

Teaching empathy in healthcare: an integrative review

José Antonio Cordero da Silva¹, Cristiane Guerreiro Pereira Abdul Massih¹, Daniele Azevedo Valente¹, Danielle Ferreira de Souza¹, Magda Regiane Lima de Carvalho Monteiro¹, Raiza Morais Rodrigues¹

1. Universidade do Estado do Pará, Belém/PA, Brasil.

Abstract

Empathy presupposes the ability and, most importantly, the willingness to understand others and put oneself in their place. Hence, health personnel are expected to be more empathetic and able to read the world around them with a humanized, critical, and reflexive look. This integrative review examines the studies on teaching empathy in undergraduate health programs published in the last five years. A total of 27 studies were selected from the MEDLINE and LILACS databases, most of which were published in the fields of medicine and nursing. Although a subjective element, most studies measured empathy using standardized scales (quantitative approach). Finally, empathy was taught using active methodologies.

Keywords: Health education. Students. Empathy.

Resumo

Ensino da empatia em saúde: revisão integrativa

Empatia pressupõe a capacidade e sobretudo a vontade de compreender o outro e se colocar em seu lugar. Considerando isso, espera-se que profissionais envolvidos em cuidados de saúde sejam mais empáticos e capazes de ler o mundo ao seu redor com olhar humanizado, crítico e reflexivo. Objetivou-se investigar, mediante revisão integrativa, o que tem sido discutido a respeito do ensino da empatia nos cursos de graduação da área da saúde nos últimos cinco anos. Foram selecionados 27 artigos das bases de dados MEDLINE e LILACS, por meio dos quais se identificou que a maioria dos estudos disponíveis foram realizados nas áreas de medicina e enfermagem. Além disso, constatou-se que, apesar de o tema empatia remeter à subjetividade, a metodologia quantitativa com aplicação de escalas padronizadas foi a mais utilizada para mensurar níveis de empatia e que, por fim, o ensino da empatia ocorreu por meio de metodologias ativas.

Palavras-chave: Educação em saúde. Estudantes. Empatia.

Resumen

Enseñar empatía en salud: una revisión integradora

La empatía es una capacidad, sobre todo una voluntad, de comprender al otro y de ponerse en su piel. Así se espera que los profesionales involucrados en el cuidado de la salud sean más empáticos y tengan una mirada humanizada, crítica y reflexiva sobre el mundo. Esta es una revisión integradora para identificar cómo se enseña la empatía en las carreras de graduación en el área de la salud en los últimos cinco años. Se seleccionaron 27 artículos de las bases de datos MEDLINE y LILACS, y se identificó que la mayoría de los estudios disponibles fueron de las áreas de Medicina y Enfermería. Se constató también que, aunque el tema de la empatía se refiera a la subjetividad, el método cuantitativo con la aplicación de escalas estandarizadas fue el más utilizado para medir los niveles de empatía y que la enseñanza de la empatía ocurrió por metodologías activas.

Palabras clave: Educación para la salud. Estudiantes. Empatía.

The authors declare no conflict of interest.

In 2001, the Ministry of Health and the Ministry of Education issued the National Curriculum Guidelines (DCN) for 14 health professions, aiming to provide academic education that encompassed the principles and guidelines of the Unified Health System (SUS). The DCN proposed revolutionary changes in the curriculum of medical schools in Brazil, encouraging the training of humanized, generalist, critical, ethical, and reflective professionals, and advocating the development of communication skills between professionals and patients.

In this scenario, empathy takes on a fundamental role, since its very origins—from the Greek *empathia*: “in affection,” “in passion” regarding the other—presupposes a desire to understand one another¹. Conceptually, empathy can be understood as a joint action between thought and behavior. It is the psychological act of putting oneself in another’s place, considering the cognitive, emotional, and motivational aspects involved.

The cognitive aspect refers to the ability to understand the experience and feelings of others and the ability to understand the world from the other’s perspective; the emotional aspect involves paying special, more affective, attention to the experiences of others; and the motivational aspect corresponds to the feeling of caring for others in society². Caring about others, understanding and respecting them is of paramount importance for future health professionals to develop good interpersonal relations.

As a form of social responsibility, exercising empathy constitutes a strong challenge to students in the day-to-day clinical practice³. For the future professional—physician, nurse, occupational therapist, speech therapist, physical therapist, etc.—empathy is a skill to be developed in their learning process. Establishing empathic relationships was seen as a need in health care, since all actions performed for patients—to guide, inform, comfort, or assist—involve interpersonal communication⁴.

