An assessment of Portuguese health service patients' perceptions of whether physicians' age and gender affect their willingness to communicate with patients

Filipa Couto*, Ana Margarida Barreto**

* ICNOVA, Faculdade de Ciências Sociais e Humanas, Universidade Nova de Lisboa, Lisbon, Portugal (f.alex_couto@hotmail.com)

** ICNOVA, Faculdade de Ciências Sociais e Humanas, Universidade Nova de Lisboa, Lisbon, Portugal (ambarreto@fcsh.unl.pt)

Abstract

This study aims to analyze the impact of physicians' age and gender on their predisposition to communication, from the perspective of patients with atopic dermatitis. Two studies were carried out. The qualitative study followed the logic of interpretivism with collective interviews with a sample of 19 people with atopic dermatitis living in the metropolitan areas of Lisbon and Porto; the quantitative study focused on the positivist perspective with the development of questionnaire surveys with a sample of 144 people with atopic dermatitis living throughout the country. The results obtained in the qualitative study point to a non-conscious influence of the variables being analyzed by the sample studied. In particular, 63 per cent and 53 per cent of those interviewed considered that the physician's gender and age (respectively) had no influence on their willingness to communicate with the patient. However, in the quantitative study, the results point to a statistically significant relationship between: a) age and gender, b) gender and physicians' communication. No statistically significant relationship was found between age (regardless of gender) and predisposition to communicate. In other words, the older the female physicians, the more they are perceived as being more willing to communicate with the patient. Male physicians, regardless of age, performed well in fewer dimensions of communication: they are more willing to answer questions, more willing to explain the tests and treatments they prescribe, and more concerned about explaining therapeutic indications several times. The older the male physician, the more he uses easy-to-understand language and the less concerned he is about keeping to the consultation time. While female physicians stand out for being more open to questions, more willing to attend to patients and being more friendly, male physicians stand out for their clinical knowledge as the characteristic that patients most appreciate.

Keywords: Age; Gender; Listen; Communication; Physician-patient communication.

Introduction

Health communication has developed over the last 40 years as an important field of study focused on the roles played by human and mediated communication in providing care and promoting health. This is an applied area of study both for analyzing the influence of communication on healthcare and the promotion

of public health, and for the work carried out in this field that is used as a strategic tool to promote better healthcare[1].

Research into the role of health communication and its promotion is complex due to individual, organizational and social factors that affect health-related decisions and behaviours[2], but it has also led to consistent evidence showing that this communication can help reduce potential risks, incidence, morbidity and mortality and improve the population's quality of life[3].

Communication between physician and patient is the most important component of this professional's work, because without it the physician will hardly be able to fulfil his role successfully[4]. It plays an essential role in communicating symptoms, concerns about the patient's health, diagnosing and prescribing tests/treatments[5].

There are different elements that contribute to effective health communication between physician and patient, such as health literacy, cultural competences and even language barriers[6]. Recent scientific evidence suggests that investment in communication skills by health professionals is reflected in optimized health literacy outcomes for patients[7].

In recent years, studies have emerged that seek to take a deeper look at the physician/patient relationship in order to detect factors that contribute to more effective health communication. Some of these studies point to demographic factors as important variables in this relationship[8, 9, 10].

The aim of this research is to study the perceived impact of the variables gender and age of physicians on their predisposition to communication, from the perspective of patients. Understanding whether and how the demographic variables (gender and age) of physicians affect patients' perceptions of physicians' predisposition to communication is fundamental to obtaining a more complete understanding of the phenomenon that is closer to reality.

Literature review

Patient-centered communication

In the 21st century, society is forcing a transition from the paternalistic clinical relationship model that was in force until recently[11], where decisions were made about the other person without their involvement, implying the deliberate limitation of the autonomy and freedom of the patient, to a new model that focuses medicine and the physician on the care of the patient, i.e. 'the patient at the center of the decision', and which arises from the autonomy gained by patients, where patients' rights, opinions and decisions regarding their health are respected[11].

