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Literature Review

TEXTO & CONTEXTO ENFERMAGEM
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HOW TO MEASURE THE EMPATHY LEVEL OF UNDERGRADUATE NURSING STUDENTS? AN INTEGRATIVE REVIEW

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ABSTRACT

Objective: analyze available evidence in the literature on the measuring of empathy levels in nursing undergraduates.
Method: integrative literature review developed in the databases PubMed, Web of Science, CINAHL and LILACS in September 2017.
Results: among the 40 primary studies analyzed, 21 questionnaires were identified to measure the empathy levels of nursing undergraduates.
Conclusion: different tools exist that are considered reliable to analyze the empathy level among nursing undergraduates.

DESCRIPTORS: Nursing. Empathy. Students, nursing. Surveys and questionnaires. Nursing staff. Social Behavior.

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COMO MEDIR O GRAU EMPÁTICO DE GRADUANDOS DE ENFERMAGEM? UMA REVISÃO INTEGRATIVA

RESUMO

Objetivo: analisar evidências disponíveis na literatura sobre mensuração do grau empático de graduandos de enfermagem.
Método: revisão integrativa da literatura realizada nas bases PubMed, *Web of Science*, CINHAL e LILACS, em setembro de 2017.
Resultados: entre os 40 estudos primários analisados, foram identificados 21 questionários para mensuração do grau empático de graduandos de enfermagem.
Conclusão: existem diversos instrumentos considerados confiáveis para a análise do perfil empático entre graduandos de enfermagem.

DESCRITORES: Enfermagem. Empatia. Estudantes de enfermagem. Inquéritos e questionários. Recursos humanos de Enfermagem. Comportamento social.

¿COMO MENSURAR EL NIVEL DE EMPATIA DE ALUMNOS DE PREGRADO EN ENFERMERIA? REVISION INTEGRADORA

RESUMEN

Objetivo: analizar evidencias disponibles en la literatura sobre la mensuración de niveles de empatía en alumnos de pregrado en enfermería.
Método: revisión integradora de la literatura desarrollada en las bases de datos PubMed, *Web of Science*, CINAHL y LILACS en septiembre del 2017.
Resultados: entre los 40 estudios primarios analizados, fueron identificados 21 cuestionarios para mensurar los niveles de empatía de alumnos de pregrado en enfermería.
Conclusión: existen diferentes herramientas que son consideradas confiables para analizar el nivel de empatía entre los alumnos de pregrado en enfermería.

DESCRIPTORES: Enfermería. Empatía. Estudiantes de Enfermería. Encuestas y Cuestionarios. Personal de Enfermería. Conducta Social.

INTRODUCTION

Empathy is an innate ability to perceive and be sensitive to the emotional states of others, and to share feelings, reflecting the ability to put oneself in other people's place and to understand their feelings.[1] Especially for nursing, empathy figures as one of the indispensable elements in the nurse-patient relationship, providing this link and benefiting both the patient and the nurse. By feeling welcomed and understood in their pain, the patient improves the level of satisfaction and therapeutic compliance; the nurse, on the other hand, strengthens the affective contact and the feeling of fulfilled duty.[2]

When the nurse learns to deal with empathy in the interactions with the patient, he becomes more satisfied and committed to his work. Currently, due to all the benefits that empathy can bring to clinical practice, there is a concern with stimulating this ability in nurses and nursing students.[3] Thus, efforts have been made to know the empathic behavior by means of measuring instruments and training of human resources, and it has been proven that, although it is innate in some people, it is a competence that can be learned.[2,4]

Questionnaires to evaluate this competence have been available since 1960, but aim to identify the empathy of the general population;[5–8] others have emerged and have been used to evaluate professional and student performance.[9–10]

Exploring ways of measuring empathy among nursing undergraduates can contribute to their valuation by education systems, to the nurse-patient relationship and to the improvement of the quality of care the former provided to the latter. In order to better understand and use available empathy assessment resources, this review aimed to identify, in the literature, the instruments used to measure the empathy level of nursing undergraduates.

