

What patients consider to be a 'good' doctor, and what doctors consider to be a 'good' patient

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ABSTRACT

Background: From a patient's point of view, an 'ideal' doctor could be defined as one having personal qualities for interpersonal relationships, technical skills and good intentions. However, doctors' opinions about what it means to be a 'good' patient have not been systematically investigated. **Aim:** To explore how patients define the characteristics of a 'good' and a 'bad' doctor, and how doctors define a 'good' and a 'bad' patient. **Material and Methods:** We surveyed a cohort of 107 consecutive patients attending a community teaching hospital in February 2019, who were asked to define the desirable characteristics of a good/bad doctor. Additionally, a cohort of 115 physicians working at the same hospital was asked to define the desirable characteristics of a good/bad patient. Responses were subjected to content analysis. Simultaneously, an algorithm in Python was used to automatically categorize responses throughout text-mining. **Results:** The predominant patients' perspective alluded to desirable personal qualities more importantly than proficiency in knowledge and technical skills. Doctors would be satisfied if patients manifested positive personality characteristics, were prone to avoid decisional and personal conflicts, had a high adherence to treatment, and trusted the doctor. The text-mining algorithm was accurate to classify individuals' opinions. **Conclusions:** Ideally, fusing the skills of the scientist to the reflective capabilities of the medical humanist will fulfill the archetype of what patients consider to be a 'good' doctor. Doctors' preferences reveal a "paternalistic" style, and his/her opinions should be managed carefully to avoid stigmatizing certain patients' behaviors.

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Key words: Patients; Patient Preference; Physicians; Physician-Patient Relations; Data Mining.

Cómo definen los pacientes a un buen médico, y cómo definen los médicos a un buen paciente

Antecedentes: Desde la perspectiva del paciente, un médico "ideal" podría definirse como aquel que tiene cualidades para las relaciones interpersonales, habilidades técnicas y buenas intenciones. Sin embargo, las opiniones de los médicos sobre lo que significa ser un "buen" paciente no se han investigado sistemáticamente. **Objetivo:** Explorar cómo los pacientes definen las características de un "buen" y "mal" médico, y cómo los médicos definen un "buen" y "mal"

*paciente. **Material y Métodos:** Encuestamos a una cohorte de 107 pacientes consecutivos que asistieron a un hospital comunitario en febrero de 2019, a quienes se les pidió que definieran las características deseables de un médico bueno/malo. Además, se pidió a una cohorte de 115 médicos que trabajaban en el mismo hospital que definieran las características deseables de un paciente bueno/malo. Las respuestas se sometieron a un análisis de contenido. Simultáneamente, se utilizó un algoritmo en Python para clasificar automáticamente las respuestas mediante minería de texto. **Resultados:** Los pacientes aludieron que las cualidades personales del médico eran más importantes que la competencia en conocimiento y las habilidades técnicas. Los médicos estarían satisfechos si los pacientes mostraran características positivas de personalidad, fueran propensos a evitar conflictos, tuvieran una alta adherencia al tratamiento y confiaran en el médico. El algoritmo de minería de texto clasificó las opiniones de los encuestados en forma precisa. **Conclusiones:** Idealmente, fusionar las habilidades del científico con las capacidades reflexivas del médico humanista cumplirá con el arquetipo de lo que los pacientes consideran un “buen” médico. Las preferencias de los médicos revelan un estilo “paternalista”, y sus opiniones deben manejarse con cuidado para evitar estigmatizar los comportamientos de ciertos pacientes.*

Palabras clave: Pacientes; Preferencia; Médicos; Comunicación; Relación médico-paciente; Minería de datos.

An ‘ideal’ doctor could be defined as one having personal qualities for interpersonal relationships, proficiency in knowledge, technical skills and good intentions¹. But beyond these considerations, most doctors are good doctors in the eyes of most patients, and complaints are usually related only to the fact that doctors and patients do not always agree on priorities². Persons who have recently experienced medical care generally give less critical ratings to doctors³, and while older patients are tolerant with medical ‘paternalism’, younger patients tend to highlight doctors’ skills in communication and in sharing decision-making⁴. Patients’ perceptions regarding doctors’ qualities have been explored with various structured questionnaires⁵⁻⁶ and occasionally through a qualitative approach with open-ended questions⁷. Though the results of structured questionnaires are easier to analyze, the open enquiry format allows to gather information on patients’ beliefs and expectations, not ruled by pre-established categories.