The communication skills required for patient-centered care include understanding the patient's goals, not interrupting the patient and being actively and attentively involved in listening to the patient. In short, it is essential to understand the patient's point of view on their condition and to express empathy[12]. Patient-centered communication has achieved a number of important results, such as patient recovery on a physical

and emotional level, greater patient satisfaction, adherence to treatment, fewer malpractice claims, efficiency of clinical resources and lower healthcare costs[13].

The patient's ability to share their clinical information, feelings and concerns with the physician is very much related to the physician's communication skills and the fact that they show a caring and respectful attitude towards the person in front of them in the consultation environment[14]. But it's essential not to forget that we're talking about two people, often with different characteristics. On the one hand, we have the physician, whose work of diagnosis, clinical decision and therapeutic prescription affects not only medical treatment, but also the patient's future quality of life. On the other hand, there's the patient who, when experiencing the illness, is faced with managing important issues relating to their illness that can have an impact on their life[15]. Socio-cultural differences between physicians and patients can affect their communication relationship[16], so overcoming these barriers requires an effort on the part of the physician so that the clinical relationship is not only positive for patients, but also for the physician[17].

The impact of physicians' age and gender on communication with patients

McKinstry and Yang (1994) were among the first authors to draw attention to the impact of demographic characteristics on the physician-patient relationship, namely age. Their study revealed that respondents considered older physicians to be kinder, more attentive and more willing to listen, with the average preferred age being 42. 58 per cent of respondents felt that the age of the physician was not relevant, but many were not happy to be seen by younger physicians (20-25 years old) or to be seen by older physicians (66-75 years old), as they felt that younger physicians were more up-to-date, but that older physicians were wiser[8].

The study by Barnsley et al. (1999) showed another important perspective on the impact of physicians' age on the physician-patient relationship. In particular, younger physicians seem to be more willing and open to taking on board the interests of patients, with greater satisfaction in consultations. Younger physicians also seem to be more supportive of patients' rights compared to more experienced physicians[18].

In 2006, a study was carried out with six general practitioners and 309 patients in South West London looking at the variables of ethnicity, gender and age. The study, which consisted of showing eight photographs of the physicians, concluded that the variables age and gender had a greater impact than the physician's ethnicity. More specifically, the respondents considered that younger physicians and female physicians had better interpersonal skills, better technical skills, with a greater ability to address the emotional side of the patient and empower them about their health[10].

A Portuguese study involving 200 patients of the emergency service at the Cova da Beira Hospital Centre, aged 18 or over, revealed that with regard to the age of physicians, the majority of patients (70.1%) prefer to be seen by physicians aged under 50. Also, with regard to the age of patients, the research showed that patients aged 65 or under (75%) prefer to be seen by physicians aged under 50, while patients aged over 65 prefer to be seen by physicians aged over 50 (52.1%)[19].

There is still a large knowledge gap regarding the age of the physician and their professional performance in terms of their relationship with patients and health outcomes.

The issue of gender has aroused great interest in academia as it is considered to be a factor in possible variations in the interpersonal aspects of the practice of medicine, placing female physicians as more patient-centered and more open to communication, which influences patient satisfaction and health outcomes[20].
In 1993 Delgado et al. studied the relationship between the gender of the physician and general satisfaction (including three dimensions: personal qualities of the physician, professional capacity and accessibility for the patient) with their care at the primary health center where they were seen. The study showed that patients felt more satisfied when they were seen by a woman rather than a male physician. The study also showed that patients were more satisfied with the personal attributes and qualities of female physicians than with those of male physicians. With regard to professional capacity, patients said they felt more satisfied with a female physician than a male physician[21].
In line with these findings is the study that suggests that female physicians appear to be more involved in the consultation, promote behaviors such as encouragement and reassurance, with positive conversation, and exhibit more affective behaviors such as concern, empathy and sympathy[20].
In short, studying the predisposition of physicians to communicate with patients, taking into account the variables 'age' and 'gender' of the physicians themselves, is an important research topic that has not yet been explored, and which allows us to better understand the physician-patient relationship and its communication. The aim of this research is to answer the question "Can the age and gender of physicians affect their willingness to communicate with patients?". The research plan also includes two hypotheses:
H1: Older physicians (regardless of gender) are perceived as being more willing to communicate with the patient compared to younger physicians;
H2: Female physicians are perceived as more willing to communicate with the patient compared to male physicians.

