Medical Students' Perspectives on Empathy: A Systematic Review and Metasynthesis

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Abstract

Purpose
Some evidence indicates that physician empathy declines during medical training, which has made it the subject of much research. Qualitative studies are relevant in this context, focusing as they do on how students themselves conceive and understand empathy during medical school. The aim of this study was to explore medical students' perspectives on empathy by conducting a metasynthesis, including a systematic review of the literature and analysis of included studies.

Method
The authors systematically searched 4 databases through June 17, 2019, for

qualitative studies reporting medical students' perspectives on empathy in medical school. They assessed article quality using the Critical Appraisal Skills Program, and they applied thematic analysis to identify key themes and synthesize them.

Results
The authors included 35 articles from 18 countries in their analysis. Four main themes emerged: (1) Defining empathy, with a lack of understanding of the concept; (2) Teaching empathy, with a focus on the hidden curriculum and clinical supervisors; (3) Willingness to be an empathetic doctor, with ambivalence

expressed by some study participants; and (4) Evolution of empathy during medical school, specifically its decline.

Conclusions
Medical students are beset by theoretical confusion regarding the concept of empathy, and they express doubts about its utility and relevance. Instruction should focus on simpler concepts such as listening, and schools should leverage clinical supervisors' strong influence on students' empathy. Prioritizing certain types of knowledge (clinical facts) during medical education has a globally negative effect on medical students' empathy.

Numerous studies have demonstrated the importance of physician empathy in obtaining a better description of symptoms from patients, reaching more specific diagnoses,[1] increasing patients' participation in their care and adherence to prescribed protocols,[2] reducing health care costs, and improving the quality of care generally.[3,4] Nonetheless, most of the research on empathy among health care professionals shows that it is generally in short supply.[5,6] Evidence concerning changes in empathy during medical school is heterogeneous; some studies suggest that it tends to decline

during medical training,[7–10] while other studies have shown different results.[11,12] Colliver and colleagues examined 11 studies all reporting a decline in students' empathy. They argued that those studies had significant methodological limits and concluded that the decline was exaggerated.[13]

Empathy, thus, has become a major issue in medical school instruction. While producing empathetic physicians is a clearly established objective of medical schools,[14] empathy curricula vary widely from school to school. In some schools, empathy content is integrated into courses in the humanities[15] (e.g., the "human kindness curriculum"), into medical ethics or narrative medicine,[16] into specific courses on empathy (its neurobiological, philosophical, or other aspects),[8,17,18] or into specific short interventions (e.g., simulations).[19] The methods of teaching empathy are similarly diverse. Some schools offer theoretical courses,[17] but others have taken more innovative approaches such as instructional films or videos,[20] theater,[21,22] acting exercises that focus on nonverbal expression,[23] Google glasses that enable supervision, student-produced field notes or portfolios, and creative collaborative projects.[24] Additionally,

private institutes specializing in training health care professionals in empathy have developed, especially in the United States. They have established partnerships with universities and design programs to strengthen empathy in the medical arts via e-learning and live training.

Importantly, a systematic review has noted that these diverse and creative methods have either not been evaluated at all or have been evaluated in studies with significant limitations.[25] Two studies included in this review,[25] as well as another study,[26] showed that increased empathy scores were not associated with increased empathy in practice. Other studies have identified various factors affecting empathy in medical students, including cultural and institutional factors,[12,27–29] as well as factors associated with family,[30] gender (women may be more empathetic than men),[9,10,12,15,19,28,31,32] and specialty choice.[9,11,33] Still other studies have demonstrated a negative correlation between burnout or stress and empathy in medical students and doctors in training (i.e., interns and residents).[29,30,34–36]

Most of the researchers in the field have recognized the difficulty of defining and measuring empathy.[13,25,37,38] The medical

education community lacks both a consensual definition of empathy and reliable instruments to measure it.[10,13,39,40] Some authors have described empathy as a cognitive attribute,[31,38,39] others as an affective or emotional one,[3,37] and still others have integrated both aspects.[41] Moreover, there are forms of social knowing and assessment—involving emotional resonance, imagination, and behavioral responses (e.g., touching someone's hand)—all over the world, yet the meaning of these and how they resemble or relate to empathy differ across cultures. While Western societies emphasize the maintenance of a clear cognitive and experiential boundary between the empathizer and the object of empathy,[42] other cultures, in the Pacific region for instance, mostly consider the experience of empathy as an altruistic behavior and perceive it as a feeling combining love, compassion, and sympathy.[43] Some authors suggested a multidimensional model approach to understanding empathy.[44] Many authors have advocated a clear and consensual definition of the concept—both to measure it[10,39] and to develop strategies to enhance it.[31]

Collectively, the literature seems to indicate that empathy is a concept difficult to understand and fully explain. The teaching of empathy remains a major unresolved issue, specifically how to teach empathy to medical students to ensure empathy in future physicians' practice. Qualitative studies are particularly relevant in this context, focusing as they do on how students themselves conceive and understand empathy during medical school. Because qualitative studies are usually conducted with small samples and in specific and limited contexts, concerns often arise about the generalizability of the study results. Here we report on a metasynthesis of research on empathy in medical students. The metasynthesis combines a systematic review of the literature and an analysis of qualitative studies on the subject[45] in an effort to "achieve analytical abstraction at a higher level by rigorously examining overlap and elements in common among studies."[46]

To our knowledge, only one metasynthesis has been published on this topic. Jeffrey conducted an unsystematic meta-ethnography of 8 qualitative studies—all based on interviews of students describing their experience of empathy during

medical school.[47] His results reveal conceptual confusion around empathy and tension in medical education between distancing from and connecting with patients.[47] Notably, however, his meta-ethnography has some methodological limitations and gives very few concrete recommendations regarding the teaching of empathy.

The objective of this study was to explore, by conducting a systemic review and metasynthesis, medical students' perspectives of empathy to generate new insights into the teaching of empathy that might lead to concrete strategies to improve it.

