

The Clinical Empathy of Intern and Resident Doctors at the Mohammed VI University Hospital in Marrakech

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Abstract

Original Research Article

Empathy plays a crucial role in the doctor-patient relationship and occupies a fundamental role in the training of interns and residents. This work aimed to assess the empathy of interns and residents using the Jefferson Scale, in order to highlight the factors influencing this empathy and its evolution. To achieve this aim, we conducted a study among interns and residents of the Mohammed VI University Hospital in Marrakech, administering an anonymous questionnaire that included sociodemographic information and the Jefferson Scale. We received 300 valid responses. Our sample consisted of 72% residents and 28% interns, with an average age of 28.81 ± 3.2 years and an average total Jefferson score of 84.98 ± 22.77 . In our study, empathy was associated with age, marital and professional status, service or specialty type, number of shifts, family history of chronic illnesses, and personal chronic illness. However, empathy decreased as individuals transitioned from intern to resident status. Finally, we addressed the question of whether empathy is acquired or innate and whether it can be improved or taught.

Keywords: Clinical empathy, Intern, Resident, Epidemiology.

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INTRODUCTION

According to a widespread and long-standing belief, one of the most important qualities of a doctor is his empathy towards patients. Indeed, if the relationship between doctor and patient is essential for effective care, empathy plays a vital role in this relationship, which is based on communication. In reality, it is a relationship between a listener and a suffering patient. However, if empathy plays a crucial role in this relationship, and if it is integrated into medical training, everything seems to align, and no further attention appears necessary. Yet, this is not what emerges from the analysis of reports on doctor-patient communication failures. The Toronto Consensus of 1991 highlighted the inadequacies observed in doctor-patient communication: rapid interruptions, lack of agreement on the reason for consultation, and failure to recognize the patient's concerns [1]. The use of empathic communication in primary care consultations was evaluated by a team of physicians in 1997 [2]. The direct or indirect signals conveyed by the patient concerning their emotions and concerns were called 'empathic opportunities.' Most of the time, the physician ignored them, which led the patient to either insist on the issue or feel shut out, to the detriment of effective listening. Another study in oncology, using this approach, observed that only one

tenth of these opportunities were identified and responded to by the physician [3]. Attempts to explain this lack of empathy have been numerous. These results can be explained in different ways, ranging from conscious avoidance for fear of losing objectivity to the belief that empathic communication takes too much time. However, the most obvious reason is that 'perhaps they don't know how to respond?' [4]. Our mission is therefore to highlight the accuracy with which internists and residents grasp the patient's point of view. In light of this observation, an assessment of the empathy of these physicians was conducted based on Hojat's research, with the aim of identifying beneficial training approaches. With this in mind, our work aimed to identify the factors influencing clinical empathy and its development among internists and residents, as well as to assess whether existing training impacts this skill.

METHOD

This is a cross-sectional descriptive study conducted over a period of one year, examining a cohort of 300 internists and residents working in the medical and surgical departments of Mohammed VI University Hospital in Marrakech. After obtaining the agreement of the department heads, we conducted a prospective recruitment of these doctors. Internists and residents who

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were informed about the study and wished to participate were included, while those who did not wish to take part were excluded.

Data were collected using a previously developed anonymous questionnaire, consisting of two parts: the first for sociodemographic data, and the second for the Jefferson Scale of Empathy Attitudes.

The information was entered into Excel, and statistical analysis was carried out using SPSS software, version 21.0. Quantitative data were represented by means and standard deviations, while qualitative data were expressed by numbers and percentages. Qualitative variables were compared using the Pearson Chi-square test

RESULTS

Socio-Demographic Aspects:

In this study, the sample consisted of 72% resident physicians and 28% internists. Among them, 62% were from a medical specialty, and 38% were from a surgical specialty. Additionally, 58% of the residents were non-contractual, and 42% were contract workers. The average age of the sample was 28.81 ± 3.2 years, with a range from 23 to 40 years. Regarding gender, there was a female predominance of 68.3%, with a male-to-female ratio of 0.46.