Given this context, this study acquires great relevance due to the possibility of identifying gaps in the empathy teaching and learning process, promoting further studies and, thus, improving the approach to this topic among health students. Thus, this integrative literature review seeks to identify the current situation of empathy teaching in undergraduate health courses.

Method

As an integrative literature review, the research allows us to summarize the available academic production on a given topic, based on scientific knowledge. For better systematization, we followed the six-phase process of preparing an integrative literature review proposed by Souza, Silva, and Carvalho⁵: 1) preparing the guiding question; 2) searching or sampling the literature; 3) data collection; 4) critical analysis of the studies included; 5) discussion of results; and 6) presentation of the integrative review.

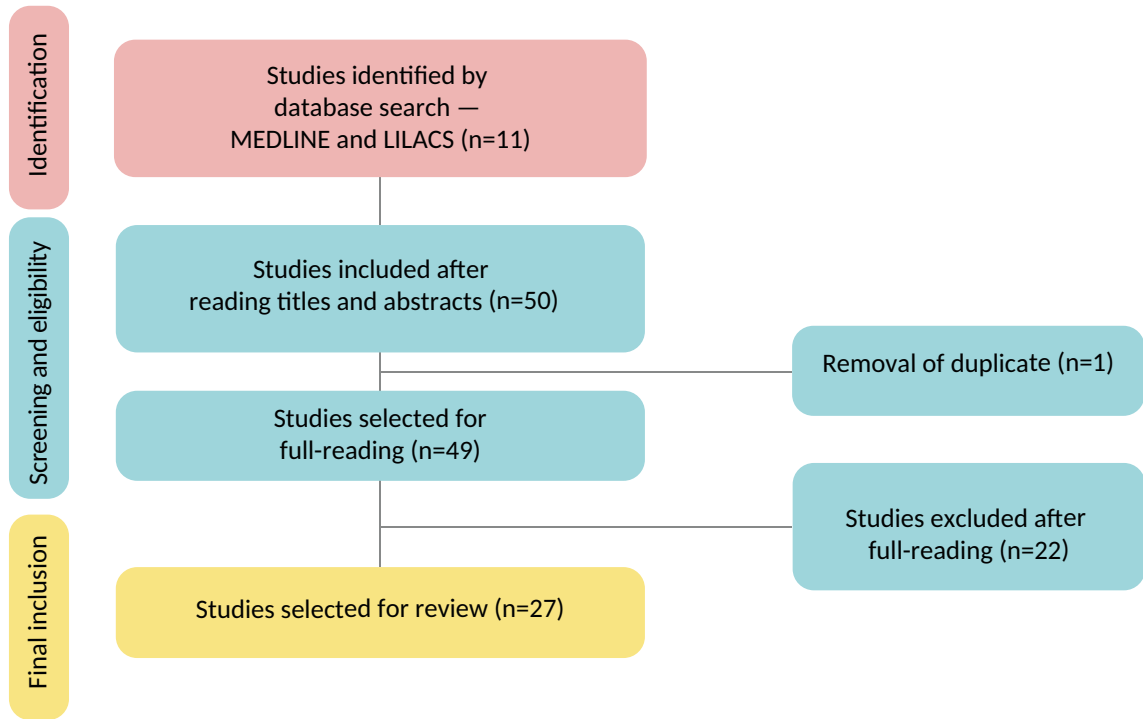
To formulate the research question, we adopted the population, concept, and context (PCC) strategy, a mnemonic rule that helps identify key topics⁶, using the following definitions: population = students, concept = empathy, context = field of health. By reconciling the PPC key topics with the study objectives, we arrived at the following research question: “What has been studied regarding empathy teaching in undergraduate health courses in the past five years?”

Bibliographic search was conducted in April 2021 on the MEDLINE and LILACS databases, chosen due to the wide coverage of publications in health, using the following Descriptors in Health Sciences (DeCS) combined by the Boolean operators “and” and “or”⁷: “*empatia and educação or estudantes and medicina or enfermagem or terapia ocupacional or fonoaudiologia or fisioterapia.*”

Inclusion criteria consisted of free full-length articles published in English, Portuguese, or Spanish in the past five years; publication of research results using primary data; and studies focusing on empathy in the context of professional training. Exclusion criteria included articles whose focus did not correspond to the research question, theoretical essays, editorial notes, duplicate publications, and paid articles.

Initial survey using the search strategies identified 311 articles: 278 (89.39%) in MEDLINE and 33 (10.61%) in LILACS. After analyzing titles and abstracts and applying the exclusion criteria, we pre-selected 50 paper, of which one was removed due to duplicate. Of the 49 articles selected for full reading, 22 were excluded for not answering the survey question, totaling 27 articles in the final review sample (Figure 1).