Method

This metasynthesis relies on the model of meta-ethnography[48] and follows the procedures of the thematic synthesis described by Thomas and Harden.[49] It complies with the ENTREQ (enhancing transparency in reporting the synthesis of qualitative research) guidelines.[50]

Search strategy and selection criteria

We conducted a systematic search of 4 databases—Medline, PsycINFO, EMBASE, and SSCI—according to a search algorithm specific to each base. We searched the databases from their origin through December 16, 2016, and updated our search on June 17, 2019. Through preliminary research, we had identified several articles from which we selected key words. We also used existing literature reviews[6,7,25,47] to determine a list of key words (a mix of free-text terms and thesaurus terms) referring to *empathy*, *medical students* and *residents*,

and *qualitative research* so that we could identify relevant studies indexed in the databases. See Supplemental Digital Appendix 1 at http://links.lww.com/ACADMED/B8.

We have detailed our inclusion and exclusion criteria in Table 1. We discussed potential articles at meetings of our research group, which comprised qualitative research specialists and physicians. We included only studies wherein the methodology:

(1) used a qualitative design based on a well-known qualitative methodology (e.g., phenomenology, grounded theory, thematic analysis);

(2) employed specific data collection tools (e.g., individual or group interviews, observation, written documents); and

(3) applied a qualitative analysis approach, illustrated by the way results were presented (i.e., a thematic organization).

We decided to include all studies related to the concept of empathy without requiring that it necessarily be the principal object of the study. To operationalize this criterion and avoid disagreements among researchers, we determined that the term "empathy" had to be mentioned in the Results section at least once.

Three of us (E.C.-D., L.V., and J.S.) conducted extensive lateral searches—systematically checking reference lists, hand searching key journals (*Academic Medicine*, *BMC Medical Education*,

Table 1

Inclusion and Exclusion Criteria Used to Select Qualitative Studies in a Review of the Literature on Medical Students' Experiences of Empathy, June 2019

Variable	Inclusion criteria	Exclusion criteria
Design	Qualitative research	Quantitative and mixed studies
Article type	Peer-reviewed journal article	Reviews, commentaries, editorials, thesis, non-peer-reviewed journal articles
Language	English	Other than English
Participants	Medical students, physicians talking about their experience with medical school and training	Participants other than medical students or physicians not talking about their own training
Topic	Related to the concept of empathy (the term "empathy" mentioned at least once in the Results section)	
Countries	All countries	None

Patient Education and Counseling, Medical Education, and *Medical Teacher*) and journals of included articles, and reviewing the articles listed in PubMed's sidebar of related articles—to identify studies that might have eluded our initial algorithms.

After collecting the references and eliminating duplicates, 2 of us (J.S. and E.C.-D.) subsequently read the titles and abstracts to assess their relevance to our target subject and methodology. The database indexing of qualitative studies was rather poor, and most of the references collected were actually quantitative studies. When the abstract was not sufficient to determine whether the article should be included, we read the entire article. We resolved disagreements over several meetings. Three authors (E.C.-D., J.S., and A.R.-L.) then read in full the potentially relevant articles and selected for our metasynthesis only the articles that met our inclusion criteria.

Assessment of article quality

Two of us (J.S. and E.C.-D.) assessed the quality of included articles independently using the Critical Appraisal Skills Program (CASP).[51] Then, all of us discussed the results until we reached agreement. We did not exclude any study from the analysis based on our evaluation. See Supplemental Digital Appendix 2 at http://links.lww.com/ACADMED/B8 for more details.

Data analysis

Our analysis of the selected articles began with an attentive reading of the title, abstract, and full text of each article, followed by additional readings—again of the title, abstract, and full text. One of us (E.C.-D.) extracted the formal characteristics of the studies, and 3 of us (J.S., E.C.-D., and A.R.-L.) independently extracted all the first-order results (i.e., the study results) and the second-order results (i.e., authors' interpretations and discussions of the results) to create an exhaustive summary of each study selected. See Supplemental Digital Appendix 3 at http://links.lww.com/ACADMED/B8 for our data extraction sheet. Because the summary of those results constitutes the data that we analyzed, we wrote it in French; the goal was to perform the analysis in our native language. We endeavored to preserve

the context of the studies included by reporting the essential characteristics of each.

Our thematic analysis relied on an inductive and rigorous process. Three of us (J.S., E.C.-D., and A.R.-L.) independently, but concurrently, conducted a descriptive analysis intended to convey the experience of the students who were the subjects of the studies—from both the participants' (students', residents', and physicians') and the authors' perspectives. For this analysis, each researcher, first, read the summaries related to each article 3 times, taking notes at each reading. Next, we each cut up the entire text of the summaries into descriptive units, using the results of this open, descriptive coding to divide all the material into *not* preestablished descriptive units. Finally, we categorized the units, regrouping them accordingly to their proximity of meaning and experience. We completed these 3 steps using N'Vivo 12 software (QSR International, Burlington, Massachusetts), which helped us assemble the descriptive units and provided graphic support. Iteratively, each of us carried out a cross-sectional analysis of all of the data analyzed up to that point, regrouping similar categories and excluding none of them.

Then, the 3 of us (J.S., E.C.-D., and A.R.-L.) met with the rest of the research team members who had all read and become familiar with the studies, as well as their summaries, but had not performed the descriptive analysis. We met to share the categories that had been uncovered. Over 4 two-hour meetings, we performed the work of translation; that is, we compared and assembled categories obtained through the article analysis both (1) to develop the key themes that captured similar ideas across different articles and (2) to develop overarching concepts about the research question. In practice, the group had to regroup the categories into themes. Each of these themes had to focus on a different aspect of the participants' experience of empathy. We then determined *key* themes, deciding which were the most important and relevant. We completed these last steps because exhaustive results that are not thus ranked may dilute the original points, which prevents any determination of their direct implications. This thematic analysis process made it possible to

develop themes inductively from our study data. The rigor of our results was obtained by triangulating both the data sources and the analyses; that is, we conducted 3 independent analyses and held monthly research meetings to share progressive results.

