanized care they provide determined that there was no statistical association between these variables. However, it was detected that 42,90 % have a high and regular level of humanized care in terms of the technological career, a fact that agrees with what was studied by Cevallos,[12] when mentioning that nurses with a high scientific knowledge and technical expertise are sometimes unable to provide good patient care; This characteristic would be more related to love and personal dedication to humanistic activities than to having an academic degree.

Regarding the fourth specific objective, about the school cycle and the level of humanized care provided by the nursing students of ITSAE 2021, it was determined that there is a significant statistical relationship between the two variables (X2 = 17,615th ; P = 0,024). This explains in a better way that when taking into account the descriptive data show that the students of the third cycle self-perceive themselves with regular humanistic care of 100 % and the first cycle with high care of 83,3 %, which agrees with what was argued by Barrera and Parra[13] when pointing out that nursing students should be instructed regarding the culture of humanization so that they become familiar with it from the first levels of study because this is what will allow applying it naturally in community, clinical and administrative practices.

In short, humanized care is a complex variable in which various factors that influence the student must be taken into account in order to make good applicability, such as work stress, academic stress, emotional crisis, lack of values, professional ethics, among other factors that contribute to the dehumanization of health care; these factors have not been treated as intervening variables in this research as they are at a descriptive correlational level, so there remains the possibility of an applied study in which humanized care can be taken into account from the formative process of the integral education center for a greater emphasis on humanistic practices.[11]

CONCLUSIONS

Humanized care is essential in the ethical and social values of nurse-patient care, involving the application of ethical principles and the student's self-perception. This process is based on the connection and shared experiences between the nurse and the patient. In the study with nursing students, no significant relationship was found between age, gender, or career and the perception of humanized care. However, a significant relationship was observed between the level of the student cycle and the quality of the humanized care they provide. This suggests that academic development influences their ability to provide more humane care.

REFERENCES

1. RAE. deshumanización | Diccionario de la lengua española [Internet]. «Diccionario de la lengua española» - Edición del Tricentenario. [cited 2024 Sep 14];Disponible en: https://dle.rae.es/deshumanización

2. Báez-Hernández FJ, Nava-Navarro V, Ramos-Cedeño L, Medina-López OM. El significado de cuidado en la práctica profesional de enfermería. Aquichan [Internet] 2009 [cited 2024 Sep 14];9(2). Disponible en: https://aquichan.unisabana.edu.co/index.php/aquichan/article/view/1476

3. Matesanz Santiago MÁ. Pasado, presente y futuro de la Enfermería: una aptitud constante. Rev Adm Sanit [Internet] 2009 [cited 2024 Sep 14];7(2):243–260. Disponible en: http://www.elsevier.es/es-revista-revista-administracion-sanitaria-siglo-xxi-261-articulo-pasado-presente-futuro-enfermeria-una-13139761

4. Guerrero-Ramírez R, Riva MEM-L, Cruz-Ruiz MDL. Cuidado humanizado de enfermería según la teoría de Jean Watson, servicio de medicina del Hospital Daniel Alcides Carrión. Lima- Callao, 2015. Revista Enfermería Herediana [Internet] 2016 [cited 2024 Sep 14];9(2):133–133. Disponible en: https://revistas.upch.edu.pe/index.php/RENH/article/view/3017

5. Ramírez P, Müggenburg C. Relaciones personales entre la enfermera y el paciente. Enfermería universitaria [Internet] 2015 [cited 2024 Sep 14];12(3):134–143. Disponible en: http://www.scielo.org.mx/scielo.php?script=sci_abstract&pid=S1665-70632015000300134&lng=es&nrm=iso&tlng=es

6. Coates CJ. The Caring Efficacy Scale: nurses' self-reports of caring in practice settings. Adv Pract Nurs Q 1997;3(1):53–59.

7. Ramos Guajardo S, Ceballos Vasquez P, Ramos Guajardo S, Ceballos Vasquez P. Cuidado humanizado y riesgos psicosociales: una relación percibida por profesionales de enfermería en Chile. Enfermería: Cuidados Humanizados [Internet] 2018 [cited 2024 Sep 15];7(1):3–16. Disponible en: http://www.scielo.edu.uy/scielo.php?script=sci_abstract&pid=S2393-66062018000100003&lng=es&nrm=iso&tlng=es

8. Vasques Brandão R, Solano Araujo I, Veit EA. Validación de un cuestionario para investigar concepciones de profesores sobre ciencia y modelado científico en el contexto de la física. REIEC [Internet] 2015 [cited 2024 Feb 27];6(1):43–60. Disponible en: https://reiec.unicen.edu.ar/reiec/article/view/68

