Review

Culture, teaching and learning of empathy in medical education: scoping review*

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This article aims to identify, along the literature, how empathy is influenced by several cultural factors in the context of health professionals' teaching-learning process .Performed as a scoping review study, as proposed by the Joanna Briggs Institute, the search was performed in PubMed, LILACS, SCOPUS and Web of Science databases, between December 2017 and January 2018. It was observed, through the researches, that Western students have a higher level of empathy compared to Eastern students, so there is also a difference in empathy between different ethinicity, race, sex and religion. It's evaluated through different instruments. So, among the factors that influence empathy, culture was identified as one of them. Further studies are needed to better understand the empathy among the various health professions.

Keywords: Empathy. Culture. Teaching. Learning. Health.

Introduction

Health professionals routinely interact with their patients and co-workers, and the way this relationships develop is crucial for establishing effective bonds between practitioner and patient[1].

Communication is part of this process, as it mediates the interaction among professionals, and between professionals and patients. To be effective, such communication must be clear, receptive and interpretable. Various components collaborate in this process, including empathy. Empathy is an essential aspect of the communication process and one of the most significant for establishing an effective bond between professional and patient[1].

Empathy is considered a multifaceted interpersonal skill composed of cognitive, affective, behavioral and moral constituents[2]. An empathic individual is understood to be one who, in a context of dialogue between two or more persons, is able to gain full understanding about the perspective of others. This understanding is molded into altruistic and/or compassionate thinking, that is, it creates a manifest interest of importance and help to the neighbor, and the individual is able to convey such a feeling so that the neighbor feels deeply understood[3].

In health care, through interpersonal skills, empathetic professionals are able to provide patients with satisfaction during their treatment. Empathy also contributes to a higher rate of patient adherence to treatment, a closer relationship between professional and patient and consequently more effective communication, thus facilitating the expression of more information about the clinical condition of the patient, minimizing the risk of disagreements and discomforts[4].

The development of empathy begins in childhood, when the child receives physical, social and emotional stimuli[5]. However, there is still a big stigma about the possibility and the way it can be taught to students and practitioners.

In the health area, numerous studies have shown that it is possible to develop empathy throughout adulthood, with the aid of teaching-learning processes such as clinical simulation, reflective writing and arts teaching, which can lead to a positive change, constantly learned and refined[6-8]. However, the teaching-learning process is complex, surrounded by personal characteristics of learners and teachers, and influenced by the strong impact of political processes and projects. Furthermore, it is influenced by culture. In the teaching-learning process, culture plays a leading role in the learning ability and perception of knowledge, involving various aspects of human life. It is a vast and complex concept[9].

The term culture was defined, from the perspective of anthropology, in the year 1871 by Edward Tylor. Its meaning derives from the junction of two words, one of Germanic origin, *Kultur* (which symbolizes the spiritual aspects of a people); and the other of French origin, *Civilization* (which refers to the material realization of a people). Both words were synthesized in the English vocabulary as *Culture,*[10]

[...] taking in its broad ethnographic sense, it is this complex whole that includes knowledge, beliefs, art, morals, laws, customs, or any other skill or habits acquired by man as a member of a society[10]. (p. 25)

Culture is considered an *adaptive system*, a dynamic process in constant adaptation whose purpose is to meet the biological needs of man through community organization, such as items related to economy, social grouping, political organization, beliefs, religious practices, among others[10]. The author[10] further describes Roger Keesing's idealistic theory of culture, which subdivides the term into three different approaches, that is, culture as cognitive system, structural system, and symbolic system.

In this sense, the cognitive system is an observable event, such as language; that is, knowledge is built and accepted within a society. The structural system consists of the construction and continuous accumulation of symbols, developed by the human mind as myths, arts, kinships, and languages. And finally the concept of culture as a symbolic system. The symbolic system approaches culture not as a complex of concrete behaviors, but rather as a program in which the members of society receive control mechanisms, plans, recipes, rules and instructions in order to manage their behaviors before the community to live in a harmonic and organized manner. Therefore, culture is the understanding of the human nature, humans' actions, creations, behaviors, beliefs and knowledge from each group, community and people[10].

In this context, considering that individuals are singular and subjective, would it be possible to infer that a Somali health professional understands and applies empathy in the same way as a German health professional? Is the learning process of these and other characteristics inherent to the profession, such as technical skills, developed in the same way in the United States and Japan? Or are different teaching strategies needed for the same purpose?

