

# Empathic communication and gender in the physician–patient encounter

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## Abstract

Although empathy in the physician–patient relationship is often advocated, a theoretically based and empirically derived measure of a physician’s empathic communication to a patient has been missing. This paper describes the development and initial validation of such a measure, the Empathic Communication Coding System (ECCS), which includes a method for identifying patient-created empathic opportunities. To determine the extent to which empathic communication varies with physician and patient gender, we used the ECCS to code 100 videotaped office visits between patients and general internists. While male and female patients created a comparable number of empathic opportunities, those created by females tended to exhibit more emotional intensity than those created by males. However, female patients were no more likely than male patients to name an emotion in their empathic opportunities. Physician communication behavior was consistent with the literature on gender differences: female physicians tended to communicate higher degrees of empathy in response to the empathic opportunities created by patients. The ECCS appears to be a viable and sensitive tool for better understanding empathy in medical encounters, and for detecting modest gender differences in patients’ creation of empathic opportunities and in physicians’ empathic communication.

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## 1. Introduction

The importance of empathy in the physician–patient relationship appears to be widely accepted in the medical literature. Medical students and physicians are advised to be empathic and to learn the skill of empathic communication [1–7]. Patients who report that their physicians have empathic qualities also report better satisfaction with care [8,9]. The presence of empathy in a physician–patient relationship may also lead to savings of time and expense [10]. Further, a patient’s perception of a physician’s lack of caring has been shown to be correlated with the decision to pursue litigation [11].

This widespread interest in empathy is noteworthy. It is also somewhat troubling because “the idea of empathy itself conceals several contested meanings within the discourse of medicine” ([12], p. 14). Spiro [4] set the tone for an edited book on empathy in medicine by casting empathy as “more than just an intellectual identification; empathy must be accompanied by feeling,” (p. 2) going on to say that in the absence of feeling, there is no empathy. At the opera-

tional level, however, the relationship between feelings, empathy, and communication is unclear. Indeed, among scholars examining physician empathy, some have focused on the cognitive dimension [1,10], the affective dimension [4,7,13], or the behavioral dimension [6]. Others have included all three dimensions in their conceptualizations of empathy stating, for example, that physician empathy is “a physician’s cognitive capacity to understand a patient’s needs, an affective sensitivity to a patient’s feelings, and a behavioral ability to convey empathy to a patient” ([14], p. 435). The latter part of this definition is the one most germane to those examining physician–patient interaction. In other words, the construct of interest is not a physician’s internal empathy, but how that empathy is communicated. Accordingly, we use the term “empathic communication” in this article to refer to the behavioral aspect of empathy.

Researchers have attempted to study empathic communication in several ways. Some have borrowed measures from psychotherapy [15–18]. This cross-contextual application of measures is problematic because of low reliability [17] and because physician responses to patients in a medical setting “do not require the depth of empathy necessary in a therapeutic relationship” ([16], p. 754). Others have used global ratings of verbal and nonverbal physician

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empathic communication [19–21]. Global ratings may be useful in capturing raters' perceptions of empathy; however, these conceptualizations will likely vary, muddying the already murky waters. Another method, written responses to hypothetical scenarios [6], does not provide testing of real interactions and, thus, has limited validity. After reviewing the literature on measuring empathic communication, we concluded that despite the case made for empathy, and perhaps due to its varying conceptualizations, a theoretically based and empirically derived measure of empathic communication in the context of a physician–patient clinical encounter was missing.

The purpose of this article is two-fold: (1) describe a new measure of empathic communication that draws on past research, communication theory, and patients' definitions of empathy; (2) report findings on the extent to which empathic communication varies with physician and patient gender. To provide a contextual backdrop, we will briefly review relevant literature on gender differences, proposing four testable predictions in the process.

## 2. Review of the literature

### 2.1. Gender and physician–patient communication

As a prelude to focusing on the relationship between gender and empathic communication, it is important to review key findings regarding both physician and patient gender differences in terms of a broad scope of communication behaviors.

The best source to date on physician gender and medical communication is a meta-analytic review by Roter et al. [22] that provides an overall picture of physician gender differences in medical encounters. They found female physicians to be more likely to use psychosocial discussion, positive talk, and emotionally focused talk than their male counterparts. In addition, female physicians use more partnership-building techniques with their patients than male physicians. Further, female physicians use more positive nonverbal communication and tend to spend longer with their patients than male physicians. Yet, there seems to be no difference between male and female physicians in the amount of biomedical information discussed, quality of information given, or social conversation exchanged.