Figure 1. Diagram of the article selection process



Extraction of all relevant information and characterization of the articles was ensured by completing an instrument previously prepared by the authors for each publication.

For better visualization and comparison between the studies, data were arranged in charts, organized, and stored in a Google Drive spreadsheet (Chart 1).

Chart 1. Categorization of articles selected for the integrative literature review according to authorship, year of publication, title, sample, and objective

Authorship and year	Title	Sample	Study objective
Souza and collaborators; 2020 ⁸	“Empathizing and systemizing profiles of Brazilian and Portuguese nursing undergraduates”	968 nursing students	To analyze the empathy and systematization profile of Brazilian and Portuguese nursing students
Cunha, Rondon, Ximenes Neto; 2020 ⁹	“Habilidade empática e seu aprendizado em graduandos de enfermagem”	11 articles	To search for available evidence in the literature on empathy/empathic ability approach in nursing students
Mairot and collaborators; 2019 ¹⁰	“As artes na educação médica: revisão sistemática da literatura”	28 articles	To evaluate the effectiveness of using Arts in the medical curriculum by means of a literature review
Ferri and collaborators; 2019 ¹¹	“Evaluation of empathy among undergraduate nursing students: a three-year longitudinal study”	118 nursing students	To assess the impact of nursing education on self-reported emotional empathy among nursing students and to assess the gender difference in self-reported emotional empathy

continues...

Chart 1. Continuation

Authorship and year	Title	Sample	Study objective
Coffey and collaborators; 2019 ¹²	"The impact of compassionate care education on nurses: a mixed-method systematic review"	15 articles	To identify, describe, and summarize quantitative and qualitative evidence and mixed-method studies conducted to prepare nurses and nursing students to lead in and/or provide compassionate care
Nalom and collaborators; 2019 ¹³	"Ensino em saúde: aprendizagem a partir da prática profissional"	21 student portfolios	To characterize the students' learning process based on their insertion into professional practice in the first and second semesters of the courses
Jeeyoon and collaborators; 2019 ¹⁴	"The educational effects of a pregnancy simulation in medical/nursing students and professionals"	94 nursing or medical students and 95 medical professionals or nurses	To investigate whether a pregnancy experience program (PREP) can increase empathy
Silva, Alves, Fortes; 2019 ¹⁵	"Percepção de estudantes de enfermagem sobre o que é ser enfermeiro"	22 nursing students	To analyze 5th-year nursing students' perception of what it is to "be a nurse"
Lorenzo and collaborators; 2019 ¹⁶	"Emotional intelligence, empathy and alexithymia: a cross-sectional survey on emotional competence in a group of nursing students"	237 nursing students	To analyze emotional intelligence, empathy, and alexithymia in nursing students
Ulloque and collaborators; 2019 ¹⁷	"Niveles de empatía en estudiantes de medicina de Córdoba, Argentina"	306 medicine students	To measure empathy levels and its components in medicine students in Córdoba (Argentina)
Alhassan; 2019 ¹⁸	"Effect of a 2-day communication skills training on nursing and midwifery students' empathy: a randomised controlled trial"	181 nursing students and 49 obstetrics students	To investigate the effect of a 2-day communication skills training (CST) on the empathy capacity of nursing and obstetrics students (NOS) in a randomized clinical trial
Kaluf and collaborators; 2019 ¹⁹	"Sentimentos do estudante de medicina quando em contato com a prática"	120 medicine students	To describe the feelings experienced by medicine students from a private institution in the countryside of São Paulo in 3 moments (1st, 3rd, and 5th years)
Larti, Ashouri, Aarabi; 2018 ²⁰	"The effects of an empathy role-playing program for operating room nursing students"	77 nursing students	To investigate the effects of a role-play training program conducted among Surgical Center nursing students on empathic communication with patients measured by empathy scores
Ozcan, Öksüz, Oflaz; 2018 ²¹	"Improving empathy in nursing students: a comparative longitudinal study of two curricula"	147 nursing students	To analyze the changes in empathy levels of nursing students in two different curricular structures, one "traditional" and the other "integrated"
Castelhano-Souza and collaborators; 2018 ²²	"Semantic validation of the short versions of the Empathy-Systemizing Quotient Scales"	215 nursing students	Semantic validation and evaluation of the psychometric properties of the short versions of the Empathy/Systematization Quotient Measurement Scales

continues...