In contrast, doctors’ opinions about what it means to be a ‘good’ patient have not been systematically explored. From the physician’s point of view, the implicit characteristics of a ‘good’ patient would include: doctor-trusting, docility to avoid decisional conflicts, obedience to doctor’s

commands, high adherence to treatment and continuity of care⁸. Since patients and doctors may have different views or priorities to characterize desirable individual’s features, we designed this study with the aim of exploring how hospitalized patients define the characteristics of a ‘good’ and a ‘bad’ doctor, and how doctors define a ‘good’ and a ‘bad’ patient.

Materials and Methods

We surveyed a cohort of consecutive patients attending a community teaching hospital in February 2019. The group corresponded to patients hospitalized in a general internal medicine or surgical ward, or in a day-care hospital unit. All patients hospitalized during the study period were considered. Exclusion criteria were dementia, aphasia, no consent or unwillingness to participate, or any difficulty with the Spanish language that prevented them from understanding or answering a questionnaire. Patients were also stratified to evaluate the effect of age, gender, level of education, and perceived health status on responses. Patients invited to participate were interviewed by a researcher in order to inform them that this study would explore their definitions of what

made a good/bad doctor, that they were not asked to evaluate the care they were receiving during their present hospital stay, and that their responses would not impact on their care. The protocol was evaluated and approved by the Institutional Review Board.

A qualitative approach with an open-ended questionnaire was used to allow the interviewee to give his/her own free hardly influenced answers. Questions were formulated as follows: "According to you, what is an ideal doctor, a doctor you would like to be treated by? How would describe him/her?", and otherwise "According to you, what is a bad doctor, a physician you would not like to be treated by? How would you describe him/her?" Complete confidentiality was guaranteed and responses were rendered anonymous. Patients' responses were subjected to content analysis performed by a psychologist and a physician (CM and

RAB). Relevant topics extracted from responses were grouped into thematic categories encompassing the characteristics of good/bad doctors as expressed by the patients. A list of key categories previously communicated by Luthy C et al.⁷ was used to identify and classify patients' responses (Table 1). This list was subsequently refined and enlarged to include unforeseen answers. Categorization of ambiguous responses was discussed and disagreements were solved by consensus.

Additionally, a cohort of physicians working at the same hospital was asked to anonymously respond a similar open-ended questionnaire in order to define the desirable characteristics of a good/bad patient. The questions' structure was: "According to you, what is an ideal patient, a patient you would like to treat? How would describe him/her?", and otherwise "According to you, what is a bad patient, an individual you would not like

Table 1. Categories for 'good' and 'bad' doctor used to classify patients' responses (modified from Luthy C et al.)

Patients' definitions of 'good' doctors' characteristics

Scientifically proficient (diagnostic, therapeutic and technical skills; competence and accuracy; proficiency in knowledge)
 Sensitive to emotions (listens to and understands the patient's needs and emotional problems, empathy)
 Positive personality characteristics (kind, warm, smiling, respectful, identifies the patient by name; good interpersonal relationship)
 Adapts to each individual patient (uses shared-decision making approach and involves patients in decisions)
 Available (devotes enough time during consultation; does not make a routine work; devotes time for care, has availability of appointments, listens and does not hurry the patient)
 Skilled in communication (gives information tailored to the patient; gives detailed information about the patient's illness)
 Tells the truth (is honest, no lies)
 Not interested in money
 Works in team
 Patient does not know