However, interpersonal communication is transactional in nature. Since physicians and patients influence each other during interaction [23], physician gender differences in communication should not be the only focus. Patients' expectations and consequently patients' communication with male versus female physicians is also of interest [24]. Hall and Roter [25] also report on how patient behaviors may differ depending on the physician's gender. First, patients of female physicians provide more biomedical and psychosocial information than patients of male physicians. This is consistent with the finding that female physicians ask

more questions. Second, patients of female physicians tend to play a greater role in partnership building, in harmony with the finding that female physicians are more likely to use partnership-building styles. Third, female physicians' patients are more likely than male physicians' patients to engage in positive talk. Again, reciprocity seems to be in effect here, as female physicians are more likely to use positive talk. As will be explained in more detail, the Empathic Communication Coding System (ECCS) captures many of these physician communication behaviors, including emotionally focused talk, psychosocial discussion, positive talk, and positive nonverbal communication.

Further, general research on communication and gender has shown differences in the ways women and men interact, and it is reasonable to assume these differences may present themselves in the medical context [26]. For example, females are more likely to disclose emotions than males [27,28]. Such a difference is important to consider when examining patients' talk. Specifically, we posit that there will be differences in the opportunities female and male patients give physicians to be empathic in the three ways. Here we use the term “empathic opportunity” to mean specific statements by patients which make that a physician could respond empathically. First, female patients will create a greater number of empathic opportunities than will male patients. Second, female patients will name emotions in a greater proportion of empathic opportunities than will male patients. Third, female patients will create more intense empathic opportunities than will male patients.

### 2.2. Gender and empathy

Empathy in the physician–patient relationship is not a new concept. The use of the term empathy in medicine was a result of a gradual dismissal of the term sympathy [29]. By the end of the 1800s, the term “sympathy,” once thought to be important in medicine, had become “not only feminized, (but) . . . devalued and sentimentalized” (p. 23). By the 1960s, More [29] writes that there was increased concern in medicine about the provider–patient relationship. Empathy became “the ideal mediator between comfort and risk, not only in psychiatry but in all clinical medicine” (p. 31). Such empathy was not the feminized sympathy, but a “detached concern” for patients, allowing physicians to keep boundaries emotionally from their patients (p. 31).

Recent research suggests that empathic communication is more frequently associated with female physicians. In addition to the research cited in the previous section indicating female physicians' propensity to have more emotionally focused talk, other research indicates that female physicians are likely to show empathic communication behaviors in their patient interactions. A survey of 714 physicians found that female physicians rated themselves as more empathic in their communication than male physicians [30]. In other research, female residents in internal medicine tended to receive higher ratings on humanism than did male residents

[31]. Additionally, nonverbal behaviors shown more often by female physicians such as nodding and smiling [32] have also been linked to perceptions of physician empathy [33]. We expect to find similar results, providing one validity test for our new measure of empathic communication: we predict that female physicians' responses to empathic opportunities will be more empathic than will male physicians' responses.

### 3. Methods

Because the measure we used in this study is new, we first provide details of its development, followed by the methodological details of the study on gender and empathy in medical encounters.

#### 3.1. Instrument development

The first step in this study was to develop a measure, the Empathic Communication Coding System (ECCS) [34], which allowed us to measure empathic communication in the physician–patient encounter in a reliable and valid manner. This system has two parts: identifying patient-created empathic opportunities and coding physician responses to those empathic opportunities.

##### 3.1.1. Identification of empathic opportunity

The purpose of using the empathic opportunity as the unit of analysis in physician–patient visits is to provide a finite set of patient statements and physician responses that can be coded for empathic communication. To this end, we first developed a system for identifying these empathic opportunities, building on previous research. Branch and Malik [35] showed how experienced clinicians used “windows of opportunity” to understand their patients' concerns. These

windows of opportunity were defined as instances “during which patients discussed their concerns about personal, emotional, and/or family issues” (p. 1667). Suchman et al. [36] defined an empathic opportunity to be “a direct and explicit description of an emotion by a patient” (p. 679) and a praise opportunity to be “a direct and explicit description of a praiseworthy behavior by a patient” (p. 681). Similarly, one task in Makoul's SEGUE Framework for teaching and assessing communication skills [37] focuses on responding to a patient's overt statement of accomplishment, progress, or challenge.