In terms of marital status, 53.3% of the internists and residents were single, 40.3% were married, 3.7% were divorced, and 2.7% were widowed. Regarding the number of children, 79% had no children, 12% had one child, 8% had two children, and 1% had three children. The doctors in our study had an average of 10.64 ± 4.43 days on call over the two months prior to completing the questionnaire, with a range from 0 on-call days for 2% of the sample to 18 on-call days for 5.7%.

Regarding the desire to study medicine, 48% of our sample had never wanted to study medicine. Furthermore, 38% of doctors needed less than 10 minutes to get to the university hospital, 38% needed 10 to 30 minutes, and 24% needed more than 30 minutes. In terms of distance from their parental home, 39% of the doctors were 100 to 400 km away, 22% were 10 to 100 km away, 21% were more than 400 km away, and 18% were less than 10 km away.

Concerning medical history, 51% of the physicians had at least one family history of chronic illness, 40% acknowledged having a chronic organic illness, and 25% acknowledged having a psychiatric illness.

The Jefferson Scale of Empathy Attitudes:

The interns and residents who participated in the survey responded to items on the Jefferson Empathy Attitudes Scale as follows (Table 1):

Table 1: Mean scores of interns and residents for each item of the Jefferson scale of empathy attitudes

Questionnaire item Scale of Empathy Attitudes	Effective	Average score	Standard deviation
1/ My understanding of the feelings of my patients and their families does not influence my medical or surgical treatment.	300	4.37	1.264
2/ My patients feel better when I understand their feelings.	300	4.23	1.346
3/ It is difficult for me to see things from my patients' point of view.	300	3.87	1.479
4/ In caregiver-patient relationships, I consider understanding my patients' body language to be as important as understanding verbal communication.	300	4.20	1.575
5/ I have a good sense of humor which I think contributes to better clinical results.	300	4.18	1.680
6 / It is difficult for me to see things from my patients' point of view because each person is different.	300	3.92	1.512
7/ When I ask my patients about their history or physical health, I try not to pay attention to their emotions.	300	4.20	1.704
8/ Being attentive to my patients' experiences does not influence the results of their treatments.	300	3.96	1.749
9/ When I treat my patients, I try to put myself in their shoes.	300	4.58	1.627
10/ My patients value the fact that I understand their feelings, which is therapeutic in itself.	300	4.56	1.617
11/ Patients' illnesses can only be cured by medical or surgical treatment; thus, emotional ties with my patients have no significant influences on medical or surgical outcomes.	300	4.32	1.774
12/ Asking patients about what is happening in their personal life(s) is not helpful in understanding their complaints related to their physical condition.	300	4.27	1.796
13/ I try to understand what is going on in my patients' minds by paying attention to nonverbal signs and body language.	300	4.48	1.685
14 / I think that emotion has no place in the treatment of physical illness.	300	3.76	1.768
15/ Empathy is a therapeutic skill without which the success of treatment is limited.	300	4.60	1.764
16/ My understanding of the emotional state of my patients as well as that of their families is an important component of the relationship.	300	4.46	1.785

Questionnaire item Scale of Empathy Attitudes	Effective	Average score	Standard deviation
17/ I try to think like my patients to provide them with better care.	300	4.23	1,753
18/ I do not allow myself to be influenced when there are strong personal relationships between my patients and their family members.	300	4.65	1,764
19/ I don't enjoy reading non-medical literature or being interested in the arts.	300	2.61	1.158
20/ I believe that empathy is an important therapeutic factor in medical or surgical treatment.	300	5.53	1.396

- Items 2, 4, 5, 9, 10, 13, 15, 16, 17 and 20 are those of the perspective-taking dimension.
- Items 1, 7, 8, 11, 12, 14, 18 and 19 are those of the emotional understanding dimension.
- Items 3 and 6 are those of the dimension putting oneself in the patient's shoes
- Emotional understanding was 32.13 +/- 9.15, with a maximum of 53 and a minimum of 11.
- Putting oneself in the shoes of the was 7.72 +/- 2.59, with a high of 14 and a low of 3.

For the interns and residents surveyed, the average scores:

- Jefferson's total was 84.98 +/- 22.77, with a minimum score of 37 and a maximum of 128.
- Perspective taking was 45.06 +/- 12.91, with a high of 68 and a low of 17.