Results

Presentation of studies

Of the 3,971 articles initially retrieved, we included 35 in our metasynthesis.[52–86] These 35 provided data from more than 1,700 medical students, interns, and residents (Figure 1), and they represented 18 countries (21 studies from English-speaking countries, and 14 from non-English-speaking nations). The median sample size was 22 participants (range, 8–351), and data were collected through interviews (17 studies), focus groups (5 studies), or combinations of tools (13 studies, see Appendix 1). Overall, the studies included were recent (25 of the 35 [71%] were published after 2010). Their objectives varied: some focused on empathy or even on a specific question related to it, while others concerned broader subjects, such as how students described their experience of their relationships with patients, their representations of professionalism, or their opinion of some aspects of their training. See Appendix 1 for the characteristics of the included studies.

The quality appraisal showed that the overall quality of the studies was high (see Supplemental Digital Appendices 2 and 3 at http://links.lww.com/ACADMED/B8). Secondary analysis without the 9 studies[52,55,56,58,59,61,73,74,76] with the lowest quality according to CASP[51] did not change the results.

Descriptions of the themes

Four themes emerged from our analysis: (1) defining empathy, (2) teaching empathy, (3) willingness to be an empathetic doctor, and (4) evolution of empathy during medical school. Table 2 presents quotations from study participants and from study authors for each theme (as well as the distribution of themes across countries).

Theme 1: Defining empathy. Most of the students in these studies did not seem to have a thorough knowledge or understanding of what empathy is;
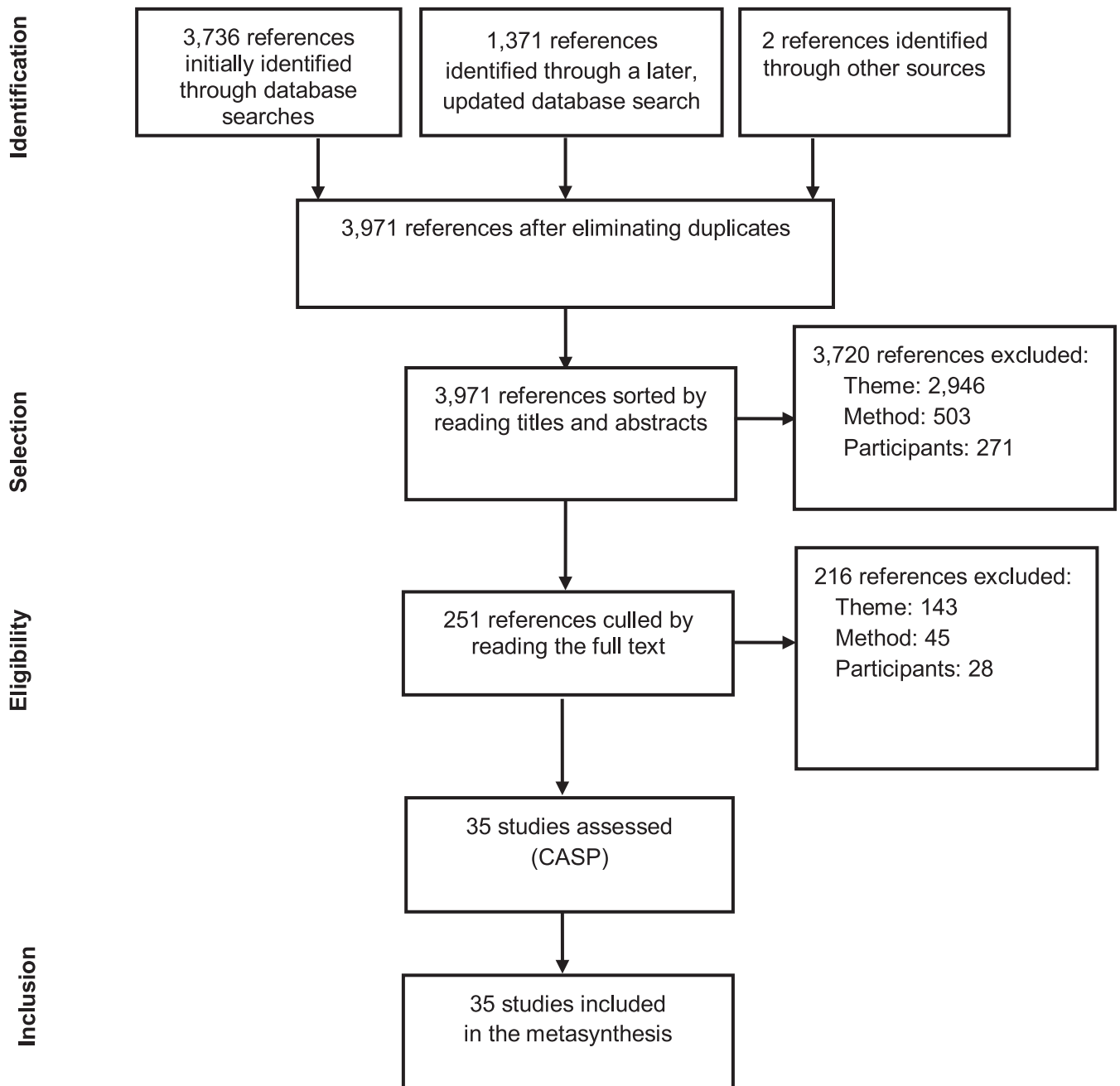
Figure 1 Article search and selection process for a systematic review of the literature on medical students' perspectives of empathy. The authors conducted the search on December 16, 2016, and updated the search on June 17, 2019. The authors used the PRSIMA guidelines to conduct their search: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group. Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. PLoS Med. 2009;6:e1000097. Abbreviation: CASP, Critical Appraisal Skills Program.

however, they were able to articulate factors and contexts that facilitated or impeded it.