Our definition incorporates these concepts: the empathic opportunity begins with a clear and direct statement of emotion, progress, or challenge by the patient. Although some have included less direct patient behaviors (e.g. potential empathic opportunities and indirect clues) in research on physician empathy [36,38], we reasoned that if physicians do not respond to explicit patient statements of emotion, progress, or challenge, it is unlikely they would respond to more subtle empathic opportunities. Table 1 displays the operational definitions used to identify the three types of empathic opportunities and gives examples of real patient statements that fit these definitions (see [34] for full identification rules).

##### 3.1.2. Coding empathic responses

The second part of the ECCS is a system to code physician responses to empathic opportunities. This is a hierarchical coding scheme by which physician responses are placed into one of six levels, ranging from Levels 0 to 5 as shown in Table 2 (see Appendix A for details and [34] for full coding rules). In developing this measure, it was important to attend to what was missing in the literature—a theoretically based and empirically derived measure based in the physician–patient context. Developing this system required attention to two questions: what communication behaviors should be

Table 1  
Identifying empathic opportunities

The empathic opportunity begins with a clear and direct statement of emotion, progress or challenge by the patient:

*Statement of emotion:* The patient describes him or herself currently feeling an emotion. Emotion is defined as “an affective state of consciousness in which joy, sorrow, fear, hate, or the like, is experienced.”<sup>a</sup>

“My biggest fear is—I don't think I'm going to get ovarian cancer or breast cancer—but I do think that I'm going to get colon cancer.”

“I'm just scared because I never went through nothing—I've never had nothing wrong with me.”

*Statement of progress:* The patient states or describes a positive development in physical condition that has improved quality of life, a positive development in the psychosocial aspect of the patient's life, or a recent, very positive, life-changing event.

“I've been exercising more than last time when I had seen you.”

“We just got married.”

*Statement of challenge:* The patient states or describes a negative effect a physical or psychosocial problem is having on the patient's quality of life, or a recent, devastating, life-changing event.

“But sometimes it's hard just eating three ounces of meat, you know what I mean?”

“I just haven't had the energy to do my job as much anymore.”

<sup>a</sup> Definition from Webster's Unabridged Dictionary, 1998.

Table 2  
Empathic communication coding system levels

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Levels 3–5—Explicit recognition of patient perspective
Level 5—Statement of shared feeling or experience
<i>“I understand how scary this must be for you. My husband recently had a biopsy and we were really scared.”</i>
Level 4—Confirmation
<i>“You sound like you are very busy. I can see why it would be tough for you to find time to exercise.”</i>
Level 3—Acknowledgment
<i>“You mentioned that you’ve been feeling sad. Would you tell me more about that?”</i>
Level 2—Implicit recognition of patient perspective
PT: <i>“This headache makes it difficult for me to work.”</i>
MD: <i>“Yes, how is the insurance business lately?”</i>
Level 1—Perfunctory recognition of patient perspective
<i>A physician’s automatic, scripted-type response (e.g. “uh-huh”) to an empathic opportunity while the physician is doing something else, often with the physician having his/her body oriented away from the patient.</i>
Level 0—Denial of patient perspective
<i>The physician either ignores the patient’s empathic opportunity or makes a disconfirming statement.</i>

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included in the coding scheme and how should these communication behaviors be hierarchically ordered. We used questionnaires, communication theory, and a validation test to attend to these issues.

**3.1.2.1. Questionnaires: characterizing empathic communication.** We conducted two questionnaire-based studies to learn about physician behaviors that patients perceive to be empathic [34]. The first was a survey completed by 42 adult patients (28 females), which asked general questions about empathic communication, focusing on communication behaviors and words that a physician might use to convey empathy. The survey used open-ended items such as asking patients how they know if their physician understands and relates to their emotional feelings and asking them to write out verbatim what a physician might say or do in a certain situation that would indicate empathy.