The Analytical Study:

A bivariate analysis was conducted to identify factors influencing empathy and its development among the surveyed internists and residents. Based on the sociodemographic factors analyzed, the mean total Jefferson scores and the scores for the three empathy subscales among the internists and residents were as follows (Table 2):

Table 2: Distribution of mean scores of empathy dimensions among internists and residents surveyed according to the sociodemographic factors analyzed

Factors	(min –max)	Average “Jefferson Total” scores	Average “Perspective Taking” scores	Average scores for “Emotional understanding”	Average “Put yourself in the patient’s shoes” scores
Age	23	97.79	49.09	39.12	9.58
	24	97.50	48.99	39.02	9.49
	25	96.56	48.89	38.55	9.12
	26	95.98	48.77	38.11	9.10
	27	95.77	48.71	37.97	9.09
	28	92.05	46.32	36.74	8.99
	29	90.04	45.01	36.12	8.91
	30	86.80	43.34	35.15	8.31
	31	85.36	42.19	34.96	8.21
	32	83.30	41.12	33.99	8.19
	33	82.57	40.79	33.61	8.17
	34	81.18	39.99	33.21	7.98
	35	78.90	38.88	32.87	7.15
	36	75.69	37.91	31.10	6.68
	37	73.58	37.06	30.30	6.22
	38	72.10	36.78	29.32	6.00
	39	68.13	34.92	27.66	5.55
40	65.51	33.58	26.78	5.15	
Gender	Male	84.75	45.01	32.06	7.68
	Female	85.07	45.10	32.18	7.79
Marital status	Bachelor	84.33	44.99	31.76	7.58
	Married	97.56	49.77	38.91	8.88
	Divorce	76.17	41.01	28.83	6.33
	Widow/Widower	79.01	42.17	29.66	7.18
Number of children	0	84.88	45.00	32.11	7.77
	1	85.76	45.10	32.88	7.78
	2	84.56	45.04	32.19	7.33
	3	86.07	45.92	32.35	7.80
Professional status	Intern	91.38	47.02	35.68	8.67
	Resident	82.53	44.30	30.76	7.45
Type of service or specialty	Medical	92.51	49.17	34.75	8.58
	Surgical	72.51	38.44	27.9	6.52

Resident contract type	No contractual	85.04	45.09	32.18	7.77
	Contractual	84.79	45.04	32.06	7.69
Number of guards during both last months	0	98.18	49.19	39.22	9.77
	1	97.80	49.09	39.12	9.59
	2	97.27	49.00	38.95	9.32
	3	96.56	48.77	38.11	9.10
	4	95.98	48.71	37.97	9.09
	5	95.77	46.32	36.74	8.99
	6	92.05	45.01	36.12	8.91
	7	90.04	43.34	35.15	8.31
	8	86.80	42.19	34.96	8.21
	9	85.36	41.12	33.99	8.19
	10	83.30	40.79	33.61	8.17
	11	82.57	39.99	33.21	7.98
	12	81.18	38.88	32.87	7.15
	13	78.90	37.91	31.10	6.68
	14	73.94	37.16	30.66	6.12
	15	69.98	36.08	28.22	5.68
	16	68.01	34.92	27.66	5.43
	17	57.41	31.58	20.78	5.05
18	50.79	28.33	18.11	4.35	
Wish to study medicine	Yes	84.99	45.11	32.14	7.74
	No	84.84	45.03	32.10	7.71
Transportation	0 to 10 min	84.75	44.99	32.07	7.69
	10 to 30 min	84.97	45.08	32.16	7.73
	More than 30 min	85.06	45.16	32.13	7.77
The parental residence	0 to 10 km	84.98	45.11	32.12	7.75
	10 to 100 km	84.99	45.09	32.19	7.71
	100 to 400 km	84.94	45.10	32.04	7.70
	More than 400 km	84.96	45.04	32.08	7.23
Family history of chronic illness	Yes	99.23	54.35	36.86	8.02
	No	77.86	39.87	30.44	7.55
Personal chronic illness	Yes	93.99	49.76	35.11	9.12
	No	81.09	43.08	31.03	6.98
Personal psychiatric illness	Yes	85.99	45.39	32.77	7.83
	No	84.34	44.88	31.78	7.68

The p-value of significance for each of the factors studied was calculated for statistical analysis (Table 3).