What empathy is. Some students were able to define empathy as the capacity to adopt patients' perspectives, gain access to their experiences, or identify their needs and priorities.[58,60–62,67,79,82] Students did not, however, succeed in offering a clear and homogeneous definition of

the concept, and some of them explicitly acknowledged it was hard to define.[79] For some, empathy involved being mindful of patients,[58,76,85] using empathy in accepting patient distress,[53,57,64,69] understanding patients,[60,79] or solely *expressing* empathy.[52,62,71,83] To attempt to define empathy, many students first linked it to other concepts or values (quoted words are from the studies; italicized words are directly from participants' quotations):

"humanity,"[70] benevolence,[59] absence of judgment ("*not judged*"),[58,61] "*ethics.*"[56] Then, many distinguished several types of empathy: "*natural,*"[62] profound (or deep),[55,66] "authentic" or "*genuine,*"[58,62,66] absurd (or illogical), "cold,"[58,62,83] or inauthentic.[66,75,83]

Factors and contexts that facilitate or impede empathy. Participants often mentioned factors that facilitate or

Table 2

Countries Represented and Quotations, by Theme, From Participants in and From Authors of Qualitative Studies Examining Medical Students' Experiences of Empathy, June 2019

Themes	Quotations from participants in primary studies	Interpretations of findings offered by authors	Countries represented
Theme 1: Defining empathy[a]			
What empathy is	Put yourself in their place and see it as they would see it or try and see it as they would see it, in the best way that you can. So if they're going through something hard, you'd say okay, what would it be like for me if I was going through something like that?[62] Appreciation of patients' needs and social context, warmth, helpfulness, taking time to listen, showing interest, and firmness.[58]	Participants had different interpretations of the concept of empathy [...]. The majority of participants believed they should be able to imagine and to try to understand someone else's feelings and experiences and, without losing objectivity, see the world through that person's eyes.[62]	United States, United Kingdom, Germany, Canada, South Africa, Lebanon, Israel, Slovenia, Sweden, Finland, Japan, Norway
The factors and contexts influencing empathy	I get angry right back. Because if I've done nothing to the patient what gives her the right to scream at me?[56]	Many students reportedly observed that their ability to empathize was affected by patients' attitudes and behavior. For example, patient behavior that was friendly, open, and honest seemed to foster empathy. Demanding, unfriendly, uncommunicative, or generally "difficult" patients were perceived to inhibit it. Some students described cooperative and compliant patients as facilitating student empathy, and uncooperative, noncompliant patients as a barrier.[69]	United States, United Kingdom, Germany, South Africa, France, Lebanon, Norway, Brazil
Theme 2: Teaching empathy[b]			
Formal classes	Last semester we had this session with patients [who] had spinal cord injuries. For me that increased my empathy to see how their lives were and to ... they talked about what they're able to do and what they're not able to do and everything from [a] personal perspective. To me, that increased my awareness and desire to learn more about them.[67] Some of my friends mock [ethics class when issues of empathy come up], because it seems like they're trying to teach you something that inherently can't really be taught.[67]	Among the factors that the respondents said fostered physician empathy were specific curricular elements of medical education. These had in common that they focused on patient–physician interaction and/or the psychosocial characteristics of a patient.[68]	United States, United Kingdom, Germany, Canada, South Africa, Israel, Japan, Brazil, China, Belgium
Informal and hidden curricula	I understand a bit more about the conditions and I know how they affect patients ... I think it is to do with education as well, because once you've understood the different ways patients can be affected and you've seen patients being affected. Because obviously in the first year we didn't see many patients anyway.[62]	Another group of factors centered on medical practice and, during undergraduate education, practice-based learning with patient contact. These 2 factors were perceived as helpful in developing clinical empathy.[68]	United States, United Kingdom, Germany, Canada, Norway, Brazil, Belgium, Australia, New Zealand
Role of experienced doctors	I was especially able to train my empathy during the general medicine clerkship through frequent contact with patients. The opportunity to reflect [on experiences during the clerkship] with my teaching physician played a big role in that because I could confirm or dismiss my perceptions.[69]	Some described the positive aspects of practice experiences in greater detail by expressing how their observation of physicians' interactions with patients and, much more so, their own contact with patients had enhanced their empathy, especially when accompanied by guided reflection with their trainers.[69]	United States, United Kingdom, Germany, Canada, Lebanon, Japan, Norway, Brazil, Belgium, Australia, New Zealand
Theme 3: Willingness to be an empathetic doctor[c]			
Wanting to be empathetic, appreciating the usefulness of empathy	One of the most important skills that must be learned is empathy. From a patient's point of view, I often think that empathy and understanding are often more important than knowledge and skills.[56]	Willingness to display empathetic behavior toward patients was the most prominent theme identified in participants' accounts of their experiences. Participants showed positive attitudes toward the importance of demonstrating empathy in the context of patient care. They felt that empathizing with patients resulted in better communication and rapport building, which leads to better patient outcomes.[62]	United States, United Kingdom, Canada, South Africa, France, Lebanon, Slovenia, Japan, Brazil, Australia, New Zealand

(Table continues)

Table 2

(Continued)