The second questionnaire was completed by 10 simulated patients (three females) working in Northwestern University Medical School’s Communication Skills unit for first-year students [37]. During the last session of this 12-week unit, each student ( $n = 163$ ) had a 10-min encounter with a simulated patient who “had” a tension headache. The simulated patients were instructed to create, within every encounter, a specific empathic opportunity about quitting smoking, coupling either positive (i.e. quit) or negative (i.e. tried to quit but could not) outcomes with either high (i.e. named emotion) or low (i.e. statement of fact) emotional intensity. Immediately after each visit, the simulated patient used the questionnaire to rate the level of empathy demonstrated by the student in response to the statement about smoking, and to record what, if anything, the medical

student did to show empathy for what the simulated patient said about quitting smoking. Empathy was clearly defined on the questionnaire as understanding and relating to what the simulated patients had to say.

The results of both questionnaires provided an empirical base for determining the scope of communication behaviors that are perceived by patients as empathic. Verbal communication behaviors included the following: confirming statements, offers of help, questions, sharing experiences, talk about emotions, telling stories about others, and telling the patient that he or she was not alone. Respondents also reported that nonverbal communication behaviors including eye contact, smiling, and nodding, and the perception that the physician is “listening,” indicated empathy. From these respondents, we learned that patients’ perceptions of how physicians communicate empathy are generally much broader than definitions offered in the literature, which often focus on communication about feelings [4].

**3.1.2.2. Theory: creating a hierarchy of empathic communication behaviors.** With a practical understanding of patients’ perceptions of empathic communication, the second step was to group these communication behaviors in a hierarchical system, with the aim of reflecting different degrees of empathy. We turned to interpersonal communication literature and theory for guidance. The hierarchical system developed by Burleson [39–42] to code the sensitivity of comforting strategies was of great relevance. The three major levels of this system are, in descending order: Explicit Recognition and Elaboration of Individual Perspective; Implicit Recognition of Individual Perspective; and Denial of Individual Perspective. These three levels formed the initial skeletal structure for our coding system.

Two areas of communication theory helped us to further develop the hierarchy. First, we turned to relational communication theory [43], which holds that in interpersonal interactions, all messages have both a content and a relational message. The content message is conveyed by the words spoken or the gestures made. The relational message, which indicates how the content message should be understood, may be based on additional verbal messages, the context of the communication, or nonverbal messages [43]. This theoretical perspective was helpful in delineating types of responses that physicians might give following a patient’s empathic opportunity. We recognized that physicians may give a content message of listening to the patient by giving both verbal and nonverbal feedback, but that the relational message might differ. For example, one physician could be saying “uh-huh” as her body is oriented towards the patient and she is making eye contact; another could say “uh-huh” while shuffling papers, typing on a computer, or writing a prescription. While both physicians would be conveying a content message of acknowledgment, the first sends a relational message that what the patient is saying is important enough to require the physician’s full attention,

while the second suggests that what the patient is saying is not as important as what the physician is doing. Thus, the acknowledgment level was placed higher than the perfunctory level.

A second theoretical perspective from which we drew is facework. In his classic article on facework in social interactions, Goffman [44] defines face as “the positive social value a person effectively claims for himself by the line others assume he has taken during a particular contact” (p. 5). Facework, Goffman explains, is the action taken by the interaction participants to either maintain face or save face. We argue that when a patient creates an empathic opportunity, the patient is making him or herself vulnerable to a face threat. Goffman’s writings support this stance:

“... when a person volunteers a statement or message, however trivial or commonplace, he commits himself and those he addresses, and in a sense places everyone present in jeopardy. By saying something, the speaker opens himself up to the possibility that the intended recipients will affront him by not listening or will think him forward, foolish, or offensive in what he said” (p. 37).

Brown and Levinson [45] built upon facework in developing Politeness Theory. This theory explains that people (e.g. physicians) use a particular type of strategy (called positive politeness) when responding to another’s (e.g. a patient’s) self face-threatening act. In fact, Brown and Levinson list empathy as one of the types of positive politeness strategies, that the speaker (physician) is “claiming common ground” with the hearer (patient) (p. 102).

This theoretical base reinforces the logical ordering of the empathic communication behaviors in two ways. First, it adds support for our four major categories of empathic communication behavior. In particular, it supports the placement of the perfunctory recognition (Level 1) as being more face saving than a denial (Level 0) but less face saving than an implicit recognition (Level 2). Second, based on the extent of facework involved, there is support for placing confirmation (Level 4) and shared feeling (Level 5) above acknowledgement (Level 3).