With the accelerated pace of globalization, cultural diversity is increasingly present in the professional-patient and professional-professional relationships, and among students. Thus, different experiences and different contexts are found in a single environment whose needs are the same, and which require a satisfactory and quality performance when it comes to care provision, regardless of the culture of the individuals. Health professionals have the duty to have a human, ethical and empathic attitude. It is, therefore, necessary that educators know teaching strategies adopted in different countries and cultures to understand and adapt to the context of their students. This would possibly help the teaching of empathy more effectively in the higher education courses.

Therefore, the present study aims to identify in the literature how empathy is influenced by different cultural factors in the context of teaching and learning in the health area.

Method

This is a Scoping Review as proposed by the Joanna Briggs Institute (JBI)[11], which aims to determine the amount of information about a certain subject by mapping and examining all relevant information in order to clarify, interpret, or even identify knowledge gaps in the researched area.

To build the research question, we applied the PCC strategy, which represents a mnemonic for Population, Concept and Context. Thus in this research, the following definitions were used: Population = students/professionals; Concept = empathy; Context = teaching/learning/culture.

After defining the elements of the strategy, the guiding question of the research was: "What are the influences of cultural differences in the teaching-learning of empathy in the education of health professionals and students?".

The search was performed by two independent researchers, according to JBI criteria[11], electronically in the National Library of Medicine (PubMed), Latin American and Caribbean Health Sciences (LILACS), SCOPUS, on the Web of Science, through the descriptors and/or their synonyms, according to the Descriptors in Health Sciences (DeCS) and Medical Subject Headings (MeSH), combining terms with the boolean connectors AND and OR[12].

The following descriptors and their synonyms were used: **(P)opulation** -"Health Personnel" OR "Students, Health Occupations" OR "Health Occupations Student" OR "Occupations Student, Health" OR "Occupations Students, Health" OR "Student, Health Occupations" OR "Students, Dental" OR "Students, Medical" OR "Students, Nursing" OR "Students, Pharmacy" OR "Students, Premedical" OR "Students, Public Health"; **(C)oncept** - "Empathy" OR "Caring" OR "Campassion"; **(C)ontext** - "Culture" OR "Cultural Characteristics" OR "Cultural Factors" OR "Teaching" OR "Education" OR "Learning" OR "Health Education" OR "Characteristic, Cultural" OR "Characteristics, Cultural" OR "Cultural Characteristic" OR "Comparison, Cross-Cultural" OR "Comparisons, Cross-Cultural" OR "Cross Cultural Comparison" OR "Cross-Cultural Comparisons" OR "Transcultural Studies" OR "Studies, Transcultural" OR "Study, Transcultural" OR "Transcultural Study" OR "Activities, Educational" OR "Educational Activities" OR "Activity, Educational" OR "Educational Activity" OR "Education, Health" OR "Education in health".

Studies in English, Spanish and Portuguese, with quantitative and qualitative approach, primary studies, systematic reviews, meta-analyses and/or meta-synthesis, books and guidelines, published in indexed sources or in gray literature, which answered the question of this research were included in the sample. All publications between December 2017 and January 2018 were searched.

To identify the studies, we carefully read the title, abstract and keywords of all publications found in the search and, afterwards, it was verified whether they met the inclusion criteria. When the title, abstract and keywords were not enough to define wether the study should be selected, the article was read in full length.

After careful reading by two independent researchers, 195 abstracts were selected out of the 6,209 titles found. Of these, 28 were excluded because they were published in more than one database. Thus, 167 studies were selected for full reading. An instrument created by the researchers according to JBI recommendations was used to extract data from the selected studies[11]. In the critical analysis of the articles, a third researcher was invited to collaborate in the analysis of the design of the study, to determine the inclusion or exclusion of studies when there were divergences among the researchers. After reading and analyzing the 167 studies in full length, seven were selected for answering the research question.

The exclusion of the 160 studies after full reading was because they did not answer the question established in the study.

The included studies were analyzed with the aid of an instrument prepared by the researchers, according to the instructions of the JBI (2015)[11], identifying the publication database, journal, author, country, year, study area, objective, details of the methodology and the sample, main results and conclusions. To present the results, the publications analyzed were called Studies and listed from S1 to S7[13-19].