9. Casimiro Z. CALIDAD DE CUIDADOS HUMANIZADOS QUE BRINDA EL PROFESIONAL DE ENFERMERÍA EN LOS SERVICIOS DE HOSPITALIZACIÓN DE UN HOSPITAL PÚBLICO DE HUÁNUCO 2016 [Internet]. 2016 [cited 2024 Sep 15];Disponible en: https://core.ac.uk/download/pdf/84496926.pdf

10. Prías Vanegas HE. CUIDADO HUMANIZADO: UN DESAFÍO PARA EL PROFESIONAL DE ENFERMERÍA. Revisalud [Internet] 2017 [cited 2024 Sep 14];3(1). Disponible en: https://www.recia.edu.co/index.php/revisalud/article/view/575

11. Valencia Gutiérrez NV. Autovaloración del cuidado humanizado por estudiantes de Enfermería. Metas de enfermería [Internet] 2021 [cited 2024 Sep 15];24(1):2. Disponible en: https://dialnet.unirioja.es/servlet/articulo?codigo=7746908

12. Cevallos Mejía CI. Percepción del cuidado humanizado y satisfacción de las pacientes puérperas atendidas en el Centro de Salud Materno Infantil "Alfonso Oramas González" Duran - Ecuador, 2019 [Internet]. 2020 [cited 2024 Sep 14];Disponible en: https://repositorio.ucv.edu.pe/handle/20.500.12692/46832

13. Gualdrón M, Barrera-Ortega K, Parra-González N. Percepción de la enseñanza en cuidado humanizado vs la práctica formativa por estudiantes de enfermería. AiBi Revista de Investigación, Administración e Ingeniería [Internet] 2019 [cited 2024 Sep 15];7(S1):7–12. Disponible en: https://revistas.udes.edu.co/aibi/article/view/1680

FINANCING

The authors did not receive funding for the development of this research.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

AUTHORSHIP CONTRIBUTION

Conceptualization: Raquel Anabel Cabrera Ponce, Melany Yelixa Solorzano Sabando, Miguel Ángel Enríquez Jácome, Jenrry Fredy Chávez-Arizala.

Formal analysis: Raquel Anabel Cabrera Ponce, Melany Yelixa Solorzano Sabando, Miguel Ángel Enríquez Jácome, Jenrry Fredy Chávez-Arizala.

Research: Raquel Anabel Cabrera Ponce, Melany Yelixa Solorzano Sabando, Miguel Ángel Enríquez Jácome, Jenrry Fredy Chávez-Arizala.

Methodology: Raquel Anabel Cabrera Ponce, Melany Yelixa Solorzano Sabando, Miguel Ángel Enríquez Jácome, Jenrry Fredy Chávez-Arizala.

Project management: Raquel Anabel Cabrera Ponce, Melany Yelixa Solorzano Sabando, Miguel Ángel Enríquez Jácome, Jenrry Fredy Chávez-Arizala.

Resources: Raquel Anabel Cabrera Ponce, Melany Yelixa Solorzano Sabando, Miguel Ángel Enríquez Jácome, Jenrry Fredy Chávez-Arizala.

Software: Raquel Anabel Cabrera Ponce, Melany Yelixa Solorzano Sabando, Miguel Ángel Enríquez Jácome, Jenrry Fredy Chávez-Arizala.

Supervision: Raquel Anabel Cabrera Ponce, Melany Yelixa Solorzano Sabando, Miguel Ángel Enríquez Jácome, Jenrry Fredy Chávez-Arizala.

Validation: Raquel Anabel Cabrera Ponce, Melany Yelixa Solorzano Sabando, Miguel Ángel Enríquez Jácome, Jenrry Fredy Chávez-Arizala.

Visualization: Raquel Anabel Cabrera Ponce, Melany Yelixa Solorzano Sabando, Miguel Ángel Enríquez Jácome, Jenrry Fredy Chávez-Arizala.

Writing - original draft: Raquel Anabel Cabrera Ponce, Melany Yelixa Solorzano Sabando, Miguel Ángel Enríquez Jácome, Jenrry Fredy Chávez-Arizala.

Writing - proofreading and editing: Raquel Anabel Cabrera Ponce, Melany Yelixa Solorzano Sabando, Miguel Ángel Enríquez Jácome, Jenrry Fredy Chávez-Arizala.

https://doi.org/10.56294/cid202598