METHOD

An integrative review of the literature was undertaken. The following stages were developed: elaboration of the research question; search for primary studies; data extraction; evaluation of primary studies; analysis, synthesis and presentation of results.[11–12]

The guiding question of the review was: "What are the instruments available in the literature to measure the empathic degree of nursing undergraduates?". For its elaboration, the PICO strategy was used,[13] in which "P" (population) referred to nursing undergraduates; "I" (intervention) to the questionnaire/instrument or scale to measure empathy; "C" (comparison) did not apply; and "O" (expected outcome) was empathy.

The inclusion and exclusion criteria were established considering the guiding question based on the PICO strategy. We included articles that measured the empathic profile of nursing undergraduates, studies on the validation and construction of scales, published in all languages, without time limit for the search. We excluded studies that did not use instruments to measure the empathic level, that had another focus than empathy, did not describe the scale used and one study was not found even after contact with the author.

The study was carried out from September to December 2017. Three authors carried out the search in September in four databases: PubMed, Web of Science, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Latin American and Caribbean Literature in Health Sciences (LILACS). Only in the CINAHL database, the "academic journal" limit was applied in the search strategy for the selection of articles. The search strategy adopted the terms of the Health Sciences Descriptors (DeCS) in three languages and controlled descriptors were used from the Medical Subject Headings Section (MeSH), keywords, synonyms and boolean operators (Table 1).

Table 1 – Controlled descriptors, keywords, synonyms and boolean operators crossed in the databases. Ribeirão Preto, SP, Brazil, 2017

PICO	Descriptors
#1 P	"Students, nursing" OR "pupil nurses" OR "student, nursing" OR "pupil nurse" OR "nursing student" OR "nursing students"
#2 I	"Questionnaires and surveys" OR questionnaires OR questionnaire OR surveys OR Survey OR scale
#3 O	Empathy OR caring OR compassion AND "students, nursing" OR "pupil nurses" OR "student, nursing" OR "pupil nurse" OR "nursing"

The final search strategy was the combination of the following elements of the PICO strategy and the Boolean operator AND, that is: P AND I AND O. Thus, in total,1,721 primary articles were identified, being 505 in PubMed, 964 in *Web of Science*, 400 in CINAHL and none in LILACS. At the end of the search in all electronic databases, the results were exported to the bibliographic manager EndNote basic. Two independent reviewers read all titles and abstracts independently. Seventy-four articles were selected to read the full text. In this stage, the reviewers disagreed on the inclusion of six articles, which were assessed by a third reviewer. The selection strategy of the articles is presented in Figure 1, in accordance with the recommendation of the PRISMA group.[14]