Themes	Quotations from participants in primary studies	Interpretations of findings offered by authors	Countries represented
Feeling hesitant about empathy	Don't you think that a doctor needs to be firm, rather than empathic? If you're not firm enough, the patient thinks this is not important for you. By showing too much empathy, the doctor may contribute to the patient's taking the treatment lightly.[55]	It shows how empathy is resisted by some students and how its instruction remains on the surface […]. In addition, many students resisted what they perceived as a contrived requirement to be empathic.[55]	United States, United Kingdom, Germany, Canada, France, Israel, Slovenia, Finland, Norway, Belgium, New Zealand
Prioritization of types of knowledge	Admissions committees are too concerned with grades and research and all that stuff, which doesn't mean anything because those are going to be the doctors [who] sit down and have monotone voice and don't really listen to patients.[66]	The students shared the opinion that possessing biomedical knowledge takes precedence over their ability to manage the emotional aspects of the consultation.[70]	United States, United Kingdom, Germany, Canada, South Africa, France, Israel, Slovenia, Norway
Emotional control	That's almost the trick of medicine, how can you feel enough to show empathy and understand what people are going through and have people appreciate that you do actually, you are actually concerned with what's going on but not take it all on yourself so that every time you see something tragic or every time you see something horrible, you break down and can't do anything.[78] There is a limit. You have to be empathetic, but you cannot be too empathetic, and again, this should come with experience; to know at which point you should stop being too involved with the patient, and at which point to engage more.[75]	For example, some students reported having trouble finding a balance between connecting with patients and maintaining an appropriate distance. These problems were partly due to limited experience with patient contact or to difficulties in managing their own emotions.[69]	United States, United Kingdom, Germany, South Africa, France, Lebanon, Slovenia, Finland, Norway, New Zealand
Theme 4: Evolution of empathy during medical school[d]			
Decline in empathy during medical school	I can understand patients' anxieties as well as when I was a student, but I find that I cannot empathise with the patients by sharing their emotion as a student. So, I want to compensate for it by saying some words or showing empathetic attitude to them.[64]	Several students described desensitization and time constraints as an inevitable part of becoming physicians.[59] Another emergent subtheme was the reported decrease in empathy over the course of one's medical career from student to attending physician as a function of exposure and burnout.[75]	United States, United Kingdom, Germany, Canada, Lebanon, Japan, Norway, Brazil, New Zealand
Medical school itself—its grueling nature—as directly responsible for the decline	I'm sure that when you're exhausted, when you're fed up, when you're overwhelmed by tiredness and your feelings, it's hard to have empathy.[74]	A group of adverse conditions for the development of physician empathy centered on stress at the workplace or during medical school.[68]	United States, United Kingdom, Germany, Canada, France, Lebanon, Norway, Brazil, Belgium

[a]Countries not represented in Theme 1: China, Belgium, Australia, New Zealand.
[b]The following countries are represented generally in Theme 2 (not in a particular subtheme): United States, United Kingdom, Slovenia. Countries not represented in Theme 2: France, Sweden, Finland.
[c]Countries not represented in Theme 3: Sweden, China.
[d]Countries not represented in Theme 4: Israel, Slovenia, South Africa, Sweden, Finland, China, Australia.

impede empathy: culture,[75] the student's education and personality,[62,69,79] feeling well and having support,[74,79,84,85] having had experiences similar to those of the patient[62] (although some disagreed with this idea[70]), or identifying in some way to the patient (e.g., age, sex, educational level).[63,79] Finally, participants collectively indicated that the most necessary condition for feeling empathy was the patient's own attitude (friendly, cooperative, honest, open, or grateful versus aggressive, closed, or mute).[54,56,69,79,85]

Theme 2: Teaching empathy. The question of whether empathy can be taught was controversial among the participants. The studies in our review indicated participants held 3 positions with regard to instruction in empathy. Some did not think that empathy could be taught,[62,83] while others felt that a class or program might be a means to try to stimulate or strengthen the empathy of those who have it naturally.[66,77,79] Finally, the last group thought that any instruction could teach only how to *seem* empathetic, to enable everyone to develop a minimal level of "pretending" empathy.[66,71]

The participants in the included studies considered 3 aspects of teaching about empathy: (1) formal classes, (2) the informal and hidden curricula, and (3) the role of experienced doctors.

Formal classes. Many students talked about the importance of formal classes that focused on empathy during medical school.[53,56,62,69] They felt that the courses related to the practical

(rather than theoretical) aspects of the concept,[68,69] in particular those using clinical illustrations,[65,77] promoted and stimulated their empathy. They also highlighted courses dealing with the physician–patient relationship and those that emphasized a holistic approach to patients, including considering their psychosocial characteristics and their experience of disease.[67–69,72,79,81,85,86] Some authors concluded that explicit instruction in empathy is necessary.[69] Notably, however, students also described the limitations of formal instruction. Courses in the physician–patient relationship appeared too far from their reality when they had not yet had any practical clinical experiences.[54] Courses aimed at strengthening empathy sometimes appeared inappropriate to participants and contributed to making empathy seem forced and superficial.[55,64,67,79] Authors criticized instructors' lack of training and disapproved of approaches focusing solely on the behavioral aspects of empathic communication.[55]

Informal and hidden curricula. Many participants felt that instruction in empathy was relayed more through the informal and hidden curricula.[68,70] Some participants talked about practical experiences with patients that had had a positive influence on their empathy.[54,57,62,67–69,72,83,85] Others explained that these experiences enabled them to develop strategies for reacting empathetically to patients.[62,73,76,79,85] Many students mentioned, in particular, experiences with patients at the end of life, which they considered the paradigmatic situation evoking empathy.[53,63,76,78] Some authors concluded that an intervention through which students followed patients in the community, accompanying them to appointments, and thereby experiencing the health care system with them, could play a positive role in developing empathy.[67]

Role of experienced doctors. Finally, most of the students and residents in the studies we analyzed insisted on the crucial role of the clinical supervisors and senior staff in teaching empathy. They felt that empathy is learned, above all, from experienced physicians.[54,67,69,70,72,73,75,76,85] That is, they considered observing the interactions of doctors with their patients and with the patients' families to be vital for teaching empathy.[54,67,69,70,72,73,75,76]

Students mentioned, in particular, the importance of observing physicians in bad news situations (e.g., telling patients about serious diseases and families about death).[53] Students explained that they appreciated observing these senior doctors treating patients as people and not as diseases.[53,72,73] Students reported that talking to physicians about their attitudes toward patients was essential in learning how to be empathetic.[52,69,70,72] They wanted to be able to have discussions with their supervisors about doctor–patient relationships.[54,69,73] Students also explicitly mentioned valuing the support of these more experienced physicians. Students highlighted both feeling inadequate and lacking support as obstacles to empathy,[54,62,64,69,72] so they cited having their supervisors' support as a necessary condition for learning empathy. They explained that they looked to experienced doctors to provide insight into practicing medicine,[52,53,65,67] particularly after a patient's death,[78] especially since, they reported, people outside of medicine could not understand them.[53] Relatedly, students also reported comparing their reactions with those of these more experienced colleagues.[53]

Theme 3: Willingness to be an empathetic doctor. While some participants wanted to be empathetic and underlined the usefulness of empathy, others were more hesitant. This ambivalence connects 2 issues: prioritizing types of knowledge and emotional control.