*3.1.2.3. Validation: testing the hierarchy.* Despite a foundation in interpersonal communication literature and theory, it was essential to examine if the levels were meaningful from a practical standpoint. The set of videotaped encounters between simulated patients and medical students provided data for initial validation of the hierarchy. One hundred and fifty (92%) of the first-year medical students agreed to have videotapes of their encounters included in this part of the study. Five of the videotaped encounters were either lost or had technical problems, leaving 145 encounters for analysis.

The first author used the ECCS levels to code medical students’ verbal and nonverbal responses to simulated

Table 3  
Mean empathy rating per ECCS level

Category	Category description	n	Empathy rating <sup>a</sup>	
			Mean	S.D.
5	Shared	22	5.77	0.53
4	Confirmation	102	5.42	0.74
3	Acknowledgment	20	4.40	1.57
2	Implicit	0	–	–
1	Perfunctory	1	4.00	–
0	Denial	0	–	–

<sup>a</sup> On a scale from 1 to 6, with 1: very strongly disagree and 6: very strongly agree that “this medical student showed empathy for what I said about quitting smoking.”

patients’ empathic opportunities. We then compared these codes to the simulated patients’ ratings of student empathy, expecting to see a positive association between the codes and the ratings. This test suggested that the hierarchical ordering of levels was consistent with simulated patient perceptions of empathic communication: as shown in Table 3, medical students’ responses to empathic opportunities that were coded as Level 5 had a higher mean empathy rating than those coded as Level 4, which were higher than those coded as Level 3. Only one student gave a response that was coded at a lower level. Given this conceptual and operational support, we applied the ECCS to study the relationship between gender and empathic communication in primary-care encounters.

### 3.2. Participants

The 100 videotaped encounters used in this study were drawn from a total of 500 visits (average of 25 patients to each of 10 general internists in Chicago and 10 general internists in Burlington, VT) that had been videotaped as part of ongoing research by the Program in Communication & Medicine at Northwestern University’s Feinberg School of Medicine. For this study, we randomly selected encounters from each of the 20 physicians until we found five encounters per physician in which the patient had created at least one empathic opportunity. We reviewed 168 tapes to find these 100 physician–patient encounters. The 100 patients who created at least one empathic opportunity were very similar to the 68 patients who did not in terms of age, social class, education level, and perceived physician–patient familiarity. However, the samples did differ in length of encounter; on average, encounters with at least one empathic opportunity were 35% longer than encounters with no empathic opportunities (25:20 versus 18:47,  $t = 3.28$ ,  $P = 0.001$ , d.f. = 159.58).

Physician age ranged from 30 to 48 years (mean = 37.7, S.D. = 5.3), with an average of 7.8 years in practice. The physician sample in this study was 20% female, a representative figure given that 23% of American physicians were female during the period in which these data were collected [46].

### 3.3. Measures

#### 3.3.1. Empathic communication coding system

*3.3.1.1. Identifying empathic opportunities.* Before the first author watched the encounters to determine those that had empathic opportunities, she and a research assistant worked to gain agreement on identifying empathic opportunities using the Empathic Communication Coding System. Both separately watched 10 encounters and identified the empathic opportunities contained within, discussed these, and then viewed again encounters about which they had disagreed. During this process, small changes were made to clarify the coding rules. Average agreement per encounter was determined to be 80%.

The first author then watched randomly selected encounters, as described in Section 3.2. She found a total of 249 empathic opportunities across these 100 encounters. All statements beginning empathic opportunities were transcribed and the segments containing empathic opportunities and the physician responses were dubbed onto a master tape to facilitate subsequent coding.

*3.3.1.2. Coding physician responses.* Two undergraduate research assistants were trained to code the physician responses to the 249 empathic opportunities using the hierarchical coding system. The students watched and individually coded the videotaped segments of the 249 empathic opportunities and physician responses. They also worked from transcriptions of the patients' statements that began the empathic opportunities. Reliability checks were conducted periodically during this coding and inter-coder reliability over all 249 empathic opportunity responses was acceptable (Cohen's Kappa = 0.73). The two coders then discussed the responses they had coded differently, a process resulting in 98.8% agreement. The first author acted as the final judge for the three responses about which the coders were unable to agree.