Chart 1. Continuation

Authorship and year	Title	Sample	Study objective
Hajibabae and collaborators; 2018 ²³	"The relationship between empathy and emotional intelligence among Iranian nursing students"	320 nursing students	To determine the relationship between empathy and emotional intelligence among Iranian nursing students
Kim; 2018 ²⁴	"Factors influencing nursing students' empathy"	147 nursing students	To examine the self-esteem, interpersonal relationships, and self-efficacy of nursing students to identify the factors affecting empathy
Gholamzadeh and collaborators; 2018 ²⁵	"The effects of empathy skills training on nursing students' empathy and attitudes toward elderly people"	63 nursing students	To investigate the effects of empathy skills training on the empathic capacity and attitudes of nursing students towards older adults
Yang and collaborators; 2018 ²⁶	"Does narrative medicine education improve nursing students' empathic abilities and academic achievement? A randomised controlled trial"	180 nursing students	To determine the effectiveness of a narrative medicine educational intervention on the empathic skills and academic performance of Chinese nursing students
Claro, Mendes; 2018 ²⁷	"Uma experiência do uso de narrativas na formação de estudantes de medicina"	80 medicine students	To describe an experience of using the narrative approach in the medicine course
Adams, Scott; 2018 ²⁸	"Gray reflections: poetry as a pathway to nursing student empathy and the creation of meaning in a long-term-care clinical practicum"	16 nursing students	To incorporate poem reading and writing into a clinical practice experience in long-term care and explore the reflective responses of nursing students
Leonard, Zomorodi, Foster; 2018 ²⁹	"The impact of caring: teaching students empathy through the patient voice"	Not informed	To describe the development and implementation of an innovative learning strategy using a panel of patients and caregivers to teach empathy through the client's own words
Schweller and collaborators; 2018 ³⁰	"Simulated medical consultations with standardized patients: in-depth debriefing based on dealing with emotions"	551 medicine students	To develop an extended and in-depth debriefing to address the affective dimension of medical consultations and the formation of professional identity within a simulation activity with standardized patients in a medical school in Brazil
Kaplan-Liss and collaborators; 2018 ³¹	"Teaching medical students to communicate with empathy and clarity using improvisation"	114 medicine, nursing, and dentistry students	To develop a communication skills training program for medical students that incorporated improvisation aiming to improve empathy
Enderle and collaborators; 2018 ³²	"Teaching strategies: promoting the development of moral competence in undergraduate students"	20 nursing students	To identify strategies and spaces used by professors to promote the development of moral competence of undergraduate nursing students
Nunes and collaborators; 2018 ³³	"Musical dynamics in the sensitization of nursing students in the face of palliative care in pediatric oncology"	10 nursing students	To analyze the applicability of musical dynamics in the sensitization of nursing students faced with palliative care in pediatric oncology
Song, Shi; 2017 ³⁴	"Associations between empathy and big five personality traits among Chinese undergraduate medical students"	530 medicine students	To examine the association between empathy and the Big 5 personality traits of Chinese medical students

Our analysis resulted in the elaboration of the following thematic blocks for discussion: students' area of study; research methodologies used; empathy measurement scales; and empathy teaching strategies. Finally, data were interpreted and discussed based on a theoretical framework relevant to the research and its objectives.

Results and discussion

Students' area of study

During our analysis, we observed that most research and publications on empathy teaching in this study sample was in the field of nursing, followed by medicine. Only one multidisciplinary study was found.

This finding is corroborated by the fact that nursing education goes beyond the biological perspective, focusing on the human dimension and prioritizing teaching based on socio-emotional competencies that allow a professional transformation during the health-disease-care process. Nursing school aims to train professionals with varied skills, and empathy is an essential skill to nursing practice⁹.

Regarding medicine, many curricular changes have been taking place in medical schools to meet the new health system demands for a more humanized and user-centered medical practice. Professional values, behaviors, and attitudes of medical students have increasingly become an object of study and concern³.

We found no studies published in the fields of occupational therapy, speech therapy, or physical therapy.

Research methodologies used by the analyzed studies

Regarding the types of studies, of the 27 articles included, 14 were quantitative studies, ten qualitative studies, and three quantitative-qualitative studies. Our research database also included three literature reviews—two systematic reviews and one integrative review.

Empathy is a cognitive skill based on the individual's subjective aspects. Ulloque and collaborators¹⁷ state that empathy merges cognitive and emotional components: the former involves understanding the world from the perspective of the other, and the latter addresses the affective capacity to connect with other people's experience.

We noted a tendency to define empathy more objectively, measurably, and, finally, statistically analyzable in terms of results. Such an effort possibly aims to produce more uniform content of increasingly quality and impact in the scientific literature, so that studies on this skill are feasible in different regions and contexts.