Wanting to be empathetic, appreciating the usefulness of empathy. Many participants in the analyzed studies considered empathy useful[52,54,59,62,63,71,73,74,76,79,84,86] because, they reported, it enabled a better physician–patient relationship and better care.[52,56,57,62,64,66,75,78,79] Participants also reported seeing value in empathy because it improves the likelihood of identifying the patient's problem with precision.[60,62,65,79] The participants appreciated, in particular, listening, treating the person and not the disease, and providing care aligned with the patient's values.[52,53,76,79] Finally, some students argued that empathy plays a protective role against burnout.[67,74,84]

Feeling hesitant about empathy. In contrast, some students were reserved about empathy.[55,62,70,82] They perceived it as imposed, artificial, and

"illegitimate."[55,83] They mentioned the potentially harmful effects of empathy on medical students and interns, especially its emotional and relational consequences.[71,74] These students considered maintaining some distance from their patients necessary to preserving their authority and protecting themselves.[52,53,55,70,78,79,82,83,85] They found empathy difficult to reconcile with their search for efficacy and the use of their medical knowledge.[59,70,72,74,79,83,85,86]

Prioritization of types of knowledge. Participants often reported that the most important aspects of training were, for them, gaining medical knowledge and constructing a professional identity. They reported that the formal university education prioritizes medical knowledge and reasoning skills over people skills and empathy[62,67,68,70]—as shown in both course content and medical school admissions policies.[55,66,70] Students in only one study felt that their university accorded importance to human qualities.[58] Some authors concluded that the objectification of patients by medicine and disease-focused education constitute a barrier to empathy[59,67,69,74] and that students thus constructed their professional identity based on this priority. That is, authors believed that in an effort to provide excellent care for patients, medical students have focused on acquiring maximal knowledge and maintaining their objectivity—to the detriment of their capacity for empathy.[53,62,79] Students viewed emotions as factors that compromise objectivity and impair reasoning and, therefore, hamper professionalism.[52,70,71] In effect, some students felt showing empathy corresponded to demonstrating a lack of professionalism.[52,70] In contrast, others believed that empathy and professionalism were associated, and they objected to their school's failure to include human dimensions and relationship skills in the curriculum.[56,59,63]

Emotional control. Above all else, students across the studies we analyzed wanted to control their emotions in front of patients.[52,70,78,82] They pointed out their need to separate objectivity and subjectivity so that their emotions would not affect patient care.[70,71] For students, controlling emotions was a sign of maturity and professionalism.[58,70,78] Participants believed they could not simultaneously be empathetic

and control their emotions with patients,[52,69–71,74–76,82,83,85] indicating that they confused empathy with lack of emotional control.[53,69,70,74,78]

Theme 4: Evolution of empathy during medical school. Many participants reported a decline in their empathy during medical school, and some thought that medical school itself—its grueling nature—was directly responsible for this decline.

Decline of empathy during medical school. Most of the students worried about whether they would remain empathetic with their patients throughout their careers.[52–54,59,86] Although many judged that their empathy declined during medical school,[60,62,67,75,79] some disagreed.[62,68] Students universally agreed that the emotional component of empathy had progressively declined,[52,59,64,67,70,78] describing a trend to see patients more as intellectual problems than as people.[62,63]

Medical school itself—its grueling nature—as directly responsible for this decline. The participants described medical school as very constraining, even brutal.[52] They identified school-related factors (e.g., lack of time, competitiveness, performance demands, cramming, stress, workload, physical and psychological fatigue[59,62,68,69,72,74,75,79,80,85]) with the loss of empathy.[54,59,62,66,67,69,70,79,85] Authors noted that medical school culture is difficult to modify.[67]

Discussion

Through our analyses and metasynthesis of 35 qualitative studies of empathy in medical school, we uncovered 4 themes around the issue of empathy, revealed conflicting thoughts, and exposed a strong ambivalence about empathy among students. In short, medical students do not know exactly what empathy is, have reservations about whether it can really be taught, are divided about its usefulness in medical practice, and confuse its absence with emotional control. Their ambivalence about this concept reflects theoretical confusion about it. The students' reservations and thoughts reflect previous results, indicating that there is still no agreement about whether or not empathy can be taught[9,10,41] and, if so, how.[38]

Our results suggest that students find empathy too complex and too vague as a concept to be used in organizing their courses, training, or even patient relationships. We argue, therefore, that a physician's empathy must be an end—not a means. Additionally, in line with others, our results suggest that teaching empathy by focusing on clear concepts easy to transmit, such as listening and attention, could lead medical students to empathy.[13,37,87] Medical scholars have recently developed some simple methods of learning based on listening, such as the "Invite, listen, and summarize" method.[88] Further approaches (e.g., narratives, art teaching), which are often used in medical education, can also enhance students' capacity for close listening.[37,87] Other scholars have proposed the use of simple tools for conducting patient-centered interviews and thus eliciting patient concerns and feelings; one example is not interrupting patients for at least 2 minutes, encouraging them to talk not only about their symptoms but also about their personal and family situation and their feelings.[40]

The students who thought that empathy could be learned mentioned the role of formal classes, informal and hidden curricula, and experienced doctors. Their views align with Jeffrey's meta-ethnography conclusions: giving a higher profile to the psychosocial elements of the curriculum or offering students more opportunities for direct patient contact supports the development of empathy.[47] The teaching of empathy that is occurring in medical schools is heterogeneous in terms of both content and teaching techniques. Moreover, this instruction is poorly studied, and the few studies examining the teaching of empathy have methodological flaws and fail to provide strong evidence, especially regarding long-term efficacy.[17,26,89,90]

A previous systematic review addressed the issue of how early practical experiences can "strengthen students' affective and cognitive learning."[91] According to the authors, those experiences, as part of an informal and hidden curriculum, might foster empathy. Yet, to our knowledge, no study has ever explored rigorously and specifically the relationship between early practical experiences and empathy. As a matter of fact, the issue of how informal and hidden curricula influence

student's empathy remains unclear and understudied.[92]