The description of the process of selection and inclusion of articles is described in the Chart 1.
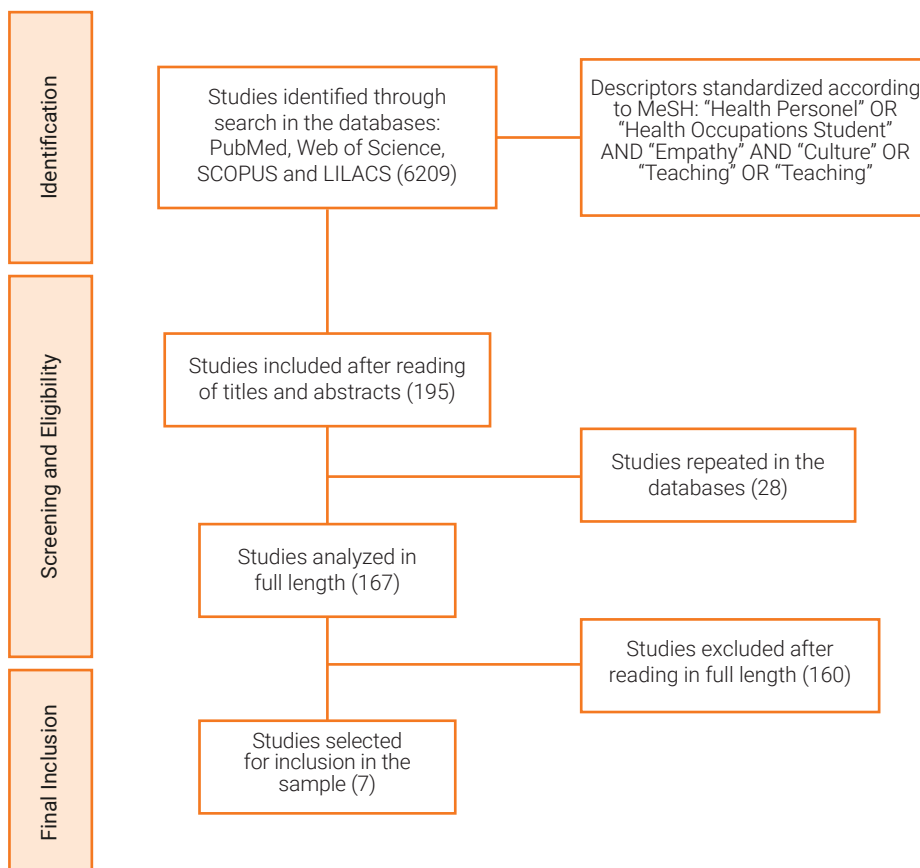

Figure 1. Description of the article selection process. Ribeirão Preto/SP, Brazil (2018)

Results

Of the studies found (6209), seven were included in the sample for they answered the research question. Among them, five were published in the last five years and two in 2013 and 2009. Six articles were published in English and one in Spanish. All articles evaluated and compared empathy in medical students.

The studies are analyzed below according to identification, year of publication, type of study, sample and country of origin (Frame 1).

Frame 1. Studies analyzed according to identification, year of publication, authorship, type of study, sample and country of origin. Ribeirão Preto/SP, Brazil (2018)

ID	Year	Studytype	Sample	Continent/country of the study
S1[13]	2016	Cross-sectional	150 Medical students	USA
S2[14]	2016	Cross-sectional	881 Medical students	Singapore
S3[15]	2015	Cross-sectional	5343 Medical students	Korea
S4[16]	2015	Cross-sectional	577 Medical students	USA
S5[17]	2014	Cross-sectional and descriptive	1838 Medical students	Colombia and Dominican Republic
S6[18]	2013	Cross-sectional and multicultural	388 Medical students	Ethiopia and Germany
S7[19]	2009	Cross-sectional	400 Medical students	Japan

Frame 2 shows the studies analyzed according to the objective, method, components related to the concept of culture and main results and conclusions.

Frame 2. Studies analyzed according to objective, method, components related to the concept of culture, main results and conclusions. Ribeirão Preto/SP, Brazil (2018).

ID	Objective	Method	Components related to the concept of culture considered in the analysis	Main results and conclusions
S1[13]	To evaluate patterns of level of empathy in podiatric medical students and determine whether emotional intelligence, personality traits, and demographics had a correlation.	Quantitative	Ethnicity (Americans and Asians) and sex	Regarding demographics, US-born Asian students had lower empathy scores than students from other backgrounds. Women had higher values of empathy than men.

Frame 2. Studies analyzed according to objective, method, components related to the concept of culture, main results and conclusions. Ribeirão Preto/SP, Brazil (2018).