The study by Castellano-Souza and collaborators²² corroborates this observation. The authors semantically validated and evaluated the psychometric properties of the short versions of the Empathy/Systematization Quotient Measurement Scales, instrument widely used in many countries to measure the empathic and systematic profile.

Measurement scales used

As for the use of empathy measurement scales, 17 out of the 27 analyzed studies employed these instruments in their research—three constructed for the research and 19 pre-existing scales. Among the latter we highlight: the Jefferson Scale of Empathy – S-version^{14,16,17,18,20}, used in five articles; followed by the Schutte Self-Report Emotional Intelligence Test (SSEIT)^{16,23}; the Empathy Quotient (EQ) – short version^{8,22}; the Systematizing Quotient (SQ) – short version^{8,22}; the Jefferson Scale of Empathy – HP-version^{14,25}; and the Jefferson Scale of Empathy^{23,26}, each used in two studies.

The Jefferson Scale of Empathy (JSE) has several versions. The student version (JSE-S) is a self-report instrument for measuring empathy in medical students, consisting of 20 items: the final score can range from 20 to 140 points—the higher the score, the higher the level of empathy. Easy to apply, its completion takes about ten minutes¹⁴. The scale evaluates three domains: perspective taking (7 to 49 points), compassionate care (7 to 77 points), and ability to stand in the patient's shoes (7 to 14 points)³⁵.

The most widely used scales are considered easy to understand and apply, which makes them strategic for teaching empathy.

Teaching strategies

We identified 16 studies that sought to develop, experiment, evaluate, or collect data on teaching strategies (Chart 2).

Chart 2. Empathy teaching strategies discussed by the studies

Authorship and year	Teaching strategies
Cunha, Rondon, Ximenes Neto; 2020 ⁹	Creative arts (literature, poetry, cinema, among others) with discussions that seek to understand the patient's point of view
Mairot and collaborators; 2019 ¹⁰	Arts (literature, theater, cinema, and painting)
Coffey and collaborators; 2019 ¹²	Compassionate care interventions and educational programs
Nalom and collaborators; 2019 ¹³	Learning in the professional practice setting
Jeeyoon and collaborators; 2019 ¹⁴	Pregnancy experience program (PREP)
Alhassan; 2019 ¹⁸	Small group discussions, brainstorming, participants' personal experience, group reports, interpretation, questions and answers, videos and summaries, communication skills training (CST)
Larti, Ashouri, Aarabi; 2018 ²⁰	12-hour training program on expressing empathy with patients
Gholamzadeh and collaborators; 2018 ²⁵	Workshop based on constructivist learning theory
Yang and collaborators; 2018 ²⁶	Program on narrative medicine, theoretical education, and clinical practice
Claro, Mendes; 2018 ²⁷	Narrative medicine
Adams, Scott; 2018 ²⁸	Poetry as a stimulus to reflection/reflective writing
Leonard, Zomorodi, Foster; 2018 ²⁹	Panel of patients and caregivers to teach empathy through the client's own words
Schweller and collaborators; 2018 ³⁰	Simulation of medical consultations with standardized patient, with extended debriefing based on patient and student emotions
Kaplan-Liss and collaborators; 2018 ³¹	Communication science course using verbal and nonverbal exercises, role play, storytelling, and improvisation exercises
Enderle and collaborators; 2018 ³²	Active methodologies, such as case simulations; paper cases; round; workshops with ethical dilemmas; realistic simulation
Nunes and collaborators; 2018 ³³	Creative and sensitive method, based on group discussions, participant observation, and artistic productions, which occur simultaneously in each dynamic

All studies utilized active methodologies to teach empathy, especially interventionist strategies involving discussion and/or narrative in groups. As an example, the clinical trial conducted by Alhassan¹⁸ sought to investigate how a communication skills training in discussion groups affected students' empathy. Claro and Mendes'²⁷ research shows that the narrative strategy is a pedagogical tool that facilitates the development of empathy skills.

Conversely, only one study used the simulation strategy in realistic scenarios with standardized patients. Schweller and collaborators³⁰ simulated medical consultations with actors representing characters based on clinical cases developed by teaching preceptors, aiming to provide students with the experience of real care. After the practical experience, students shared feelings and impressions with each other, reflecting on the physician-patient relationship. Participants highlighted

the importance of perceiving the patient's fragility in the face of their own illness.

Enderle and collaborators³² sought to identify the strategies used by nursing teachers to develop moral competencies, including empathy. Active methodologies such as case simulations, paper cases, round, workshops with ethical dilemmas, and realistic simulations were the pedagogical tools listed by the 20 professors who participated in the research.