Our results indicate that not all medical students think empathy can be taught, but those who believe it can be think that it is, above all, taught by experienced physicians role-modeling interactions with patients. This finding aligns with findings from other qualitative studies examining senior staff members and empathy, namely, that faculty and clinical teachers serve as role models and that it is vital for them to share their experiences with students, discuss the emotions aroused by patients, and make themselves available to address students' questions and concerns about aspects of the physician–patient relationship.[93,94] We think, therefore, that an essential, pragmatic, and simple strategy to foster medical students' empathy is to strengthen these supervisors in their role as models and to encourage them to share their own experiences. The role of instructors is an important aspect of the informal curriculum. Others have already considered this idea,[10,37] emphasizing the fact that physicians must have protected time to allocate to the students they supervise. Similarly, to reinforce the traditional principle of apprenticeship, students should be able to affiliate themselves with a particular senior practitioner, following that physician and seeing all the patients in the practice—rather than following up on just one specific patient. Students could witness a lived experience of empathy and its concrete application in daily medical practice. This sort of apprenticeship could represent a new approach to teaching empathy. To our knowledge, no medical school has implemented such an approach, and no quantitative or qualitative studies have addressed the effect of such a strategy.

Similarly, we are aware of no qualitative study exploring students' perspectives about innovative approaches to teaching empathy.[20–23] We feel physicians and medical educators involved with teaching or transmitting empathy to medical students should take into account the singularity of each student's learning behaviors, yet the issue of each student's individual needs, autonomy, and learning strengths is also understudied.[95,96] We are aware of only one study suggesting that paying attention to the student as a whole individual could change learning behaviors.[81] Further qualitative research is necessary to explore not only

(1) the influence on empathy learning when senior staff members and medical educators consider the singularity of each student's learning behaviors but also (2) the medical students' views of learning and developing empathy through innovative approaches and through teaching tailored to their own learning behaviors.

Our results raise the question of the effect of ranking and prioritizing types of knowledge in medical schools, which often promote learning through human body organs or systems. This emphasis validates students' reserve about empathy. There are other medical models—such as the biopsychosocial model, narrative medicine, and integrative medicine[97,98]—which offer a humanist and holistic approach. Although these models have gained recognition, they were barely mentioned in the studies we analyzed in this metasynthesis. We advocate rethinking medical training to avoid prioritizing medical knowledge and to teach students other medical models that emphasize patients and their complete histories. Such reform is consistent with other recent articles urging a paradigm shift in medical education, from focusing on diseases to focusing on patients.[37,87] To date, the recommendations based on our results—to focus on clearer concepts (like listening) rather than empathy, to reintroduce the apprenticeship model,[10,37,93,94] and to teach students holistic and humanist medical models (at least as much as models centered on human body organs and systems)—are not yet part of the official medical training in any medical school.

This metasynthesis integrates the experience of 1,760 participants from 18 different countries. The method we applied is rigorous, has been tested in medical research,[49] and meets the criteria of the ENTREQ guidelines.[50] We analyzed 35 articles, all published in peer-reviewed journals and most meeting standards of good quality. Our method was well suited to the synthesis of this number of qualitative studies and allowed us to reach much broader conclusions than any of the individual studies could.

Nonetheless, some aspects of this metasynthesis limit the generalization of its conclusions. A qualitative metasynthesis collects only partial information from participants and relies on the interpretations of the researchers, which together constitute the data given in the initial articles. Although our search strategy is rigorous, we cannot be sure that it identified all relevant articles. Moreover, although our search strategy assembled articles from diverse cultural areas, English-speaking countries are overrepresented as we restricted our selection to articles in that language. We did not find differences between the countries represented; however, some countries were not represented in each theme (see Table 2), and often these were countries (e.g., China, Australia, Sweden) represented by only one included study.

Conclusions

Empathy appears too complex and too vague to be used as an operant concept in courses and training. Based on our results, we believe that empathy in a physician must be an end, not a means, and both formal and informal empathy education must be structured around clearer concepts, such as listening to patients. Our results also raise broader questions about medical school that have a direct influence on students' empathy: What is the effect of prioritizing some types of knowledge over others? How does the lack of holistic and humanist medical models in medical schools influence physicians' empathy in the long term? Might the apprenticeship model effect increase the empathy of physicians and physicians-in-training?

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Appendix 1
Summary of 35 Qualitative Studies Examined in a Review of the Literature of Medical Students' Experiences of Empathy, June 2019