ID	Objective	Method	Components related to the concept of culture conside-red in the analysis	Main results and conclusions
S2[14]	To explore the change in empathy and the factors that contributed to that change.	Quantitative	Socio-demographic region (Singapore), sex, art, family and community service of the participants..	Female participants and affinity with clinical specialties were determining factors in the higher level of empathy compared to counterparts. High workload and inadequate learning environments were the stressors that contributed to low level of empathy. Time spent with family, and artistic and community services correlated with higher empathy scores, while time spent on other individual tasks and leisure correlated with lower scores. The thematic analysis revealed that the most common self-reported determinants were exposure to activity (community service) or socialization, personal and family event, as well as environment (high workload). Empathy in Singapore is built by a multicultural factor that involves the western and eastern model, having a median score when compared to western and eastern countries.
S3[15]	To evaluate empathy in Korean medical students across the country.	Quantitative	Sociodemographic region (Korea) and sex	Female students and postgraduates scored higher on empathy levels compared to their counterparts. The empathy score of Korean medical students was lower than that of students in Western countries.
S4[16]	To analyze the perception of simulated patients (SP) about the empathy of medical students, focusing on their sex and races. Also, to assess the self-report of empathy of students, with an emphasis on races and sex.	Quantitative	Race and sex	The assessment of simulated patients indicated significant interaction effects of sex and race on empathy. According to the evaluation of SP, women, regardless of races, had significantly higher mean empathy values than men. In contrast, black students obtained the lowest score according to the assessment of SP. Black female students of African-American origin and women of Eastern and Pacific Islander traits scored significantly higher on empathy levels than men. Black and African-American students achieved the highest average results in self-reported empathy.
S5[17]	To compare empathy between medical students from three Colombian medical schools and one from the Dominican Republic.	Quantitative	Sociodemographic region (Colombia and Dominican Republic) and sex	Empathy levels tend to decrease as the courses progress. There was a difference in empathy between males and females; women had a higher empathy levels. The scores obtained were not significant when the universities of Colombia and Mexico were compared.
S6[18]	o examine cultural differences in the empathy levels of first-year medical students.	Quantitative and qualitative	Sex, religion and ethnicity (Ethiopia and Germany)	Male students in Jimma (Ethiopia) had significantly higher empathy values than male students in Munich (Germany). There was no significant difference between women. Within each university there was a moderate and positive correlation between the instrument that evaluated the eyes of Caucasian students (restricted to this sample) and which evaluated empathy. The main findings of the study were that culture, religion, specialty chosen, and sex had an influence on emotional empathy and cognitive empathy in first year medical students.
S7[19]	To investigate psycho-metric properties of the Jefferson Scale of Phy-sician Empathy (JSPE) - Japanese version and to study the differences in empathy levels between men and women from different semesters of the undergraduate course.	Quantitative	Sociodemographic region (Japan) and sex	Women had higher levels of empathy than men. During the research period, throughout the medical course, empathy levels increased among both sexes. Cultural and educational characteristics of different medical schools in Japan influenced the levels of empathy. The score of Japanese students was lower than that of the United States and Mexico.

All articles evaluated empathy in medical students and were cross-sectional studies. The studies S2[14], S3[15] and S7[19] showed that students residing in the West, for example, in the United States (US), have a higher level of empathy when compared to oriental students, such as those from Japan, Korea, and Singapore. Also, in the study S1[13], students of Asian origin living in the USA had a lower level of empathy when compared to other ethnic groups born in the country. In S6[18], the empathy of Germans was compared to that of Ethiopians, and they had a higher level of empathy. Difference in empathy between different races was also evaluated in S4[16].

Frame 3 shows the analysis according to the type of study, sample and instrument used to evaluate empathy.

Frame 3. Studies analyzed according to the sample and method/instrument used for evaluation of empathy. Ribeirão Preto/SP (2018)

ID	Sample	Instrumenttoevaluateempathy
S1[13]	150 Podiatric(foot specialists) medical students	Jefferson Scale of Physician Empathy (JSPE)
S2[14]	881 Medical students	Jefferson Scale of Physician Empathy-Student (JSPE-S) and instrument developed by the researchers
S3[15]	5343 Medical students	JSEP-S
S4[16]	577 Medical students	Jefferson Scale of Patient Perceptions of Physician Empathy (JSPPPE) e Global Ratings of Empathy (GRE)
S5[17]	1838 Medical students	JSPE
S6[18]	388 Medical students	Balanced Emotional Empathy Scale (BEES) e Reading the Mind in the Eyes test (RME-R test)
S7[19]	400 Medical students	JSPE