#### 3.3.2. Emotional intensity ratings

Eighteen of 21 undergraduate students enrolled in a health communication course at Northwestern University rated the emotional intensity of videotaped empathic opportunities on a 5-point scale, with 1: low and 5: high. All students were instructed to focus on the patient's emotional intensity (i.e. not the physician's) during the empathic opportunity, thinking about what the patient said and how he or she said it. The students were split into three groups of six, each of which rated one-third of the 249 empathic opportunities. The average measure intraclass correlation, which represents consistency of values within cases, was 0.82 for Group 1, 0.74 for Group 2, and 0.85 for Group 3. Mean ratings (i.e. the average of six scores) are used as our index of emotional intensity for each empathic opportunity, providing a more stable and valid estimate than one based upon individual ratings.

To obtain a complementary indicator of emotional intensity, two undergraduate research assistants were trained to code the transcribed empathic opportunities. This second coding process characterized if and how patients named an emotion when creating an empathic opportunity. The students coded the empathic opportunities into one of seven categories. The first two, progress and challenge, were used for empathic opportunities that fit the definitions of progress and challenge as shown in Table 2. The other five categories—*anxiety, like, dislike, hope, and miscellaneous emotion*—were used when a patient named an emotion in his or her empathic opportunity. After achieving inter-coder reliability on 32 empathic opportunities (Cohen's Kappa = 0.81), the students coded all remaining empathic opportunities with good reliability overall (Cohen's Kappa = 0.79). They then worked together to resolve differences in coding, resulting in 100% agreement. For analysis, the five emotion categories (*anxiety, like, dislike, hope, and miscellaneous*) were collapsed into one "named emotion" category, allowing us to compare the extent to which patients stated a progress, challenge, or emotion within an empathic opportunity.

## 4. Results

### 4.1. Empathic opportunities and gender

We first examined the effects of patient gender on the number, specific emotional content, and emotional intensity of empathic opportunities.

#### 4.1.1. Number and specific emotional content

The mean number of empathic opportunities per encounter was 2.49 ( $n = 100$ , S.D. = 1.6, minimum/maximum = 1/9). A one-tailed *t*-test revealed no significant difference in the number of empathic opportunities created by female and male patients. We also calculated a ratio for each patient of empathic opportunities with a named emotion divided by the total number of his or her empathic opportunities. A one-tailed *t*-test indicated that there was no difference in emotional-content ratios across gender: both male and female patients named emotions in approximately half of their empathic opportunities. As neither number of empathic opportunities nor naming of emotions varied with gender, the data do not support the first two predictions.

#### 4.1.2. Intensity of empathic opportunities

The mean emotional intensity score across all empathic opportunities was 3.30 ( $n = 249$ , S.D. = 0.72, minimum/maximum = 1.33/5.00). An intensity score was calculated for each patient by averaging his or her emotional intensity scores across the total number of empathic opportunities he or she created during the videotaped encounter. A one-tailed *t*-test revealed that the 57 female patients created more emotionally intense empathic opportunities than did the 43 male patients. The mean intensity score for female

Table 4  
Frequencies of ECCS codes of physician responses

Category	Category description	<i>n</i> ( <i>N</i> = 249)	Percentage	When able to respond (%)
5	Shared	4	1.6	1.7
4	Confirmation	35	14.1	15.0
3	Acknowledgment	165	66.3	70.8
2	Implicit	11	4.4	4.7
1	Perfunctory	8	3.2	3.4
0	Denial	10	4.0	4.3
–	Patient did not give MD chance to respond	16	6.4	–

patients was 3.41; for male patients it was 3.14 ( $t = -2.08$ ,  $P < 0.05$ , d.f. = 93.97). This modest but statistically significant difference was consistent with our third prediction.

#### 4.2. Physician responses and gender

We also examined the relationship between physicians' gender and their responses to empathic opportunities in order to address our final prediction. Unfortunately, we were unable to perform a  $2 \times 2$  analysis of patient and physician gender because our sample included only five encounters between female physicians and male patients.

As shown in Table 4, physician responses to the empathic opportunities created by patients were coded most frequently as acknowledgment (66.3% overall; 70.8% when the patient gave his or her physician a chance to respond). Since there were different numbers of empathic opportunities per interaction but the same number of interactions per physician, we used the interaction as our unit of analysis when comparing levels of empathic communication. This required creating a mean empathy score for each interaction by averaging the physician response scores across all empathic opportunities within an interaction. A one-tailed *t*-test comparing male and female physicians' empathy scores revealed that females gave higher empathic responses than did males. Female physician's mean empathic level was 3.27, male physicians mean empathic level was 2.90 ( $t = -2.62$ ,  $P < 0.01$ , d.f. = 40.7). Thus, our fourth prediction was also supported by the data.