Authors (year)	Objective(s)	Country	Participants	Data collection	Method of analysis
Rucker and Shapiro (2003)[52]	To explore how students use creative projects to reflect on their practice and to explore their socialization into medicine	United States	Students in internal medicine (n = 211)	Creative projects	Descriptive analysis and interpretation of creative projects
Ratanawongsa et al (2005)[53]	To explore the experience of students in relation to end-of-life situations	United States	3rd-year students at 3 hospitals (n = 28)	Semistructured interviews	Grounded theory
Nogueira-Martins et al (2006)[54]	To explore perceptions of the learning process relative to the physician–patient relationship and how courses in psychology can affect this process	Brazil	5th-year students (n = 16)	Semistructured interviews	Qualitative clinical approach
Raz and Fadlon (2006)[55]	To explore the interaction of new issues related to communication with biomedical culture	Israel	1st-year students (n = 210)	Focus groups, short-term observations	Thematic analysis
Van Staden et al (2006)[56]	To describe students' representations of "soft skills"	South Africa	6th-year students (n = 93)	7 focus groups, 16 semistructured interviews, 23 personal essays	Grounded theory
Griswold et al (2007)[57]	To explore the type of lessons drawn from an encounter with refugee patients	United States	1st- and 2nd-year students (n = 27)	Semistructured "debriefing" interviews, individual or in pairs	Thematic analysis, specifically the "immersion/ crystallization" approach
Van Rooyen and Treadwell (2007)[58]	To explore students' representation of professionalism	South Africa	5th-year students (n = 189)	Essays	Thematic analysis
Allen et al (2008)[59]	To explore the feasibility and effect of reflexive practices during training and how the "hidden curriculum" affects students	Canada	2nd-year students (n = 41)	Student journals	Thematic analysis
Windish et al (2008)[60]	To explore the experience of health care providers in the situation of discharges against medical advice	United States	Students with clinical experience (n = 20), plus assistants and others (n = 14)	Semistructured interviews	Thematic analysis, grounded theory approach
Lindberg (2009)[61]	To explore the students' and teachers' ideas of medical practice	Sweden	3rd- and 4th-year medical students (n = 8)	Semistructured interviews by telephone	Approach inspired by grounded theory
Tavakol et al (2012)[62]	To explore what students perceive to be the essence of empathy	England	Students (n = 10)	Semistructured interviews	Thematic analysis, phenomenological approach
Head et al (2012)[63]	To explore the opinion of students with experience in palliative care	United States	Students (n = 40)	Reflective writing	Grounded theory
Aomatsu et al (2013)[64]	To analyze and compare students' conceptual understanding of empathy	Japan	5th-year students and interns (n = 13)	Focus groups	Thematic analysis
Arntfield et al (2013)[65]	To understand students' perception of the effect of a course in narrative medicine on their capacity to communicate	United States	4th-year students (n = 12)	Focus groups with 6 students, questionnaires with open-ended questions	Grounded theory
Bayne et al (2013)[66]	To explore how empathy is expressed in medical practice	United States	Physicians of different specialties (n = 21)	Semistructured interviews	Thematic analysis, grounded theory
Sheikh et al (2013)[67]	To explore changes in students' attitudes and personalities, specifically those affecting their capacity to be empathetic	Canada	2nd-year students (n = 12)	Semistructured interviews	Thematic analysis
Ahrweiler et al (2014)[68]	To explore the influence of medical training on empathy and to look for differences between specialties	Germany	Physicians of diverse specialties (n = 42)	Questionnaires with open-ended questions	Thematic analysis, Mayring's inductive approach
Ahrweiler et al (2014)[69]	To determine the situational and educational factors influencing empathy and to compare points of view between universities	Germany	Students at 3 different universities (n = 115)	Questionnaires with open-ended questions	Thematic analysis

(Appendix continues)

153

Appendix 1
(Continued)

Authors (year)	Objective(s)	Country	Participants	Data collection	Method of analysis
Eikeland et al (2014)[70]	To explore what empathy signifies for students and what factors they report to influence their capacity to be empathetic	Norway	3rd-year students (n = 11)	Semistructured interviews	Thematic analysis
Klemenc-Ketis and Vrecko (2014)[71]	To explore and compare students' representation of professionalism by their year in medical school	Slovenia	1st- and 5th-year students (n = 12)	Focus groups	Grounded theory
Aper et al (2015)[72]	To explore how students use their skills in consultations (real or simulated)	Belgium	Students in different years of medical school (n = 39)	3 × 2 focus groups	Constant comparative analysis
Burgess et al (2015)[73]	To study students' perceptions of and the influence of tutors as role model	Australia	2nd-year students at 6 clinical schools (hospitals) (n = 59)	9 focus groups	Thematic analysis
Picard et al (2015)[74]	To explore the relationship between empathy and burnout	France	Interns in general medicine (n = 22)	Semistructured interviews	Thematic analysis
Batley et al (2016)[75]	To explore the negative attitudes and emotions provoked by meeting patients in an emergency department	Lebanon	3rd- and 4th-year students, interns and residents (n = 24) and attending physicians (n = 6)	Semistructured interviews	Thematic analysis
Boland et al (2016)[76]	To explore how medical students learn about and deal with death, dying, and palliative care during a clinical placement and to improve medical education about end-of-life and palliative care	United Kingdom	3rd-year students (n = 22)	Reflective essays	Grounded theory
Easton (2016)[77]	To explore how teachers use anecdotes, their impact on the learning process, and students' and teachers' opinions of anecdotes as a teaching tool	United Kingdom	1st-year medical students (n = 13)	Focus groups, observation of courses	Thematic analysis
Smith-Han et al (2016)[78]	To explore students' experience of a patient's death	New Zealand	Students with clinical experience (n = 10)	Repeated semistructured interviews	Thematic analysis, Grounded theory
Stratta et al (2016)[79]	To understand whether foundation doctors have perceived the phenomena of empathy decline and to understand why this decline would occur	United Kingdom	Foundation doctors (n = 9)	Semistructured interviews	Thematic analysis
Sun et al (2016)[80]	To explore perceptions of the effect of how working time is organized on the work environment and professionalism	Canada	Interns (n = 18), senior staff (n = 9), other (n = 3)	Semistructured interviews	Thematic analysis
Wang et al (2016)[81]	To explore the experience of students and tutors in relation to problem-based learning coaching	China	3rd-year students (n = 20) and tutors (n = 5)	Semistructured interviews	Interpretative phenomenological analysis
Toivonen et al (2017)[82]	To explore what emotions breaking bad news provokes in students and how these emotions are reflected	Finland	4th-year students (n = 351)	Questionnaire learning assignment	Qualitative inductive content analysis
Plotkin and Shochet (2018)[83]	To gain insight into 1st-year medical students' challenges and successes in conveying empathy to enhance the teaching of communication skills	United States	1st-year students (n = 13), patients (n = 14)	2 focus groups with students and 2 focus groups with patients	Thematic analysis
Winkel et al (2018)[84]	To examine the experiences of obstetrics and gynecology residents to generate a theory of how residents learn to thrive in this context	United States	Obstetrics and gynecology residents (n = 18)	Semistructured interviews	Grounded theory
Pohontsch et al (2018)[85]	To identify factors which medical students assume to influence empathic abilities during the course of their studies	Germany	3rd- and final-year students (n = 12 + 12)	Semistructured interviews	Thematic analysis
Wald et al (2018)[86]	To learn about family medicine residents' experiences of challenging patient encounters and how these contribute to their professional development	United States	3rd-year students (n = 50)	Mandatory reflective writings	Immersion/ crystallization (thematic analysis)