Among the instruments, the most used to evaluate empathy in medical students was the Jefferson Scale of Physician Empathy JSPE (71.4%)[13-16,19]. This instrument was developed in the USA, translated and validated in 38 languages, and applied in Europe, Asia, the Middle East, North and South America, Australia and New Zealand, totaling 54 countries[20]. The instruments generally assess the cognitive and affective component of empathy. The Reading the Mind in the Eyes test (RME-R test) and Jefferson Scale of Patient Perceptions of Physician Empathy (JSPPPE) were the only instruments identified in this study that are not self-reported.

Discussion

The positive effects evidenced of the use of empathic activities for patients, health services, and professionals/students are increasingly present in the international literature. For the patients, the effects of being treated by an empathic professional translate into greater satisfaction with the service and care provided, greater adherence to treatment, and improved prognosis. The gains for the health professionals, when they adopt an empathic stance, include lower rates of depression and burnout and greater satisfaction with the care provided, triggering benefits for the health service, translated into low rates of negligence regarding the service[17,21,22].

Culture is influenced by the social environment in which the individuals live, being considered as a learnable habit. Each human being brings with him the genes inherited from his parents, which forms human nature. When the natural factors of the human being, such as fear, sadness, love, anger and joy, are integrated with culture, the influence of culture on human behavior can be seen more clearly, demonstrated through the way of feeling and expressing emotions and consequently giving rise to the personality[23].

In this review, although only studies with medical professionals were found[13-19], it was possible to identify that culture is among the factors that influence empathy in the studied context. Some studies[14,24,25] have shown that as the course progresses, empathy among students decreases significantly in countries such as the United States, the United Kingdom, Poland, Australia, Singapore, China and others in Europe. In contrast, other studies conducted in countries such as Japan[19] and China[26] showed that the level of empathy is maintained or increases throughout the training. These results can be explained by the change in emotional relationships in a more professional approach in the first set of countries, and by the closer contact between people during the care process in the eastern countries[19,24].

All the articles also agreed that women are more empathic when compared to men. This finding corroborates with results of other works[1,27,28]. According to the studies[1,27], this result can be associated with the factor of social development and learning of women, which is related to their role of generating lives and caring, which is influenced by culture and favors greater externalization of emotional signals when compared to men.

Studies[13-19] compared, other factors in addition to culture-related components, such as medical specialty, emotional intelligence, personality traits, and year of the course. These factors can positively or negatively influence the level of empathy of individuals. It was identified in external studies that empathy varies according to the medical specialty chosen, which is in agreement with the present findings. Professionals choosing specialties focused on human orientation tend to show a higher level of empathy when compared to those whose specialty is focused on technological orientation[28].

Regarding ethnicity, the study S1[13] showed a difference in the level of empathy between different ethnic groups living within the same country. Studies S3[15] and S7[19] also found differences in empathy, where Asians (Japanese and Koreans) scored lower on the Jefferson Scale of Physician Empathy (JSPE) than North Americans. Another study conducted in South Korea also compared JSPE scores and found that the average score of Korean students was lower when compared to Italian and American

students[29]. However, in the study S2[14], students living in Singapore, considered of Asian origin, when evaluated and compared with the scores of other Asians such as Japanese and Koreans, and Americans, were classified as presenting a reasonable level of empathy. This classification was explained by the author by the fact that the place studied (Singapore) is influenced by the United Kingdom and the US when it comes to the method of training medical students, while some cultural behaviors reflect the influence of Asia.

A cultural explanation that the empathy of Asians and Americans differs involves the lack of the habit among Asians of using nonverbal communication and expressing feelings and emotions that make up empathic communication[15,19]. S7[19] showed that there has been an increase in the level of empathy throughout the education of Japanese students and this is associated with the fact that medical schools there have a curriculum that, from the first year onwards, addresses topics such as economics, literature, arts and sciences, with humanistic, philosophical and ethical classes.

Regarding race, the study S4[16] compared the level of empathy between races from the perspective of Simulated Patients (SP) and in the self-report of the students. Self-reported empathy of blacks was greater than that of whites. In contrast, when blacks were evaluated by SP, which were 74% white, they had lower empathy scores. This contradictory result has two possible explanations according to the author[16], namely: 1) the evaluated students did not show empathy in fact; or 2) the SP (who were mostly whites) had unconscious prejudices during the assessment of the empathy of black students. Communication barriers may appear when individuals are classified by race, because such classification can lead to decriminalization and oppression of people of different races[23].