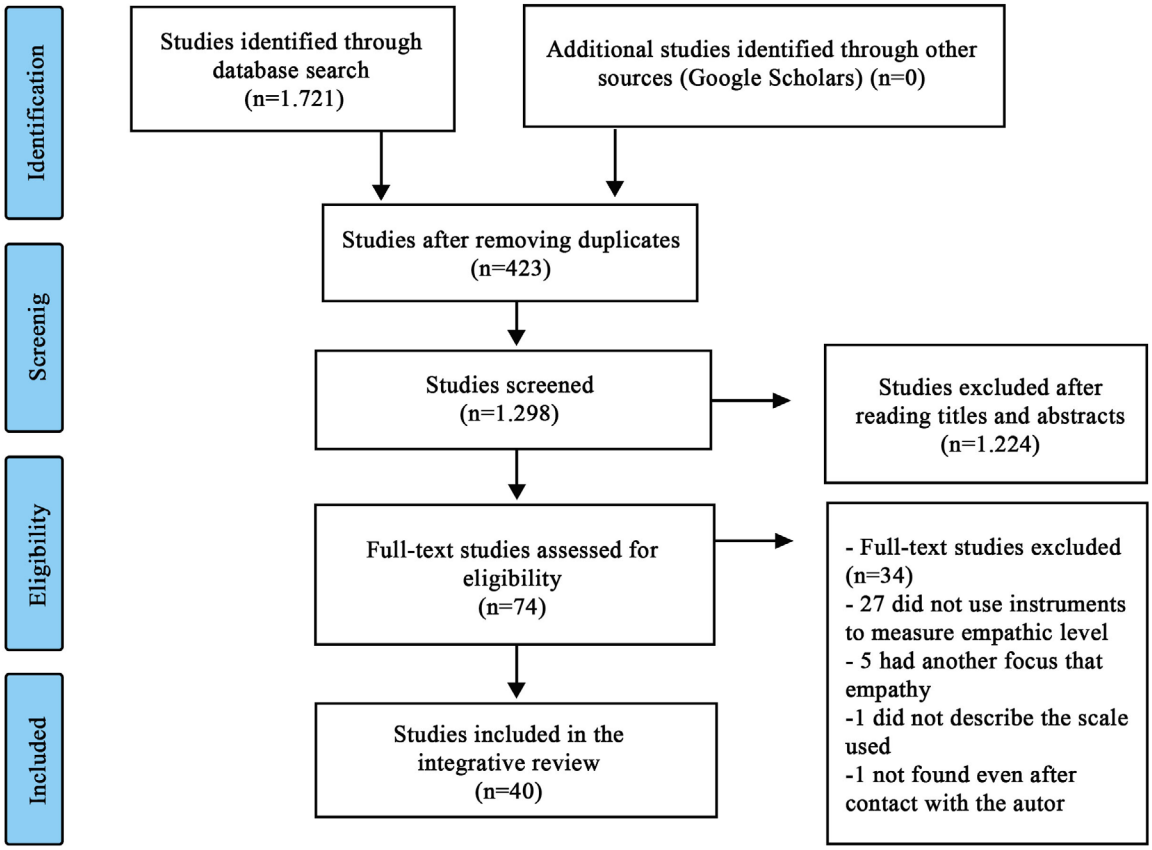

Figure 1 – Identification flowchart of primary studies included in the review. Ribeirão Preto, SP, Brazil, 2017

The final review sample consisted of 40 articles, summarized according to the year of publication, language, authors and country of origin of the corresponding author, type of journal in which it was published, level of evidence and questionnaire used to measure the nursing undergraduates' degree of empathy. The data extracted for the qualitative synthesis were collected using a validated instrument.[15] As for the country of origin, the corresponding author's country was chosen, since the country where most of the studies were conducted could not be identified. For the classification of the evidence, the seven-level clinical question/intervention system was used, namely: level I for systematic review/meta-analyses; level II, randomized clinical trial; level III, non-randomized controlled trials; level IV, cohort study or case-control studies; level V, meta-synthesis of qualitative information or descriptive studies; level VI, single qualitative studies or descriptive studies; and level VII, expert opinion.[12]

RESULTS

Of the 40 (100%) articles analyzed, 39 (97.5%) were published in English and one (2.5%) in Spanish. All the analyzed publications were developed in universities. A concentration of publications was identified in the last seven years (75%), 26.6% of which were published in 2012 and 20% in 2015. Of the 26 (100%) journals identified, 38.5% were general nursing journals, 34.6% in nursing education, 15.4% in other health areas (pharmacy, biological sciences, health and social), 7.7% in the medical area and 3.8% in psychiatric nursing. Regarding the level of evidence, 85% were classified as level VI, 12.5% level IV and 2.5% level II (Table 2).

In this review, 21 questionnaires were identified that measure the empathic level of nursing undergraduates, whose citation frequency in the articles selected in this review was as follows: The Jefferson Scale of Empathy - Health Professions students (JSE-HPS) ten times; The Jefferson Scale of Empathy (JSPE) four times; Balanced Emotional Empathy Scale (BEES) three times; (KSES), Empathic Communication Skills Scale (ECSS), and Jefferson Scale of Physician Empathy-Nursing Student (JSPE-R), Empathy Quotient (EQ) and Systemizing Quotient (QS), Interpersonal Reactivity Index (IRI), Kiersma-Chen Empathy Scale, Empathic Tendency Scale (ETS), Empathic Understanding Scale (EUS), and Hogan Empathy Scale (HES), each of which is quoted twice. Finally, the questionnaires Scale of Ethnocultural Empathy (SEE), Scale of Empathic Tendency (SET), Staff-Patient Interaction Response Scale (SPIRS-PCN), Reynolds Empathy Scale (RES), Empathy Construct Rating Scale, Modified KCES, Emotional Empathy Tendency Scale (EETS), Scale of Empathy Skill, Empathic Response Scale, Layton Empathy Test, Kagan's Affective Sensitivity Scale were used once each.