Table 3: Results of the bivariate analysis of internists and residents

Factors	“Total Jefferson” score	“Perspective Taking” Score	“Emotional Understanding” Score	“Putting yourself in the patient’s shoes” score
Age	p = 0.009 (< 0.05)	p = 0.131	p = 0.001 (< 0.05)	p = 0.108
Gender	p = 0.111	p = 0.154	p = 0.099	p = 0.112
Marital status	p = 0.018 (< 0.05)	p = 0.006 (< 0.05)	p = 0.375	p = 0.199
Number of children	p = 0.622	p = 0.472	p = 0.433	p = 0.711
Professional status	p = 0.011 (< 0.05)	p = 0.184	p = 0.001 (< 0.05)	p = 0.287
Type of service or specialty	p = 0.003 (< 0.05)	p = 0.001 (< 0.05)	p = 0.233	p = 0.142
Resident contract type	p = 0.871	p = 0.611	p = 0.777	p = 0.532
Number of guards during the last two months	p = 0.017 (< 0.05)	p = 0.002 (< 0.05)	p = 0.501	p = 0.211 (< 0.05)
Wish to study medicine	p = 0.377	p = 0.818	p = 0.127	p = 0.211
Transportation	p = 0.141	p = 0.118	p = 0.227	p = 0.197
The parental residence	p = 0.132	p = 0.528	p = 0.112	p = 0.243
Family history of chronic illness	p = 0.019 (< 0.05)	p = 0.003 (< 0.05)	p = 0.193	p = 0.134
Personal chronic illness	p = 0.004 (< 0.05)	p = 0.379	p = 0.166	p = 0.001 (< 0.05)
Personal psychiatric illness	p = 0.211	p = 0.233	p = 0.221	p = 0.101

DISCUSSION

Empathy is a concept that plays a crucial role in the doctor-patient relationship and is considered an essential component for its success. Neumann [5] reviewed the existing knowledge about empathy in this context. In our study, we assessed the empathy of interns and residents using the Jefferson Scale. We also examined the factors influencing empathy and its development over time. Additionally, we compared our results with those in the literature to offer insights for improving empathy in interns and residents.

Factors associated with total Jefferson and the three dimensions of empathy:

1. Age:

The results reveal a significant correlation between empathy as "emotional understanding" and the age of our doctors. In this way, it is observed that the lower the age, the higher the "total Jefferson" score, which means that the higher the age, the lower the empathy. These results are in agreement with some studies [6-8] that highlight that the younger the age, the more empathy, while the higher the age, the progressively lower the empathy. This association is also observed in another study conducted by Lin and Carmel [9, 10], who also demonstrated that the younger the doctors, the more empathetic they are.

In this way, we could have assumed that increasing age reflects increasing responsibilities and stress, which leads to a decrease in the empathic skills of our doctors.

2. Marital status:

We found a significant correlation between empathy, especially its dimension "Perspective Taking", and the marital status of our physicians. On this, we find that married physicians have high scores in terms of "Jefferson Total" and "Perspective Taking", meaning that married ones are more empathetic than single and divorced ones.

Our conclusions are consistent with those of a French study [11] which demonstrated that living as a couple refers to a personal experience and to the doctor's relationship with the other, which implies an emotional dimension and a well-being of this doctor which increases his empathic capacities.

3. Professional status:

Our results highlight a significant correlation between empathy, particularly in its dimension "Emotional understanding", and the professional status of our physicians. In this way, we find that resident physicians are less empathetic than intern physicians.

In this sense, many studies have shown that interns lose their empathy when their profile becomes resident. However, our results are consistent with those of the literature and in particular of research conducted

in France [12-14], which emphasize a correlation between the workload and the empathic skills of interns and residents.

According to an attempt at explanation, the decrease in empathy in residents compared to interns was due to the increased degree of responsibility at work in residents, which leads to irritation, loss of motivation, decreased investment, fatigue and sad mood.

4. Type of service or specialty:

The results we observed highlight a significant correlation between empathy, especially in its "Perspective Taking" dimension, and the type of department or specialty. In this way, we find that physicians in medical departments are more empathetic than those in surgical departments. According to Hojat [15], these data are in line with the study that demonstrated that physicians whose specialty was person-oriented (Medicine) obtained significantly higher scores than those whose specialties were more technical (Surgery). This can be explained by a natural tendency of physicians in medical specialties to focus more on others and their emotions, and to seek to understand their patients (the "Perspective Taking" dimension).