Methodology

For this research, we opted to analyze the research problem using different methods, with a view to improving the validity of the conclusions presented and mutual confirmation[22]: through a qualitative study, following the logic of interpretivism with collective interviews; and a quantitative study, focusing on the positivist perspective with the development of questionnaire surveys among people with atopic dermatitis. In this way, triangulation was used, i.e. more than one research method was utilised[22].

Study I - Qualitative Study

The first study used a qualitative perspective, following the logic of interpretivism. This perspective was chosen due to its essence of searching for meaning and understanding the social phenomenon that is the physician-patient communication relationship, and not just focusing on measurement[23].
The study's target population was people with Atopic Dermatitis (AD). This choice was based on the high prevalence of the condition in the population. The prevalence of atopic dermatitis has increased worldwide and it is estimated that the prevalence in adults ranges from 0.3 per cent to 14.3 per cent[24]. Recent data

suggests that in Portugal atopic dermatitis affects around 440,000 Portuguese, with 202,000 suffering from moderate to severe forms of the disease[25].

The recruitment of participants for the collective interviews was supported by ADERMAP - Associação Dermatite Atópica Portugal - which is a non-profit organisation with the aim of promoting public education about AD and raising awareness of the impact it has on quality of life and day-to-day activities. For this study, we used non-probabilistic criterion sampling, i.e. the population for the study was selected according to a set of predefined criteria. This technique has the advantage of allowing a sample adapted to the study[26].

Here are the criteria used to select the participants in the discussion groups:

- Patients of the National Health System;
- Greater Lisbon and Oporto region;
- Heterogeneous ages - over 18 but under 65;
- Accompanied by a dermatologist or allergist;
- People with a connection to ADERMAP either through membership or by being registered on the association's database to receive information.

The data collection period took place between April and July 2022, via Zoom, and lasted approximately 60 minutes. The interviews were conducted using the same semi-structured interview script, with closed questions and some open questions to allow participants to freely express their opinions on the topic and the hypotheses put forward. Four collective interview sessions were held, totaling 19 participants.

Collecting information from the collective interviews resulted in a set of numerical data, which we analyzed statistically. We also carried out a qualitative analysis of the data collected using the content analysis method, which is widely used to analyzes text by dividing the material into smaller coding units which we then group into categories in a coding frame, the coding frame being the heart of this analysis method. In other words, the main categories of the coding frame are the aspects on which we should focus our analysis. Data analysis is carried out manually. It was understood that it was not necessary to use computer software for data analysis. The coding tables below bring together all the categories and subcategories, allowing us to gather a large amount of information and thus correlate and order it in order to analyze the content.

Please note that the subcategories presented in all the tables and the respective definitions are based on the literature consulted, so all the authors are duly identified.

I. Dimension 'Communication relationship between physician and patient"

Since communication is the basis of a relationship between physician and patient, this dimension aims to get a view from the participants in the collective interviews as to whether the physician who follows them in the context of their pathology, atopic dermatitis, is communicative, if so, in what circumstances (inside and outside the consultation), and what type of relationship exists.

a) Category "Relationship with current physician"

This category includes all registration units that define the current relationship between the participant and their physician.

Table 1: Subcategories related to the category "Relationship with current physician".

Subcategory	Typology	Definition
Greater Complicity [27, 19]	Concept-driven	This subcategory includes all references that indicate that the participants' relationship with the physician is based on compassion and understanding.
Lesser Complicity [28, 14]	Concept-driven	This subcategory includes all references that indicate that the participants' relationship with the physician is not based on compassion and understanding.
Empathetic [28, 18]	Concept-driven	This subcategory includes all references that indicate the physician's act of correctly recognizing the patient's emotional state, through the expression of concern and care.
Neutral empathy [29]	Concept-driven	This subcategory includes all references that contrast with the meaning of empathy, that is, being touched by the emotions of another.

Source: Authors

b) Category "Availability and openness to dialogue by the physician"

This category includes all registration units that define the physician's availability to the participant.

Table 2: Subcategories related to the category "Availability and openness to dialogue by the physician".