Among the methods used to develop empathy in health students, clinical simulations stood out. The use of active methodologies such as clinical simulations has recently been gaining ground in the curricula of training courses for health professionals and in their qualification[7]; clinical simulations werer used as strategy to assess empathy in S4[16].

This methodology stands out for allowing learners to interact with simulated patients in order to solve cases proposed for the situation and, after the activity, to reflect on their attitudes in the scenario. This interaction and reflection make learners acquire communication skills, understand the perspectives of others and the importance of listening, which are components of empathy[7,29].

The study S6[18] provided an interesting approach about the factors that make up empathy and the culture evaluated, through a comparison between Germans and Ethiopians. In this research, the use of two instruments stood out. In the Balanced Emotional Empathy Scale (BEES), which evaluates emotional empathy, the students (men) who obtained the highest scores were the Ethiopians. On the other hand, the results of the instrument Reading the Mind in the Eyes (RME-R), which analyzes cognitive empathy through gaze, built from the perspective of Caucasian eyes, showed that the students with the highest scores were the Germans.

Emotional (BEES) and cognitive (RME-E) empathy were related to culture, religion, specialty chosen, and gender. In this respect, the authors[18] said that 74% of Ethiopians actively participated in their religions, while only 32% of the Germans

did that. Religious community participation is related to humanism, altruism, and charitable actions, all of which are linked to empathic behavior. Religion is directly associated with the dilemmas of life and death and can positively impact the relationship bewteen professionals and patients, and help them through difficult times, such as when it is necessary to communicate bad news[28].

As a limiting factor of this article, the studies included to compose the final sample were all cross-sectional studies, a methodology used to assess the state of an specific moment, thus hindering the interpretation of the results in the long-term, besides the fact that they were restricted to medical education only. The results may have also limitations regarding the publications found, because the search strategy used prioritized generalist databases within the health area, and no search was made in other more specific databases, such as psychology and health education, a fact that could broaden the results obtained.

Regarding the type of study, the limiting factor is contained in its characteristic of seeking all knowledge produced on a certain subject, without regard for the quality of the data found, and the possibility of bias towards the veracity or level of evidence found in this investigation.

The use of self-report instruments completed by the students, which was the case in the studies, S1[13], S2[14], S3[15], S4[16], S5[17], S6[18] and S7[19], causes bias during the filling of the instrument, because the students may answer the questionnaire based on socially acceptable attitudes[7]. Moreover, the positive results found do not always corroborate the empathic attitudes to be taken in their future practices[7]. However, by associating instruments of different natures, such as those used in S2[14] (a qualitative instrument developed by the researchers themselves), S4[16] (analysis of students' empathy through the perspective of standardized patients) and S6[18] (instrument that assesses the gaze of the participant), the results obtained by self-report instruments are strenghtened, for this allows to confront the divergent/convergent data found in a certain context.

Finally, it should be noticed that empathy is multifaceted, consisting of cognitive, affective, attitudinal/behavioral and moral components[2,3]. Therefore, it is important to measure empathy with quantitative and qualitative instruments, which are complementary, as was done in S2[14]. This study aimed to investigate the students' understanding about empathy in different situations through open questions, and thus identified potentialities and difficulties for the development and improvement of empathy in each subject.

Conclusion

In this review, although differences in empathy levels influenced by different cultural contexts were identified, it was found that even if individuals receive the influence of the same culture, the way in which they interpret and express abilities is changed from one individual to another. However, some basic aspects are shared evenly in the same culture, such as customs, languages, beliefs, religions and policies, and they can influence the interpersonal relationships and empathy of individuals in a positive or negative way. Such statements could be strengthened by a meta-analysis to obtain a statistical synthesis of quantitative results of the studies.

As the studies found here were restricted to medical education, which may be a limitation of this review and highlights the need to deepen the study of empathy among other health professionals, it is suggested that empathy be evaluated and compared between different health professions, using instruments that can encompass both self-reported as well as expressed data, which could bring great gains in satisfaction and health care.

Further longitudinal studies are needed to monitor the level of empathy and develop the strategies necessary for its improvement throughout the training and in confrontation or in the light of existing cultural differences.

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Authors' contributions

All authors actively participated in all stages of the preparation of the manuscript.

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