Patients' definitions of 'bad' doctors' characteristics

Insensitive to emotions (lack of empathy, does not listen)
 Interested only in money (works for money; lack of dedication)
 Negative personality characteristics (brags, takes him/herself too seriously, disrespectful, does not identify the patient by name)
 Not scientifically proficient (lack of technical skills or experience)
 Does not adapt to each individual patient (routine work, does not consider the patient's opinion)
 Unskilled in communication (provides ready-made responses)
 Not available (always in a hurry)
 Does not tell the truth
 Does not work in team
 Patient does not know

to treat? How would you describe him/her?” Due to lack of previously described categories to classify doctors’ responses, we defined by consensus the list of possible characteristics that a ‘good’ patient would present (Table 2). In this case, the categories of a ‘bad’ patient were initially defined as the reverse image of the good one. Similarly to the patients’ survey analysis, relevant topics obtained from responses were grouped into categories encompassing the characteristics of good/bad patients as communicated by doctors. Physicians’ demographic characteristics such as age, gender, medical specialty, and years from graduation were also recorded.

Simultaneously, an algorithm written in Python 3.7.0 (Python Software Foundation. 2001-2018) was used to automatically categorize patients’ and physicians’ responses by searching selected keywords throughout the free texts (text-mining) (Appendix). Finally, human (psychologist/physician) versus algorithm-based analysis was compared.

Qualitative variables were expressed as absolute values and percentages, and continuous variables as mean, range and standard deviation (SD). Comparison between categories was made with χ^2 , using the 2-tailed Fisher’s exact test when cell expected values were ≤ 5 . IBM SPSS 23.0 Statistics (IBM Corporation, Armonk, NY) was used for statistical analysis.

Table 2. Categories for ‘good’ patient used to classify doctors’ responses (categories for ‘bad’ patient were initially defined as the reverse image of the ‘good’ one)

Doctors’ definitions of ‘good’ patients’ characteristics
Doctor-trusting relationship (patient must trust the doctor)
No conflicting attitude (patient and family)
Obedience to doctor’s commands or suggestions (docility to avoid decisional conflicts)
High adherence to treatment (importance of continuity of care)
Shared decision-making (commitment with self-care)
Skilled in communication
Positive personality characteristics
Doctor does not know

Results

Patients’ responses

One hundred and seven patients completed the survey. Mean age was 47.1 years (SD 16.2, range 18-77) and 57.0% were women. Regarding patients’ educational level, 8.4% had attained primary school level, 41.1% secondary level, and 50.5% tertiary/university level. Considering patients’ self-rated health status, 45.8% of respondents declared a very good or excellent health status, 45.8% referred to it as good, and 8.4% as fair. Table 3 summarizes the patients’ responses for what they considered was a ‘good’ doctor, according to the human and algorithm-based analyses. Comparison between the two analytical methods showed no statistical difference in most categories, except for the “communicational skills” dimension that was more frequently identified by the algorithm than by the human analyzer. Literal descriptions of a ‘good’ doctor are referred in the following responses. Example 1: “... he/she is respectful, attentive and sincere ... he/she explains everything about the procedures I am going to receive”. Example 2: “... he/she has vocation for service... efficient... responsible”. Example 3: “... he/she generates empathy, confidence... he/she is in a good mood, which conveys that you are not another number”.

Undesirable physicians’ features as denoted by the same patients are included in Table 4. Comparison between the two analytical methods showed no statistical differences in most categories, except for being “unskilled in communication” that was more frequently identified by the algorithm than by the human analyzer. Literal descriptions of a ‘bad’ doctor are referred in the following responses. Example 1: “... he/she seems indifferent and treats a patient simply as a thing...” Example 2: “... he/she is always in a hurry...does not understand that his/her patient is a person with a history and emotions, not just a body to treat...does not listen to his/her patient”. Example 3: “... he/she has not the capacity to understand the bad moment the patient is experiencing...”. Regarding gender differences, female patients tended to prefer “sensitive to emotions” physicians, when compared with male respondents (51% versus 35%, $p = 0.098$). Younger patients below the mean age (47.1 years) considered “communication skills” as a desirable doctor’s trait when compared with older individuals (41% versus 19%, $p = 0.013$). Regarding