Subcategory	Typology	Definition
Available to listen [8, 30]	Concept-driven	This subcategory includes all references that indicate that the physician has a listening ear that allows the adequate collection of clinical data, diagnosis and choice of therapies; acts as a healing and therapeutic agent; contributes to fostering and strengthening the physician-patient relationship.

Not available to listen [8, 31]	Concept-driven	This subcategory includes all references that indicate that the physician does not pay due attention to the importance of keeping patients adequately informed, lack of knowledge about treatment options, stress, tiredness and lack of time for patients.

Source: Authors

c) Category "Social and communicative skills of physicians"

This category includes all registration units that define the physician's social and communicative skills as perceived by patients.

Table 3: Subcategories related to the category "Social and communicative skills of physicians".

Subcategory	**Typology**	**Definition**
Greater openness to communication [32, 9]	Concept-driven	This subcategory includes all references that indicate that the physician knows how to observe, listen, inform, identify feelings, act appropriately and deal with particular communication challenges.
Less openness to communication [9, 33]	Concept-driven	This subcategory includes all references that indicate that the physician does not give patients the opportunity to ask questions and clarify doubts and does not demonstrate dynamism and flexibility when dealing with different patients or different circumstances.
Available to answer questions [33]	Concept-driven	This subcategory includes all references that indicate that the physician gives the patient the opportunity to ask questions and review the patient's information more than once, thus understanding them better.
Limits dialogue to pathology and therapy [34]	Concept-driven	This subcategory includes all references that indicate that the physician informs patients about the results of the diagnosis, but is not very receptive to promoting understanding of the information provided by them and involving patients/caregivers in related decisions. with the diagnosis.

Active listening [14]	Concept-driven	This subcategory includes all references that indicate that the physician has an attentive and respectful attitude towards the person in front of him/her in the consultation environment, allowing the patient to share with the physician their clinical information, their feelings and concerns.
Addressing emotional issues [10, 12]	Concept-driven	This subcategory includes all references that indicate that the physician addresses the patient's feelings, ideas, concerns and experiences regarding the impact of the disease.

Source: Authors

Study II – Quantitative Study

Focusing now on the positivist perspective, we used questionnaires to survey people with atopic dermatitis with the of ADERMAP - Associação Dermatite Atópica Portugal. The aim was to compare the results with those obtained in the qualitative study and to explore the existence (or not) of correlations between the age and gender of physicians and their willingness to communicate with patients.
As with the qualitative study we also used non-probabilistic criterial sampling, in that segments of the population were selected for the study according to pre-defined criteria.

Here are the criteria used to select the participants in the questionnaire surveys:

- Patients of the National Health System and private systems;
- Greater Lisbon and Oporto region and patients from other regions of the country;
- Heterogeneous ages - over 18;
- Accompanied by a dermatologist or allergist;
- People with atopic dermatitis who are linked to ADERMAP through membership or are registered on the association’s database to receive information.

In order to broaden the study population, we selected survey participants from both public and private health services in the greater Lisbon region, the greater Porto region and other regions, so that we could compare the results obtained in the collective interviews and understand whether or not there are differences between physicians from the two health systems and the different areas of residence.
With the exception of the demographic and sample characterization questions, in addition to the questions about the physician's age and gender, length of consultation and the characteristic most appreciated by patients in relation to these professionals, the questionnaires used a Likert scale with five possible answers to assess the central point of our research: whether, from the respondents' perspective, the physicians' age and gender affect their willingness to communicate with patients.
The questionnaire survey data was collected between December 2022 and August 2023 using the Google Forms software provided by the Google platform. The questionnaire was distributed via ADERMAP's email

to its database, and was also shared on the association's social networks, namely Facebook and Instagram. A total of 144 responses to the survey were obtained, all of them valid.

The data collected from the questionnaire surveys using Google Forms was statistically processed, not only using Microsoft Excel software, but mainly using SPSS - Statistical Package for the Social Sciences (IBM-SPSS) version 28 - an advanced software that supports statistical analysis and helps to ensure high precision of the results.

In this study, results were considered statistically significant when the proof value was less than 5%, and marginally significant when the proof value was between 5% and 10%.