Almost all studies analyzed reported satisfaction on the part of the research subjects—whether health students, professors, patients, or caregivers. Moreover, empathy teaching involves the cognitive-behavioral scope, that is, permeates the assistant-patient relations experienced in clinical practice. Thus, developing teaching strategies based on active methodologies is of paramount importance so that future health professionals can develop empathic attitudes.

Final considerations

Empathy as a curricular component in health courses has been the recurrent object of scientific research, suggesting an awareness of its important role for health professionals, in line with the DCN. Empathy teaching aims at training a more humanized, critical, and reflective professional, who meets the SUS principles and guidelines and who favors communication and improved quality of care.

Our integrative review allowed to identify relevant aspects that, in the past five years, marked the topic studied. We found great heterogeneity in the frequency of studies between the different fields of health, predominating works published in nursing and medicine. Research on this topic requires a greater scope, since it is the human being, in its various dimensions, the focus of all health professions.

The widespread use of quantitative methodologies denotes the interest of the scientific community in making empathy a measurable skill. Importantly, active methodologies stood out as teaching strategies, enabling students to experience professional-patient relations through situations in which empathy skills are fundamental.

Based on a corpus of research on empathy in health education, we sought to reflect on this important topic that permeates the professional-patient relationship. Our findings may subsidize teaching practices and contribute to further research, focusing on quality of care through empathy and the understanding that health education goes beyond information transfer by professors, and includes valuing the experience of learners and enabling the shared and critical construction of new knowledge.

References

1. Nunes C. Empatia, exigência do mundo atual. *Educação Pública* [Internet]. 2019 [acesso 18 out 2022];19(1). Disponível: <https://bit.ly/3U4hcUa>
2. Mansur SS, Botelho A. Empatia de Joseph K na obra “O Processo”, de Franz Kafka [Internet]. In: *Anais Eletrônicos do 17º: Seminário Nacional de História da Ciência e da Tecnologia*; 23-27 nov 2020; Rio de Janeiro. Rio de Janeiro: Unirio; 2020 [acesso 18 out 2022]. p. 23-7. Disponível: <https://bit.ly/3EYkILx>
3. Kaluf IO, Sousa SGO, Saturnino L, Cesário, RR. Sentimentos do estudante de medicina quando em contato com a prática. *Rev Bras Educ Méd* [Internet]. 2019 [acesso 18 out 2022];43(1):13-22. DOI: 10.1590/1981-52712015v43n1RB20180098
4. Pontes AC, Leitão IMTAR, Islane C. Comunicação terapêutica em enfermagem: instrumento essencial do cuidado. *Rev Bras Enferm* [Internet]. 2008 [acesso 18 out 2022];61(3):312-8. DOI: 10.1590/S0034-71672008000300006
5. Souza MT, Silva MD, Carvalho R. Revisão integrativa: o que é e como fazer. *Einstein (São Paulo)* [Internet]. 2010 [acesso 18 out 2022];8(1):102-6. DOI: 10.1590/S1679-45082010RW1134
6. Peters M, Godfrey C, McInerney P, Soares CB, Khalil H, Parker D. *The Joanna Briggs Institute Reviewers' Manual 2015: methodology for JBI scoping reviews* [Internet]. Adelaide: Joanna Briggs Institute; 2015 [acesso 18 out 2022]. Disponível: <https://bit.ly/3V1yMJv>
7. Santos CMC, Pimenta CAM, Nobre MRC. A estratégia Pico para a construção da pergunta de pesquisa e busca de evidências. *Rev Latinoam Enferm* [Internet]. 2007 [acesso 18 out 2022];15(3):508-11. DOI: 10.1590/S0104-11692007000300023
8. Souza MC, Mendes IAC, Martins JCA, Godoy S, Souza-Junior VD, Trevizan MA *et al.* Empathizing and systemizing profiles of Brazilian and Portuguese nursing undergraduates. *Nurs Ethics* [Internet]. 2020 [acesso 18 out 2022];27(1):221-9. DOI: 10.1177/0969733019833132
9. Cunha ICKO, Rondon LS, Ximenes Neto FRG. Habilidade empática e seu aprendizado em graduandos de enfermagem. *Enferm Foco* [Internet]. 2020 [acesso 18 out 2022];11(3):6-14. Disponível: <https://bit.ly/3ueGxQV>
10. Mairot LTS, Costa BBG, Heringer TPM, Borges RC, Moura EP. As artes na educação médica: revisão sistemática da literatura. *Rev Bras Educ Méd* [Internet]. 2019 [acesso 18 out 2022];43(4):54-64. DOI: 10.1590/1981-52712015v43n4RB20180146