Table 3. Patients' definitions to characterize a 'good' doctor

Categories for a 'good' doctor	Responses, n (%) (human-based analysis)	Responses, n (%) (algorithm-based analysis)	P-Value
Sensitive to emotions (listens to and understands the patient's needs and emotional problems, empathy)	47 (43.9)	52 (48.6)	0.493
Positive personality characteristics (kind, warm, smiling, respectful, identifies the patient by name; good interpersonal relationship)	47 (43.9)	41 (38.3)	0.405
Scientifically proficient (diagnostic, therapeutic and technical skills; competence and accuracy; proficiency in knowledge)	37 (34.6)	49 (45.8)	0.094
Skilled in communication (gives information tailored to the patient; gives detailed information about the patient's illness)	32 (29.9)	50 (46.7)	0.011
Available (devotes enough time during consultation; does not make a routine work; devotes time for care, has availability of appointments, listens and does not hurry the patient)	20 (18.7)	20 (18.7)	1.000
Tells the truth (is honest, no lies)	8 (7.5)	8 (7.5)	1.000
Adapts to each individual patient (uses a shared-decision making approach and involves patients in decisions)	3 (2.8)	6 (5.6)	0.498
Not interested in money	0 (0.0)	0 (0.0)	1.000
Works in team	4 (3.7)	4 (3.7)	1.000
Patient does not know	0 (0.0)	0 (0.0)	1.000

As more than one response was possible, the total is higher than 100%.

Table 4. Patients' definitions to characterize a 'bad' doctor

Categories for a 'bad' doctor	Responses, n (%) (human-based analysis)	Responses, n (%) (algorithm-based analysis)	P-Value
Negative personality characteristics (brags, takes him/herself too seriously, disrespectful, does not identify the patient by name)	64 (59.8)	70 (65.4)	0.397
Insensitive to emotions (lack of empathy, does not listen)	30 (28.0)	24 (22.4)	0.345
Not available (always in a hurry)	24 (22.4)	23 (21.5)	0.869
Unskilled in communication (provides ready-made responses)	18 (16.8)	35 (32.7)	0.007
Not scientifically proficient (lack of technical skills or experience)	12 (11.2)	21 (19.6)	0.088
Does not adapt to each individual patient (routine work, does not consider the patient's opinion)	5 (4.7)	8 (7.5)	0.567
Patient does not know	3 (2.8)	3 (2.8)	1.000
Does not tell the truth	3 (2.8)	10 (9.3)	0.082
Does not work in team	2 (1.9)	2 (1.9)	1.000
Interested only in money (works for money; lack of dedication)	0 (0.0)	0 (0.0)	1.000

As more than one response was possible, the total is higher than 100%.

educational level, patients who attained tertiary or university level preferred “sensitive to emotions” physicians (56% versus 32%, $p = 0.014$), whereas those who attained primary or secondary educational level preferentially chose “positive personality traits” (60% versus 28%, $p < 0.001$). Finally, when patients were divided by self-rated health status, individuals reporting a very good or

excellent health status tended to consider the “lack of scientific proficiency” an undesirable characteristic for defining a “bad” doctor (18% versus 5%, $p = 0.061$). The rest of possible comparisons did not show statistical differences or trends among patients’ demographic characteristics (Figure 1) (see also Tables 7 to 11bis in the supplementary material).