Results of study 1

Sample characterization

The sample was made up of 63 per cent female (12 people) and 37 per cent male (7 people). In terms of age, 42 per cent of respondents said they were between 41 and 50 years old (8 people). On the other hand, 26 per cent of our sample, or 5 people, are between the ages of 31 and 40. This was followed by the group aged between 18 and 30, representing 21 per cent of the sample, i.e. 4 people. Finally, 11 per cent of our sample is in the 51 to 60 age bracket, i.e. 2 people. 53% of the participants lived in the Greater Lisbon area (10) and 47% lived in the Greater Porto area (9). With regard to the participants' level of education, the majority had higher education, i.e. 68 per cent, while 16 per cent said they had secondary education, and the same percentage (16 per cent) had basic education.

With regard to the age of the physicians following the participants in the collective interviews, we found that 47 per cent of the patients were followed by physicians aged between 30 and 39. 21% of those involved were followed by physicians aged between 40 and 49, and the same percentage of patients were followed by physicians aged between 50 and 59. To a lesser extent, 11 per cent of patients were followed by physicians aged between 60 and 69. In terms of the gender of the physicians treating the participants in our study, 68 per cent were treated by female physicians and 32 per cent by male physicians.

Availability of the physician to listen and answer all the patient's questions, in addition to therapeutic questions

This question made it clear that of the 19 participants, only two said that their physician was not willing to listen and answer all their questions, apart from therapeutic ones. Interviewee no. 2, whose physician is between 60 and 69 years old and male, said: "My physician is very quiet. I can't tell if it's because he's not available or if it's because of his temper. I'm the one who often asks questions and the answer is always very short. That's not to say that the treatments he gave me weren't working, but I can't tell if it's because of his temperament that he's quiet. He's a physician who doesn't answer my questions very much". Participant no. 7, whose physician is between 50 and 59 years old and female, also said that "Sometimes communication is a bit complicated. I feel it could be a bit better. There's no regular communication".

What this question and the answers to it reveal is that the majority of physicians, in this case those who follow patients with atopic dermatitis, are available to listen, regardless of their age or gender. The 17

participants who said that their physician was totally available mentioned, among others, "e answers everything I ask and is understanding", participant No. 3; "I feel a lot of support from my physician. She doesn't say a lot, but she's always available to answer any questions", participant No. 4; "There's no rush to finish the appointment because of my doubts and questions", participant No. 5; or "The physician is available. He gave me contact details for any questions", participant No. 12.

"Relationship with current physician"

The category "Relationship with current physician" (table 1) is made up of 4 subcategories, all of which are concept-driven. In total, the 4 subcategories obtained 19 registration units.
Of all the subcategories, 'Greater Complicity' was the one with the highest number of registration units (10), followed by 'Empathetic' relationship with the physician (6). The subcategory 'Less Complicity' came in with 3 registration units. The subcategory 'Neutral Empathy' didn't receive any units.

"Availability and openness to dialogue by the physician"

The category "Availability and openness to dialogue on the part of the physician" (table 2) is made up of 2 subcategories, both of which are concept-driven. In total, the 2 subcategories obtained 19 registration units. Of all the subcategories, 'Available to listen' was the one with the highest number of recording units (17), followed by 'Not available to listen to the patient' (2).

"Physician's social and communicative skills"

The category "Social and communicative competences of the physician" (table 3) is made up of 6 subcategories, all of which are concept-driven subcategories. In total, the 6 subcategories obtained 19 registration units. The subcategories with the highest number of registration units are 'Available to answer questions' (15), 'More open to communication' (3), and 'Addressing emotional issues' (1). The remaining 3 subcategories did not obtain any registration units.

Participants' perception of whether the physician's age and gender are variables that influence their predisposition to listen to the patient

With regard to the participants' perception of whether gender influences the physician's willingness to listen to the patient, 5 participants considered that gender does have an influence. Participant No. 7 stated that "... I noticed that as I grew up and went through puberty, I ended up looking for female physicians. Perhaps because of the need for some identification". Participant 12 also felt that "In my experience, I feel that the issue of gender is more visible. Female physicians, for example, are more sensitive to aesthetic issues. In the case of this disease, this is a very important aspect". Twelve participants felt that it had no influence. Participant No. 4 replied, "I've had contact with different physicians of different ages and genders and the reactions and way of communicating are always different. I think the difference lies in the physician's personality and not so much in their gender and age, their willingness to listen and help". Participant 11 also said that "The willingness and predisposition to listen are not influenced by age and gender". Two of the participants had no opinion on this topic.