Table 2 – Articles included in the integrative review. Ribeirão Preto, SP, Brazil, 2017.

Authors	Country	Study design	Questionnaire/purpose	Evidence level
Ferri, et al.[16]	The Netherlands	Retrospective cohort	BEES*/ measure empathy	VI
Gallagher, et al.[17]	New Zealand	Prospective cohort	JSPE†/measure empathy	VI
Anaya, et al.[18]	Colombia	Retrospective cohort	JSPE†/measure empathy	VI
Petrucci, et al.[19]	Italy	Retrospective cohort	JSE-HPS‡/measure empathy	VI
Ward[20]	United States	Prospective cohort	JSE-HPS‡/measure empathy	VI
Choi, et al.[21]	Korea	Prospective cohort	Empathy Construct Rating Scale/measure empathy	IV

Table 2 – Cont.

Authors	Country	Study design	Questionnaire/purpose	Evidence level
Chen, et al.[22]	United States	Prospective cohort	KCES§ e JSE-HPS‡/ measure empathy	VI
Everson, et al.[23]	Australia	Prospective cohort	Modified KCES‡/measure empathy	VI
Ferri, et al.[24]	Italy	Retrospective cohort	BEES*/measure empathy	VI
Fleming, et al.[25]	United States	Prospective cohort	Scale of Ethnocultural Empathy /measure empathy	VI
Montanari, et al.[26]	Italy	Retrospective cohort	JSE-HPS‡/scale validation	VI
Penprase, et al.[27]	United States	Retrospective cohort	Empathy Quotient e Systemizing Quotien / measure empathy	VI
Özakgül, et al.[28]	Turkey	Retrospective cohort	Scale of Empathic Tendency /measure empathy	IV
Williams, et al.[29]	Australia	Retrospective cohort	JSE-HPS‡/measure empathy	VI
Hsiao, et al.[30]	China	Retrospective cohort	JSE-HPS‡/ analyze psychometric properties	VI
Kiersma et al.[31]	United States	Retrospective cohort	KCES§/scale validation	VI
Kim, et al.[32]	United States	Retrospective cohort	Empathy Quotient -Short/ measure empathy	VI
Taylor e Mamier.[33]	United States	Prospective cohort	Empathic Response Scale/measure empathy	IV
Penprase, et al.[34]	United States	Retrospective cohort	Empathy Quotient e Systemizing Quotient/ measure empathy	VI
Cunico, et al.[35]	Italy	Prospective cohort	BEES*/measure empathy	IV
McKenna, et al.[36]	Australia	Retrospective cohort	JSPE†/measure empathy	VI
Ouzouni e Nakakis.[37]	Greece	Retrospective cohort	JSPE-R‖ /measure empathy	VI
Ozcan, et al.[38]	Turkey	Prospective cohort	ECSS¶ e ETS**/measure empathy	VI
Ward, et al.[39]	United States	Retrospective cohort	JSPE-R‖/measure empathy	VI
Wilson, et al.[40]	England	Retrospective cohort	JSPE†/measure empathy	VI
Briggs, et al.[41]	United States	Prospective cohort	JSE-HPS‡/measure empathy	VI
Fields, et al.[42]	United States	Retrospective cohort	JSE-HPS‡/ analyze psychometric properties	VI
McKenna, et al.[43]	Australia	Retrospective cohort	JSE-HPS‡/measure empathy	VI
McMillan e Shannon[44]	United States	Retrospective cohort	JSPE-R‖/ analyze psychometric properties	VI

Table 2 – Cont.