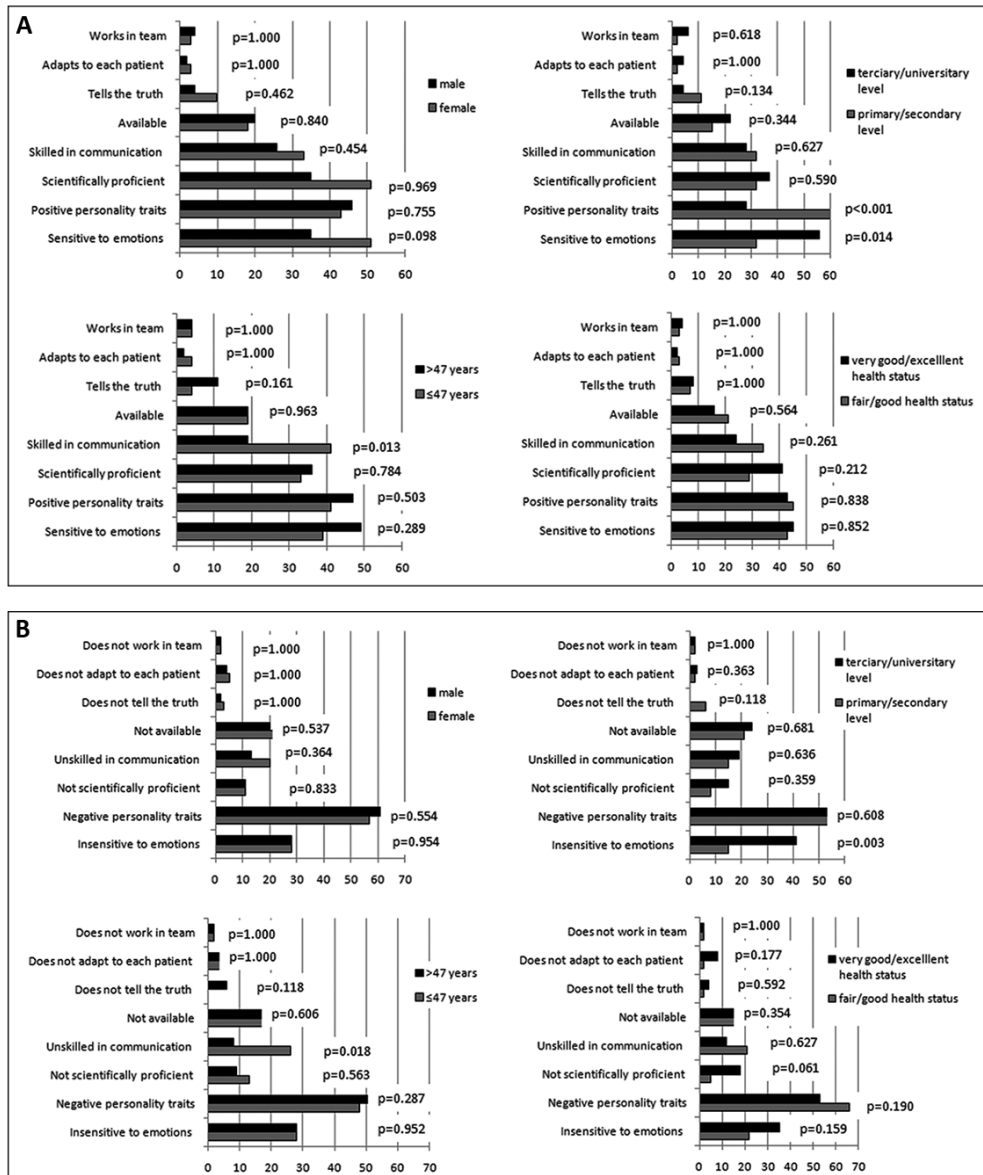


Figure 1. Categories selected by patients for “good” (a) and “bad” (b) doctors according to gender, age, educational level, and self-rated health status (values are expressed as percentages).

Physicians' responses

One hundred and fifteen physicians completed the survey. Mean age was 40.4 years (SD 11.5, range 26-65) and 53.0% were women. Regarding medical specialties, 40.9% performed a surgical specialty and the rest a clinical one. Mean time from graduation was 14.5 years (SD 9.7). Table 5 summarizes the physicians' responses for what they considered was a 'good' patient, according to the human and algorithm-based analyses. Comparison between the two analytical methods showed no statistical differences in all categories. In order to simplify the analysis, obedience to doctor's commands and adherence to treatment categories were grouped into only one category. A 'good' patient was defined by individual physicians

with the following responses. Example 1: "... he/she pays attention and obeys instructions...he/she is respectful..." Example 2: "... he/she takes care of his/her health... expresses his/her doubts..." Example 3: "... he/she trusts and respects his/her doctor's opinion... does not want to change it or adapt it to his/her preferences... does not constantly question the doctor's opinion..."