Regarding the participants' perception of whether age influences the physician's willingness to listen to the patient, 7 participants considered that there are differences. Participant No. 5 said, "I believe that an older physician doesn't have as much patience as a younger physician", and participant No. 8 said, "I've also noticed that younger physicians tend to suggest yoga or Pilates, a healthy diet, in other words, suggest some kind of alternative therapies that can improve my emotional side and my physical well-being that can directly help me". Ten participants said that age had no influence on the physician's willingness to listen to the patient. Participant No. 3 said "I think it has more to do with the personality of the physicians than with gender and age" and participant No. 17 said "I've had young physicians and older physicians, some spectacular and others not so much. In other words, I can't find a relationship". 2 participants had no opinion on this topic.

Results of study 2

Sample characterization

61 participants, corresponding to 42,4% of the sample, said they lived in the Greater Lisbon area and 27 respondents, 18,8%, lived in the Greater Porto area. On the other hand, 56 individuals, or 38,9% of the participants, said they didn't live in any of these areas, out of a total of 144 valid surveys analyzed. With regard to the age of the participants, 43 were aged between 18 and 30, 35 were aged between 31 and 40, 49 were aged between 41 and 50 and 11 were aged between 51 and 60. Only six participants indicated that they were over 60. In terms of percentages, it breaks down as follows: 29,9 per cent of the individuals were aged between 18 and 30, 24,3 per cent between 31 and 40, 34 per cent between 41 and 50, 7,6 per cent between 51 and 60 and 4,2 per cent over 60. The sample was made up of 112 females and 32 males, which corresponds to a percentage of 77,8 per cent women and 22,2 per cent men. With regard to the respondents' level of education, 97 participants said they had higher education, i.e. 67,4%, while 44, i.e. 30,6%, said they had secondary education and 3, i.e. 2,1%, had basic education.

Relationship between the physician's age and the predisposition to communicate with patients

We chose to analyze the communication variables we defined in the questionnaire together, as they all contribute to establishing a successful communication relationship between physician and patient. Furthermore, by analyzing them together, it will be possible to directly correlate and verify the physician's age and the variables that influence communication with the patient, according to the respondents' perceptions. Since the variables being analyzed are ordinal, Spearman's non-parametric correlation (RS) was used. The Spearman correlation coefficient is a special case of the Pearson correlation coefficient[35].

Table 4: Communication relationship between physician and patient taking into account the physician's age

	Physician's Age	
	R_S	P
Availability to receive patients	0,043	0,605
Physician actively listening during consultation	0,105	0,210
Physician addresses the emotional part of the patient	0,053	0,525
Physician clarifies all doubts	0,101	0,227
Physician uses easy-to-understand language	-0,035	0,679
Physician explains treatments and tests that prescribes	0,034	0,686
Physician lets patient ask all the important questions	0,078	0,351
Physician makes sure there are no doubts about what was said and decided in consultation	0,053	0,525
Physician involves patient in the therapeutic decision-making process, valuing the patient's opinion	0,027	0,749
Physician is interested in the patient and not just the disease	0,093	0,269
Physician responds to contacts outside consultation hours	0,066	0,430
Physician explains therapeutic indications several times	0,049	0,562
As long as the patient is followed by this physician, the disease is stable	0,074	0,376
Patient has no difficulty understanding the information the physician gives	0,025	0,770
Physician does not use very technical language	-0,034	0,690
The physician is not concerned about keeping the appointment time	,326*	< 0,001
Physician does not interrupt the patient and lets him finish speaking	0,093	0,270
Physician is not focused on the computer during the consultation	0,103	0,218

Source: Authors

According to the participants' perceptions, table 4 shows only one statistically significant correlation between a communication variable and the physician's age. In this way, we can see that the older the physician, the less concerned they are about keeping to the appointment schedule (p=< 0,001).
No statistically significant correlations were found between the physician's age and the other variables.