5. Number of guards:

Our results reveal a significant correlation between empathy through these two dimensions "perspective taking" + "putting oneself in the patient's shoes" and the number of on-call shifts of our doctors. In this way, we find that the more the number of on-call shifts increases, the less empathetic our doctors are. These conclusions are consistent with those of the literature, in particular French research [12-14] which identified a correlation between workload and empathy of health professionals. These results were explained by the fact that doctors who have a high number of on-call shifts were faced with an increased workload, which leads to a decrease in empathic abilities among these professionals.

6. Family history of chronic illness:

In our research, we found a significant correlation between empathy in terms of "perspective taking" and the family history of chronic illness of our physicians. Physicians with a family history of chronic illness were therefore more empathetic than those who did not. French research [16, 17] examined in part the correlation between the empathy of health professionals and the presence of a person with a chronic illness in the family. Our results are corroborated by these studies which explain this empathy based on the experience of the practitioner, which allows people living with a person with a chronic illness to better understand these patients (the "Perspective Taking" dimension).

7. Personal chronic illness:

Our study highlights a significant correlation between empathy in its dimension "Putting oneself in the patient's shoes" and the personal chronic illness of our physicians. Interns and residents suffering from a personal chronic illness were therefore more empathetic than those who did not have a chronic illness. These findings lead us to research conducted in France [18, 19] that has thoroughly examined the correlation between empathy and the presence of a chronic illness. This research confirms our results and explains this empathy using the notion of *déjà vu*, which allows individuals suffering from a chronic illness to live the same experience as patients, which allows them to develop a better ability to put themselves in the patients' shoes (dimension "Putting oneself in the patient's shoes").

Factors not associated with total Jefferson

1. Genre:

During our research, we did not observe a significant link between the gender of our doctors and empathy. These findings are consistent with French research [11] that did not find an association between empathy and gender. However, the analysis of this finding was based on the hypothesis that women are more empathetic than men. According to Hojat [15], this hypothesis was supported by the fact that women would be more sensitive to emotional signals than men, which would allow them to better understand others.

2. Number of children:

During our research, we did not observe a significant link between the number of children and the empathy of our doctors. These results are consistent with existing research, in particular a study carried out in 2018 [11], which did not find a link between empathy and the number of children.

3. Type of resident contract:

Resident contract type and empathy are not related according to our results. Therefore, there is no research in the literature that explores such an association. This factor was studied based on the hypothesis that choosing a contract that provides professional and material stability could encourage aspects of empathy in our residents.

4. Wish to study medicine:

According to our research, there is no correlation between the desire to practice medicine and the empathy of our doctors. However, there has been no research in the literature that addresses such an association, because they do not take this factor into account. The analysis of this factor was based on the hypothesis that the desire to practice medicine would have a positive impact on the empathy of doctors. And this will help to develop the empathy aspects of our health professionals.

5. Transport:

It is not possible to link transportation to the empathy of our doctors. However, no research in the literature has examined this hypothesis in relation to empathy. In our work, we studied this factor by assuming that doctors who have a shorter travel time to the hospital would be more empathetic. And that this tranquility will promote the blossoming of aspects of empathy in our doctors

6. Parental residence:

There is no link between parental residence and the empathy of our physicians. Thus, no research has examined the relationship between parental residence and empathy in the literature. Research on this phenomenon was based on the idea that physicians who resided as close as possible to the parental residence were more likely to be more empathetic. Thus, this comfort would promote the development of aspects of empathy in our physicians.

7. Personal psychiatric illness:

We did not find a link between personal psychiatric illness and our physicians' empathy in our study. Our hypothesis was that physicians with psychiatric illness would be more empathetic than other physicians.

Our results compared to the literature:

Regarding the average "Jefferson total" scores of internists and residents, several studies have been conducted in this regard by assessing the empathy of doctors in various countries. From one study to another, the "Jefferson total" scores differed significantly. The following table summarizes these various studies (Table 4).