## 5. Discussion

The research reported in this article is important in two regards: (1) it introduces and tests a new measure; (2) it provides additional perspective on the relationship between gender and empathy in physician–patient communication.

### 5.1. ECCS

This article introduces a new measure for physician empathic communication—the Empathic Communication Coding System. Such a measure is needed in the study of

physician–patient communication to facilitate research about physician empathic communication. While identification of empathic opportunities in this coding system was limited to the most obvious examples, there were a considerable number of empathic opportunities evident in our sample: nearly three in five observed physician–patient encounters contained at least one empathic opportunity.

The hierarchical coding portion of this measure was developed specifically for the physician–patient context, based on patient perceptions of physician empathy and grounded in a theoretical approach from the interpersonal communication literature. An initial test of this coding scheme with simulated patients and medical students demonstrated validity. Further, the finding that female physicians communicated more empathy than did male physicians provides another indication of the instrument's validity, as its use resulted in a finding suggested by other research.

One may question the advantage of using a coding system rather than having either the patients or outside observers rate the empathy present in the physician's response to an empathic opportunity. We offer three answers to this question: first, having patients rate their physicians' empathic communication to a specific empathic opportunity after the encounter may be plagued by poor recollections, unless it is done during stimulated recall, a very time-intensive process. Second, using coders who have attained reliability means that researchers can be assured that the same conceptual and operational definitions of empathy are being used—which is not the case with patient or outside observer ratings. Third, a successful and valid empathic communication coding system is useful to educators in helping future physicians to learn how to communicate empathically.

### 5.2. Gender, empathy, and the physician–patient encounter

The research reported herein also helps us understand more about gender, empathic communication, and the physician–patient encounter. Patients who did and those who did not create empathic opportunities were found to have remarkably similar demographic characteristics. Moreover, contrary to reports that, in general, men are less likely than

women to communicate emotions [27,28], male and female patients were equally likely to name an emotion in their empathic opportunity. Further, male patients in this sample created as many empathic opportunities as did female patients. Although these observations did not support our predictions, they are consonant with Hall and Roter's [25] finding that male patients and female patients have no difference in propensity for emotional talk. Evidently, something about the physician–patient context eliminates, for patients, gender differences that are apparent in more general interpersonal communication.

However, male and female patients were not entirely similar in their communication regarding empathic opportunities: female patients tended to create more emotionally intense empathic opportunities than did male patients. While the relationship with gender was not particularly strong, it is extremely interesting because the greater intensity was not due to more naming of emotions. We presume that intensity may have been communicated through nonverbal channels, a potential link worthy of study given the significance for both theory and practice.

We also examined physician responses to empathic opportunities by using the ECCS response coding scheme, and found physician gender to be a significant predictor of the level of empathic communication shown to a patient. This result is bolstered by Roter et al.'s finding that female physicians are more likely to participate in psychosocial discussion, emotionally focused talk, and positive talk [22], as well as literature indicating that females are more apt to talk about emotions [27,28].

It is also interesting to note that on the whole, patients do not expect, nor do they get, the “shared feeling” [4] type of empathy. Instead, physicians in our study seemed to lean toward acknowledging (70.8%) and confirming (15%) patients' empathic opportunities. Our surveys suggested that such responses met patient conceptualizations and expectations regarding empathy.

### 5.3. Caveats

It is important to note that the relationship between empathy and empathic communication may not be straightforward. That is, a physician may feel empathy for his or her patient but may not be ready, willing, or able to show it through empathic communication. Thus, it is important to remember that the ECCS is intended to measure observable behavior only, not empathy as an internal process. The ECCS is limited in its ability to fully account for the effect of physician nonverbal behavior on empathic communication levels. Although it does capture nonverbal behaviors that indicate listening and perfunctory responses, it does not examine the more complicated matter of when the nonverbal behavior contradicts or takes away from a verbal, highly empathic response. On a broader level, this research may only be generalizable to the context studied (i.e. internal medicine visits associated with academic medical centers).