Authors	Country	Study design	Questionnaire/purpose	Evidence level
Özcan, et al.[45]	Turkey	Prospective cohort	Scale of Empathic Skill/ measure empathy	VI
Ozcan, et al.[46]	Turkey	Retrospective cohort	ECSS¶ e ETS**/measure empathy	VI
Ward, et al.[47]	United States	Retrospective cohort	JSPE†/ analyze reliability and validity	VI
Adriaansen, et al.[48]	The Netherlands	Retrospective cohort	Staff-Patient Interaction Response Scale for Palliative Care Nursing / analyze reliability and validity	VI
Gunther, et al.[49]	United States	Retrospective cohort	HES†† e EETS‡‡/ measure empathy	VI
Beddoe e Murphy[50]	United States	Retrospective cohort	Interpersonal Reactivity Index /measure empathy	VI
Lauder, et al.[51]	England	Retrospective cohort	Reynolds Empathy Scale /measure empathy	IV
Nagano[52]	Japan	Retrospective cohort	Empathic Understanding Scale /scale validation	VI
Evans, et al.[53]	United States	Prospective cohort	Layton Empathy Test e HES/measure empathy	VI
Becker e Sands[54]	United States	Retrospective cohort	Interpersonal Reactivity Index /measure empathy	VI
Kunst-Wilson, et al.[55]	United States	Retrospective cohort	Kagan's Affective Sensitivity Scale/measure empathy	II

*BEES=Balanced Emotional Empathy Scale; †JSPE=The Jefferson Scale of Empathy; ‡JSE-HPS=The Jefferson Scale of Empathy- Health Professions students; §KCES=Kiersma-Chen Empathy Scale; || JSPE-R=Jefferson Scale of Physician Empathy-Nursing Student; ¶ECSS=Empathic Communication Skills Scale;**ETS=Empathic Tendency Scale; ††HES=Hogan Empathy Scale;‡‡EETS=Emotional Empathy Tendency Scale

DISCUSSION

The analysis of the studies in this review revealed that the empathic degree of nursing undergraduates has been identified through 21 questionnaires, all of which are self-administered and are rapidly filled out. The product of this review consists of the reference synthesis for researchers and nurses who seek guidance on the evaluation of the degree of empathy among undergraduates and nursing professionals. Each of the 21 tools studied is the focus of this discussion.

The JSPE was developed to measure the empathic qualities and trends of medical students and physicians in patient care situations.[8] It analyzes cognitive behavior and presents good reliability,[56] and has already been applied to nursing students and health professionals.[17–18,57–58]

Then, it was adapted to other areas, after which the JSE-HPS emerged,[59] which has already been applied to students from various health courses, was developed, showing higher levels of empathy among nursing students and more in women than in men.[19] In an intervention with nursing students that used this scale in the pre- and post-test, it was identified that health care is very focused on virtual and theoretical teaching, reducing interaction with the patient.

The focus on humanization in teaching and empathy needs to be preserved for the sake of a good relationship with the patient.[20] The specific JSPE-R[47] was also created for nursing undergraduates.

This scale has already been used with nurses and reveals that the evidences of the levels related to attitude, emotional intelligence and empathy differ with respect to sex, as well as the relationships among them.[60] Another study using this scale in nursing and medical undergraduates indicated that their attitudes are similar.[44]

The BEES assesses the levels of emotional empathy, the emotional feelings of others, and the tendency to develop good interpersonal relationships,[61] with good reliability when applied to nursing and medical students.[16,24,35,62]

EQ and SQ[63–64] are two scales that measure levels of cognitive empathy and systematization in the general population. Both have good reliability and have been validated for French and Italian.[65–66] The validation of the Empathy Quotient-Short (EQ-Short) was also identified, which is the short version of the empathy quotient,[67] also validated for use in Portugal.[68–69]

The IRI was developed to measure the empathy of the general population; has two domains related to cognitive (recognizes the emotions of the other) and emotional behavior (responds to the emotions of the other).[7] In a study involving nursing students, the confirmatory analysis showed low or statistically insignificant values, but the internal consistency and test-retest reliability were at moderate levels.[70] When used to measure the empathy of university students from various courses, it showed good reliability and acceptable psychometric values.[71]