11. Ferri P, Rovesti S, Bonetti L, Stifani S, Panzera N, Di Lorenzo R. Evaluation of empathy among undergraduate nursing students: a three-year longitudinal study. *Acta Biomed* [Internet]. 2019 [acesso 18 out 2022];90(11-S):98-107. DOI: 10.23750/abm.v90i11-S.8874
12. Coffey A, Saab MM, Landers M, Cornally N, Hegarty J, Drennan J *et al*. The impact of compassionate care education on nurses: a mixed-method systematic review. *J Adv Nurs* [Internet]. 2019 [acesso 18 out 2022];75(11):2340-51. DOI: 10.1111/jan.14088
13. Nalom DMF, Gheizzi JFSA, Higa EFR, Peres CRFB. Ensino em saúde: aprendizagem a partir da prática profissional. *Ciênc Saúde Colet* [internet]. 2019 [acesso 18 out 2022];24(5):1699-708. DOI: 10.1590/1413-81232018245.04412019
14. Jeeyoon Y, Yoohyun C, Eum JL, Hun DS, Ha JW, Sun HK *et al*. The educational effects of a pregnancy simulation in medical/nursing students and professionals. *BMC Med Educ* [Internet]. 2019 [acesso 18 out 2022];19(1):168. DOI: 10.1186/s12909-019-1589-8
15. Silva BLG, Alves ES, Fortes AFA. Percepção de estudantes de enfermagem sobre o que é ser enfermeiro. *Arq Ciências Saúde Unipar* [Internet]. 2019 [acesso 25 nov 2022];23(2):81-8. DOI: 10.25110/arqsaude.v23i2.2019.6136
16. Lorenzo RD, Venturelli G, Spiga G, Ferri P. Emotional intelligence, empathy and alexithymia: a cross-sectional survey on emotional competence in a group of nursing students. *Acta Biomed* [Internet]. 2019 [acesso 18 out 2022];90(4-S):32-43. DOI: 10.23750/abm.v90i4-S.8273
17. Ulloque MJ, Villalba S, Villalba TV, Fantini A, Quinteros S, Díaz-Narváez V. Niveles de empatía en estudiantes de medicina de Córdoba, Argentina. *Arch Argent Pediatr* [Internet]. 2019 [acesso 18 out 2022];117(2):81-6. DOI: 10.5546/aap.2019.81
18. Alhassan M. Effect of a 2-day communication skills training on nursing and midwifery students' empathy: a randomised controlled trial. *BMJ Open* [Internet]. 2019 [acesso 1 abr 2021];9(3):e023666. DOI: 10.1136/bmjopen-2018-023666
19. Kaluf IO, Sousa SGL, Luz S, Cesario RR. Sentimentos do estudante de medicina quando em contato com a prática. *Rev Bras Educ Méd* [internet]. 2019 [acesso 1 abr 2021];43(1):13-22. DOI: 10.1590/1981-52712015v43n1RB20180098
20. Larti N, Ashouri E, Aarabi A. The effect of an empathy role-play program for operating room nursing students. *J Educ Eval Health Prof* [Internet]. 2018 [acesso 18 out 2022];15:29. DOI: 10.3352/jeehp.2018.15.29
21. Ozcan CT, Öksüz E, Oflaz F. Improving empathy in nursing students: a comparative longitudinal study of two curricula. *J Korean Acad Nurs* [Internet]. 2018 [acesso 18 out 2022];48(5):497-505. DOI: 10.4040/jkan.2018.48.5.497
22. Castelhana-Souza M, Mendes IAC, Martins JCA, Trevizan MA, Souza-Júnior VD, Godoy S. Semantic validation of the short versions of the Empathy-Systemizing Quotient Scales. *Rev Latinoam Enferm* [Internet]. 2018 [acesso 18 out 2022];26:e3044. DOI: 10.1590/1518-8345.2606.3044
23. Hajibabae F, Farahani M, Ameri Z, Salehi T, Hosseini F. The relationship between empathy and emotional intelligence among Iranian nursing students. *Int J Med Educ* [Internet]. 2018 [acesso 18 out 2022];9:239-43. DOI: 10.5116/ijme.5b83.e2a5
24. Kim J. Factors influencing nursing students' empathy. *Korean J Med Educ* [Internet]. 2018 [acesso 18 out 2022];30(3):229-36. DOI: 10.3946/kjme.2018.97
25. Gholamzadeh S, Khastavaneh M, Khademian Z, Ghadakpour S. The effects of empathy skills training on nursing students' empathy and attitudes toward elderly people. *BMC Med Educ* [Internet]. 2018 [acesso 18 out 2022];18(1):198. DOI: 10.1186/s12909-018-1297-9
26. Yang N, Xiao H, Cao Y, Li S, Yan H, Wang Y. Does narrative medicine education improve nursing students' empathic abilities and academic achievement? A randomised controlled trial. *J Int Med Res* [Internet]. 2018 [acesso 18 out 2022];46(8):3306-17. DOI: 10.1177/0300060518781476
27. Claro LBL, Mendes AAA. Uma experiência do uso de narrativas na formação de estudantes de medicina. *Interface Comun Saúde Educ* [Internet]. 2018 [acesso 18 out 2022];22(65):621-30. DOI: 10.1590/1807-57622016.0850
28. Adams SB, Scott LD. Gray reflections: poetry as a pathway to nursing student empathy and the creation of meaning in a long-term-care clinical practicum. *Creat Nurs* [Internet]. 2018 [acesso 18 out 2022];24(1):52-61. DOI: 10.1891/1078-4535.24.1.52