Relationship between the physician's age and the characteristic that patients most appreciate

Since we wanted to understand whether, from the participants' perspective, there is a relationship between the physician's age and the characteristic that patients most appreciate, we used a Kruskal-Wallis test.

Table 5: Relationship between the physician's age and the characteristic that the patient appreciates most

	20-29		*30-39*		*40-49*		*50-59*		*60-69*		*More than 70*		
	N	%	N	%	N	%	N	%	N	%	N	%	N
Openness to doubts	0	0%	13	50%	9	34,6 %	3	11,5 %	1	3,8%	0	0%	26
Clinical knowledge	3	5,4%	10	17,9 %	25	44,6 %	10	17,9 %	5	8,9%	3	5,4%	56
Lack of concern about consultation time	0	0%	2	50%	1	25%	0	0%	0	0%	1	25%	4
Availability to see the patient	0	0%	12	36,4 %	11	33,3 %	7	21,2 %	3	9,1%	0	0%	33
Sympathy	0	0%	7	46,7 %	6	40%	2	13,3 %	0	0%	0	0%	15
None	1	14,3%	2	28,6 %	2	28,6 %	1	14,3 %	1	14,3 %	0	0%	7
All	0	0%	1	33,3 %	0	0%	2	66,7 %	0	0%	0	0%	3
test Kruskal-Wallis		0,302											

Source: Authors

Applying the Kruskal-Wallis test, with a p-value of 0,302, there are no statistically significant differences in the age of the physician according to the characteristics mentioned by the patients. We were able to see, however, that clinical knowledge is the characteristic that respondents most appreciate in a physician, with the latter being between 40 and 49 years old. The physician's availability to see the patient was also one of the characteristics mentioned, with these health professionals being between 30 and 39 and between 40

and 49 years old. Openness to doubts was also the third most important characteristic, with physicians aged between 30 and 39 and between 40 and 49 being the most open to answering patients' questions.

Verification of the hypothesis regarding the influence of the physician's gender on their predisposition to communicate with the patient

In order to understand the participants' perception of the relationship between the physician's gender and willingness to communicate with the patient, taking into account the variables defined, we used the Mann-Whitney U-test to see if there were statistically significant differences between male and female physicians.

Table 6: Communication relationship between physician and patient taking into account the physician's gender

	Masculine		*Feminine*		
	Mean	Standard Deviation	Mean	Standard Deviation	P
Availability to receive patients	4,02	1,079	4,09	1,033	0,369
Physician actively listening during consultation	4,27	0,978	4,20	1,094	0,437
Physician addresses the emotional part of the patient	3,76	1,250	3,79	1,235	0,442
Physician clarifies all doubts	4,29	1,077	4,12	1,023	0,084
Physician uses easy-to-understand language	4,39	0,964	4,28	0,865	0,115
Physician explains treatments and tests that prescribes	4,40	0,914	4,22	0,889	0,058
Physician lets patient ask all the important questions	4,34	1,115	4,24	0,988	0,107
Physician makes sure there are no doubts about what was said and decided in consultation	4,06	1,172	3,88	1,115	0,093
Physician involves patient in the therapeutic decision-making process, valuing the patient's opinion	3,97	1,254	3,84	1,212	0,185
Physician is interested in the patient and not just the disease	3,73	1,270	3,71	1,272	0,466
Physician responds to contacts outside consultation hours	3,19	1,556	3,21	1,623	0,444
Physician explains therapeutic indications several times	3,63	1,218	3,49	1,298	0,280
As long as the patient is followed by this physician, the disease is stable	3,79	1,345	3,62	1,244	0,140

Patient has no difficulty understanding the information the physician gives	4,48	0,919	4,37	0,962	0,193
Physician does not use very technical language	4,00	1,215	4,18	0,931	0,355
The physician is not concerned about keeping the appointment time	3,76	1,263	3,67	1,228	0,315
Physician does not interrupt the patient and lets him finish speaking	4,37	0,962	4,50	0,864	0,216
Physician is not focused on the computer during the consultation	4,05	1,193	3,82	1,239	0,106

Source: Authors

According to the perception of patients (participants), we observed marginally significant differences between the genders in the variables availability to clarify doubts (p=0,084), explaining the tests and treatments prescribed (p=0,058) and concern about explaining therapeutic indications several times (p=0,093). We found that male physicians are more willing to clarify doubts, are more willing to explain the tests and treatments they prescribe, and are more concerned about explaining the therapeutic indications several times

Relationship between the physician's gender and the characteristic that patients most appreciate

With regard to gender, we also wanted to know if there was any relationship between male and female physicians and the characteristics that patients most appreciate. To do this, we used a Fisher-Freeman-Halton exact test, given that the assumption for applying the Chi-square test was not met.