KCES has affective and cognitive components and identifies the nurse's ability to understand and value the patient's point of view.[72] Although it was considered reliable and possesses good internal consistency in pharmacy and nursing students, it may not be effective for use among professionals and students from other courses. It is more reliable if applied in adults.[31] The Modified KCES has a similar conceptual structure to the KCES and also measures the affective and cognitive empathy, with good internal consistency and applicability in graduate nursing students.[23] It contains items that analyze the participant's own thoughts and feelings in relation to a specific group of patients and items that raise viewpoints on whether a particular aspect of empathy is desirable in health professionals.[31]

The ECSS and ETS[73–74] measure the dimensions of verbal responses concerning cognitive and affective components that include the understanding of other people's emotions, thoughts, feelings, and understanding of the verbal response. There are three main stages of empathic response in Dökmen's classification of empathy: the "you," "I," and "them" stages. The person who uses the stage "they" makes assessments based on the judgments of society (*i.e.* what other people feel and think) rather than focusing on the problem. At the "I" stage, the person criticizes the other person, gives advice and diagnoses the problem according to his own interpretation, revealing his own feeling. The "you" stage involves putting yourself in the other's place to understand that person's problem, reflecting what is understood, supporting that person and understanding profound feelings.[46] The ETS was developed to measure the capacity of empathic relationships in everyday life and was also applied in nursing students.[28,]

The HES identifies the reflection of an empathic individual5 and was designed to measure the natural characteristics, that is, to identify the empathic attitude without the person possessing any learning or training on the subject. High scores indicate sensitivity and good interpersonal behavior, while low scores reflect insensitivity to the feelings of others.[53] It was used in nursing students and obtained good psychometric results.[49]

The EETS measures the participant's natural characteristics, with good validity and reliability, and has been used with nursing professionals.[49]

The ERS, developed to measure the empathic capacity to respond to the spiritual suffering of the other,[75] evaluates the intellectual appreciation of the feelings of others and does not evaluate empathic behavior. The construct validity has low to moderate levels, but internal consistency and test-retest reliability showed more acceptable levels,[56] being applied to nursing students.[33]

The EUS measures the nurse-patient connection. For a nurse to take care of a patient, first, a relationship needs to be established between them, and empathic understanding is the key concept in this connection. It is a reliable scale with good internal consistency, applied to nursing students and nurses.[52]

The RES measures the behaviors and attitudes of a professional during an oral interaction with a patient;[76] it is valid and reliable for use with nursing undergraduates,[77] as well as the ECRS, which possesses high emotional consistency, content validity and discriminant validity.[78]

The SPIRS-PCN[79] measures the empathic degree of nurses dealing with patients in palliative care. Its use is feasible in educational situations, after some training on communication for oncology and palliative care. It has good internal consistency and reliability results.[48]

The SEE[80] was developed to analyze empathy related to ethnicity and racial origins. It presents good internal consistency, reliability, test-retest and convergent normative values, in validation for languages, including Spanish, and has been applied to nursing and dentistry students.[81]

The Layton Empathy Test[82] aims to determine if empathy is learned after training. It was developed for nursing students, with low levels of construct validity and reliability coefficients.[53]

Most of the questionnaires found (85.7%) presented good reliability and internal consistency in the context in which they were applied, demonstrating that they are fit to measure the empathy level of nursing undergraduates. In addition, the tool can serve to analyze the behavioral, cognitive, affective, emotional, educational, ethnic and spiritual profiles of these students.

Considering the evidence that there are instruments to measure the empathic degree of both students and health professionals, it is recommended that schools and health services use them and select one tool for the purpose of investments in processes of professional education, training and permanent development of their human resources, as a strategy conducive to satisfaction and qualified professional performance.[2,4,29,83]

CONCLUSION

Considering the relevance of the empathic ability to the quality of the care provided to health service patients and the range of available questionnaires, it is expected that they will be more used in research involving nursing undergraduates, in order to evaluate the empathic degree. Studies of this nature may indicate the need for institutional investments and teachers on this theme in undergraduate nursing courses.

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NOTES

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CONFLICT OF INTEREST

No any conflict of interest.

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