Table 4: Comparison the means of the "Jefferson total" scores of our study with the literature

Studies	Populations	Tools	Average "Jefferson Total" scores
Paris – France [20]	250 doctors in training	JSPE	97.37
USA [21]	162 doctors in training	JSPE	101.57
Lyon – France [22]	191 doctors in training	JSPE	90.22
Madrid – Spain [23]	187 doctors in training	JSPE	86.11
Our study (Marrakech - Morocco)	300 interns and residents	JSPE	84.98

Evolution of empathy

In our study, we found a decreasing evolution of our physicians' empathy. This is manifested by a

decrease in the means of the "total Jefferson" scores and the three other aspects of empathy, when moving from

an intern professional status to that of a resident (Figure 1).

However, our results are consistent with those of the literature, in particular research conducted in

Germany [24, 25], which found a decrease in the empathy of physicians who work under stressful and high workload conditions. The explanatory hypothesis was that physicians lose their capacity for empathy due to the accumulation of stress over the years of practice.

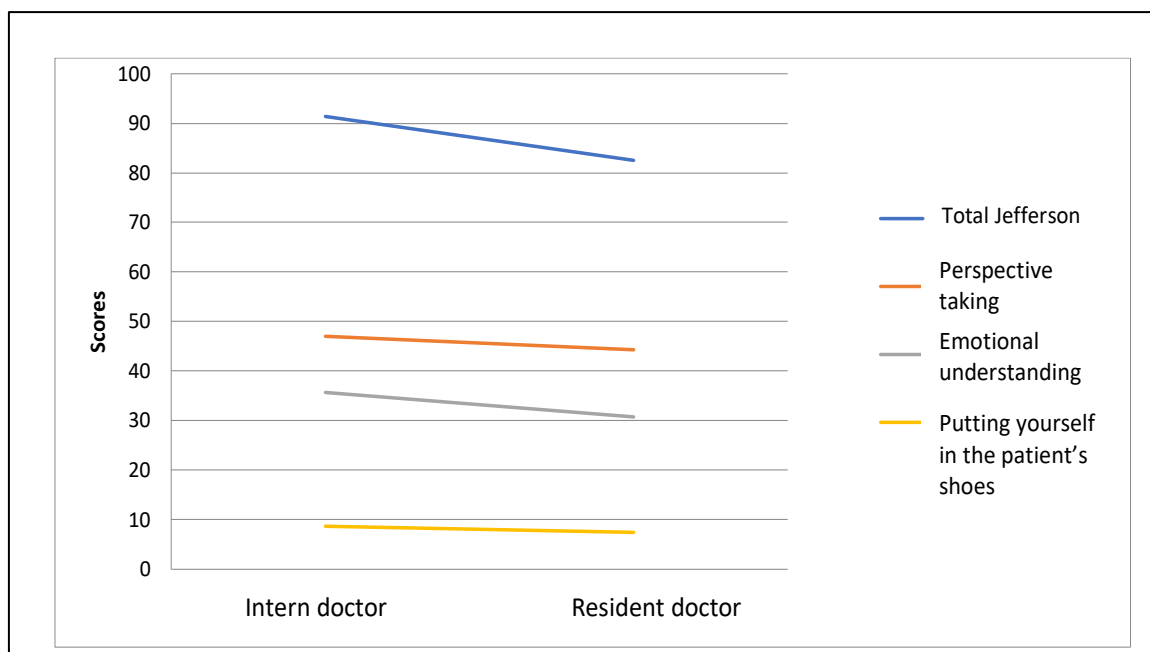


Figure 1: The evolution of empathy scores among doctors

CONCLUSION

Empathy or the ability to understand the experiences, the point of view of the other and the transmission of this understanding are the foundations of an effective relationship between the doctor and the patient. In the 21st century, many articles have been published, highlighting the multiple applications of empathy for both the patient and the doctor. This empathy is recognized today for its importance and is considered a skill to be validated during the training of interns and residents. However, our research and that of the literature have revealed a decrease in empathy among interns and residents. On this, the question of its theoretical and practical teaching arises. In this sense different options have been explored, ranging from workshops on communication skills, from simulation to drama classes. Some have demonstrated their effectiveness, but the challenge remains to implement them in a dense and heavy training and workload among interns and residents. However, if negative behavior can be contagious, perhaps empathy and compassion can also be?

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