29. Leonard CR, Zomorodi M, Foster BB. The impact of caring: teaching students empathy through the patient voice. *Creat Nurs* [Internet]. 2018 [acesso 18 out 2022];24(1):62-6. DOI: 10.1891/1078-4535.24.1.62
30. Schweller M, Ribeiro LD, Passeri RS, Wanderley JS, Carvalho-Filho MA. Simulated medical consultations with standardized patients: in-depth debriefing based on dealing with emotions. *Rev Bras Educ Méd* [Internet]. 2018 [acesso 18 out 2022];42(1):84-93. DOI: 10.1590/1981-52712018v42n1RB20160089
31. Kaplan-Liss E, Lantz-Gefroh V, Bass E, Killebrew D, Ponzio NM, Savi C *et al.* Teaching medical students to communicate with empathy and clarity using improvisation. *Acad Med* [Internet]. 2018 [acesso 18 out 2022];93(3):440-3. DOI: 10.1097/ACM.0000000000002031
32. Enderle CF, Silveira RS, Dalmolin GL, Lunardi VL, Avila LI, Dominguez CC. Teaching strategies: promoting the development of moral competence in undergraduate students. *Rev Bras Enferm* [Internet]. 2018 [acesso 18 out 2022];71(4):1650-6. DOI: 10.1590/0034-7167-2017-0704
33. Nunes CF, Silva LF, Santo FHE, Góes FGB, Moraes JRMM. Musical dynamics in the sensitization of nursing students in the face of palliative care in pediatric oncology. *Esc Anna Nery Rev Enferm* [Internet]. 2018 [acesso 18 out 2022];22(4):e20170448. DOI: 10.1590/2177-9465-ean-2017-0448
34. Song Y, Shi M. Associations between empathy and big five personality traits among Chinese undergraduate medical students. *PLoS ONE* [Internet]. 2018 [acesso 1 abr 2021];12(2):e0171665. DOI: 10.1371/journal.pone.0171665
35. Silva JTN, Toledo A. Association between emotional intelligence and empathy among medical students: a single center cross-sectional study, Brazil, 2019. *Rev Bras Educ Méd* [Internet]. 2019 [acesso 18 out 2022];45(1):e042. DOI: 10.1590/1981-5271v45.1-20200053

José Antonio Cordero da Silva – PhD – corderobel4@gmail.com

 0000-0002-4403-5665

Cristiane Guerreiro Pereira Abdul Massih – Graduate (specialist) – cristiane.massih@aluno.uepa.br

 0000-0002-4038-063X


Daniele Azevedo Valente – Graduate (specialist) – danieleazevedos84@gmail.com

 0000-0001-7831-5502


Danielle Ferreira de Souza – Graduate (specialist) – d.s.terapeuta@gmail.com

 0000-0001-5014-1715

Magda Regiane Lima de Carvalho Monteiro – Graduate (specialist) – magda.monteiro@uepa.br

 0000-0003-1487-7121

Raiza Morais Rodrigues – Graduate (specialist) – toraizamorais@gmail.com

 0000-0003-0877-8944

Correspondence

Raiza Morais Rodrigues – Universidade do Estado do Pará. Centro de Ciências Biológicas e da Saúde, Campus II. Trav. Perebebuí, 2623, Marco CEP 66087-670. Belém/PA, Brasil.

Participation of the authors

The authors contributed equally to the article.

Received: 7.26.2022

Revised: 10.18.2022

Approved: 11.7.2022