Undesirable patients' features as referred by the same physicians are included in Table 6. Comparison between the two analytical methods showed no statistical differences in most categories, except for the "conflicting attitude" and "sharing decision-making" dimensions that were more frequently identified by the algorithm than by the human analyzer. Literal descriptions of a

Table 5. Doctors' definitions to characterize a 'good' patient

Categories for a 'good' patient	Responses, n (%) (human-based analysis)	Responses, n (%) (algorithm-based analysis)	P-Value
Positive personality characteristics (kind, respectful, honest, educated patient, good interpersonal relationship)	79 (68.7)	76 (66.1)	0.673
Obedience to doctor's commands or suggestions (docility to avoid decisional conflicts, adherence to treatment)	53 (46.1)	40 (34.8)	0.080
Skilled in communication (gives detailed information about the patient's illness)	17 (14.8)	14 (12.2)	0.562
Doctor-trusting relationship (patient trusts the doctor)	14 (12.2)	14 (12.2)	1.000
Shared decision-making (commitment with self-care)	7 (6.1)	11 (9.6)	0.326
No conflicting attitude (patient and family)	5 (4.3)	3 (2.6)	0.722

As more than one response was possible, the total is higher than 100%.

Table 6. Doctors' definitions to characterize a 'bad' patient

Categories for a 'bad' patient	Responses, n (%) (human-based analysis)	Responses, n (%) (algorithm-based analysis)	P-Value
Negative personality characteristics (unkind, disrespectful, dishonest, impatient, bad interpersonal relationship)	91 (79.1)	97 (84.3)	0.306
No obedience to doctor's commands or suggestions (prone to generate decisional conflicts, low adherence to treatment)	39 (33.9)	42 (36.5)	0.679
Conflicting attitude (patient and family)	20 (17.4)	38 (33.0)	0.006
Doctor-trusting relationship (patient does not trust the doctor)	19 (16.5)	25 (21.7)	0.314
Unskilled in communication (unable to give detailed information about the patient's illness)	6 (5.2)	13 (11.3)	0.149
Sharing decision-making (uncommitted with self-care)	0 (0.0)	24 (20.9)	< 0.001

As more than one response was possible, the total is higher than 100%.

'bad' patient are stated in the following responses. Example 1: "... he/she is disrespectful, discourteous, intolerant, anxious... does not respect shift schedules...does not comply with medical indications..."

Example 2: "... he/she is impatient... distrustful... with a conflicting family...he/she permanently doubts..." Example 3: "... he/she thinks he/she knows more about medicine than the doctor does..."

Physicians' opinions were divided by age below and over the mean value of 40.4 years. Older doctors preferred patients "obedient to doctor's commands and suggestions" (63% versus 35%, $p = 0.003$), whereas younger physicians favored patients with "positive personality traits" (78% versus 54%, $p = 0.008$) when choosing among categories for "good" patients. No age-based differences were observed when selecting categories for "bad" patients.

Discussion

In this qualitative study, we explored the definitions of what it means to be a 'good' or a 'bad' doctor from a group of hospitalized patients' point of view. Patients' opinions on doctors' positive and negative characteristics were contrasted with the definitions of what it is to be a 'good' or a 'bad' patient from the doctors' perspective.

At a first glance, features selected by patients to define a 'good' or a 'bad' doctor showed that the 'bad' doctor cannot be defined as the reverse image of the 'good' one, since 'bad' doctors were defined more by their negative personality characteristics than by sensitivity to emotions. Although positive/negative personality traits and sensitivity/insensitivity to emotions were in the foreground in both 'good' and 'bad' doctors, the psychologist and the physician who analyzed the responses recognized that these characteristics were difficult to differentiate from each other.

One approach to defining a 'good' doctor equates the skills of a dedicated scientist and a medical humanist². In the current study, scientific proficiency was ranked in the third place after more humanistic characteristics as sensitivity to emotions and positive personality traits to define a 'good' doctor.