In addition to different contexts, different cultures' construals of empathy and appropriate behavior in the physician–patient encounter deserve close attention.

### 5.4. Future research

Future research in the area of gender and physician empathic communication could lead in several directions. More purposeful sampling would allow us to look specifically at empathy in different types of gender pairs, which we were unable to do here because of a small cell size, and examine if physician empathic communication is a phenomenon affected by patient gender. Gender and physician empathic communication may also differ depending on context. It may be useful to see if the tendency for female physicians to be more empathic than male physicians holds up across various practice types and patient situations. Finally, patient outcomes should be evaluated as they relate to levels of physician empathic communication. For instance, it will be important to discover whether empathic communication is linked to outcomes such as satisfaction and health status.

## 6. Summary and practice implications

The ECCS encompasses a range of communication behaviors, and appears to be a valid and valuable instrument for measuring empathic communication in physician–patient encounters. Regarding patient gender, males and females created comparable numbers and types of empathic opportunities, but those created by female patients tended to be more emotionally intense. Additionally, female physicians communicated higher degrees of empathy to patients who created empathic opportunities. Further research should examine empathic communication and gender in different contexts, with attention to patient outcomes.

Beyond the focus on gender, the concepts and findings from this research have implications for physicians, medical educators, and researchers examining physician–patient communication. For instance, a better understanding of patients' expectations for physician empathic communication may change the way empathy is talked about, taught, and assessed. Our results suggest that physician empathic communication should be conceived of more broadly than sharing the patient's feeling [4] since patients interpret other communication behaviors as empathic. Toward that end, the ECCS provides a useful vocabulary and a promising method for pursuing the meaning and the outcome of empathic communication in medical encounters.

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## Appendix A. ECCS: response coding scheme

### A.1. Levels 3–5—Explicit recognition of patient perspective

#### A.1.1. Level 5—Shared feeling or experience

A response should be categorized in this level if the physician makes an explicit statement that he or she either shares the patient's emotion or has had a similar experience. If the physician uses the words, "in my experience," code it as Level 5.

#### A.1.2. Level 4—Confirmation

Responses in this level convey to the patient that the expressed or inferred emotional feeling progress or challenge is legitimate. This can be done in several different ways depending on the empathic opportunity. For example, this type of response may be a congratulatory remark, an acknowledgment that the challenge the person is experiencing is difficult, or a statement legitimizing the patient's emotion. Also, by making a statement that others have experienced this same emotion, progress or challenge, the physician is providing confirmation.

#### A.1.3. Level 3—Acknowledgment

This level is characterized by the physician's acknowledgment of something that the patient has either said explicitly or that the physician has inferred from the patient's statement. It is a response that explicitly acknowledges the central issue in the empathic opportunity. Often it is a restatement of what the patient has said. This type of response may also include questions, statements, advice, or offers of help.

Acknowledgment should also be coded when the physician response to the empathic opportunity is to have his/her body oriented toward the patient and provide nonverbal and verbal backchanneling cues such as "mm-hmm," "yes," nodding, etc. while the patient is talking about the empathic opportunity. It should be clear that the doctor is actively listening to the patient over a 10 s or longer period of time. These cues are, in and of themselves, a response.

#### A.1.4. Level 2—Implicit recognition of patient perspective

This level contains responses that do not explicitly recognize the central issue in the empathic opportunity, but focus on a peripheral aspect of the statement. These statements tend to be more content-based, not dealing directly with the progress, challenge, or emotion. These may also include questions or advice.

#### A.1.5. Level 1—Perfunctory recognition of patient perspective

This response is characterized by a physician's automatic, scripted-type responses (e.g. nodding, saying "uh-huh") to a patient's statement while the physician is doing something else, often typified by the physician having his/her body

oriented away from the patient. These scripted responses can either be verbal or nonverbal. (If they are nonverbal or verbal backchanneling cues, the 10 s or longer rule from Level 3 applies.)

#### A.1.6. Level 0—Denial of patient perspective

This response is characterized by the physician either ignoring the patient's empathic opportunity or by making a disconfirming statement. Examples might include:

- The physician making an immediate topic change.
- The physician not responding at all, but starting or continuing a physical task (patient exam, writing in chart, typing on computer).
- The physician making a disconfirming statement to the patient about what was said.

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