The communication skills in a 'good' doctor were claimed by almost a third of the patients, although the text-mining analysis found them in almost half of respondents. A review of the literature on primary care patients' perspective about

how patients want their doctor to communicate revealed specific expectations to be met in medical encounters⁹.

In a recent survey, patients were asked to respond in two words their feelings about the doctor's interview immediately following the clinic visit¹⁰. Positive words more frequently chosen were: knowledgeable, caring, professional, excellent, and competent. Negative words frequently chosen were: rushed, busy, hurried, uncaring, rude, unconcerned, arrogant, uninterested, and condescending. In this case, positive words predominantly referred to scientific proficiency, whereas negative adjectives suggested poor personality traits. In our study, the positive/negative personality characteristics and the emotional sensitivity/insensitivity categories ranked both in the first places to define a good/bad doctor.

Regarding what physicians considered to be a good/bad patient, most common categories selected were the positive/negative personality traits and the adherence to doctor's suggestions. At least for the two top categories, 'bad' patients could be defined as the reverse image of a 'good' one. A conflicting attitude of the patient or his/her family was indicated as an unfavorable characteristic by almost one-fifth of physicians, but this frequency increased to one-third after using the algorithm-based method.

Nearly one-fifth of physicians considered patient trust a desirable characteristic, and less than 10% cared about the concept of sharing decision-making, although the text-mining analysis duplicated this last proportion, at least for those considered 'bad' patients. Wrede-Sach et al.¹¹ found that when confronting "self-determined" to "doctor-trusting" patients, it was not easy for doctors to anticipate the desired level of patient involvement in their healthcare shared decision-making.

A longitudinal study of student experiences in clinical learning conducted by Sointu¹² concluded that 'bad' patients were considered mainly to have wrong priorities, little knowledge, and were difficult to deal with, while 'good' patients were active, compliant and knowledgeable. Labeling patients as 'good' or 'bad' has been also recognized to affect their abilities to make appropriate decisions.¹³

Free-form text analysis can be performed by almost instant automated information extraction using text-mining methods. However, because of the severe implications that errors may have in

healthcare, potential benefits of human/natural language technologies must be carefully evaluated¹⁴. In the current study we explored a simple algorithm to automatically categorize patients' and physicians' responses by searching selected keywords throughout the free-form texts. Later, algorithm outcomes were compared with the classifications done by the psychologist/physician researcher. Globally, categorization of patients' opinions done by the algorithm was accurate for most groups.

This study has some limitations. First, although we did not try to make a difference between a 'poor' and a 'bad' doctor, surveyed patients included these categories together. For instance, a 'poor' doctor is generally credited with good intentions but inadequate knowledge or skills required for the job, while a 'bad' doctor, however skilled, is one with bad intentions, undesirable values, or serious defects of moral agency². Second, since all the respondents were not critically-ill patients, most of them reported a good or very good self-rated health status; hence, this situation should be considered to interpret the current findings. Third, these findings are difficult to generalize since the patients' and doctors' responses are heavily influenced by our social and cultural context. Finally, until further investigation, the free-form text-mining analysis should be considered an exploratory approach.

In conclusion, this survey-based qualitative study gathered local information on patients' and physicians' opinions about what they considered is a good/bad doctor or patient, respectively. Although it was initially hypothesized that patients and doctors would have different views or priorities to characterize desirable individual's features, personality characteristics were in the foreground in both patients and physicians' selections. In addition to the human-based analysis, a text-mining algorithm was accurate to classify individuals' opinions into the different preset categories. Ideally, fusing the skills of the applied scientist to the reflective capabilities of the medical humanist will fulfill the archetype of what patients consider to be a 'good' doctor. Furthermore, doctors would be satisfied if patients manifested positive personality characteristics, were prone to avoid decisional and personal conflicts, had a high adherence to treatment, and trusted the doctor. These preferences reveal a "paternalistic" physician style, and his/her opinions should be managed carefully to avoid stigmatizing certain patients' behaviors.

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