Table 7: Relationship between the physician's gender and the characteristic that the patient appreciates most

	Feminine		*Masculine*	
	N	%	N	%
Openness to doubts	15	57,7%	11	42,3%
Clinical knowledge	26	46,4%	30	53,6%
Lack of concern about consultation time	1	25%	3	75%
Availability to meet	25	75,8%	8	24,2%

Sympathy	10	66,7%	5	33,3%
None	3	42,9%	4	57,1%
All	2	66,7%	1	33,3%
P		0,092		

Source: Authors

According to the participants' perceptions, in terms of the physician's gender and the characteristic that the patient likes the most, we can conclude that there is a marginally significant relationship between the physician's gender and the characteristics that patients like the most, with a p-value of 0,092. In more detail, the analysis shows that female physicians have higher values than male physicians. In other words, female physicians were more open to questions, more willing to help and more friendly. In the case of male physicians, clinical knowledge stands out as the characteristic that patients most appreciate.

Relationship between the age of the male physician and the predisposition to communicate with patients

Since we want to relate a set of ordinal variables, we once again used Spearman's non-parametric correlation (RS). Here we analyze the correlation between the age of male physicians and their willingness to communicate with patients, in order to assess whether there are any statistically significant differences.

Table 8: Relationship between the physician's gender and the characteristic that the patient appreciates most

	Masculine	
	Rs	*P*
Availability to receive patients	*-0,161*	*0,106*
Physician actively listening during consultation	*-0,150*	*0,122*
Physician addresses the emotional part of the patient	*0,099*	*0,223*
Physician clarifies all doubts	*-0,132*	*0,154*
Physician uses easy-to-understand language	*-0,190*	*0,070*
Physician explains treatments and tests that prescribes	*-0,067*	*0,302*

Physician lets patient ask all the important questions	*-0,095*	*0,231*
Physician makes sure there are no doubts about what was said and decided in consultation	*-0,067*	*0,302*
Physician involves patient in the therapeutic decision-making process, valuing the patient's opinion	*-0,062*	*0,316*
Physician is interested in the patient and not just the disease	*-0,021*	*0,423*
Physician responds to contacts outside consultation hours	*-0,079*	*0,270*
Physician explains therapeutic indications several times	*-0,134*	*0,149*
As long as the patient is followed by this physician, the disease is stable	*-0,040*	*0,378*
Patient has no difficulty understanding the information the physician gives	*-0,094*	*0,233*
Physician does not use very technical language	*-0,052*	*0,345*
The physician is not concerned about keeping the appointment time	*0,204*	*0,056*
Physician does not interrupt the patient and lets him finish speaking	*-0,011*	*0,465*
Physician is not focused on the computer during the consultation	*0,082*	*0,264*

*. The correlation is significant at the 0.05 level (1 tail).
**. The correlation is significant at the 0.01 level (1 tail).

Source: Authors

Using Spearman's non-parametric correlation (RS), there were only two marginally significant correlations between two communication variables and the age of the male physician. In this way, we realized that, according to the participants' perceptions, the older the male physician, the less concerned he is about keeping to the appointment time (p=0,056) and using easy-to-understand language (p=0,070).

Relationship between the age of the female physician and the predisposition to communicate with patients

Since we want to relate a set of ordinal variables, we once again used Spearman's non-parametric correlation (RS). Here we analyze the correlation between the age of the female physician and the predisposition to

communicate with the patient, according to the latter's perception, in order to assess whether there are statistically significant differences.

Table 9: Communication relationship between female physician and patient taking into account the physician's age

	Feminine	
	Rs	*P*
Availability to receive patients	*,246**	*0,013*
Physician actively listening during consultation	*,341***	*0,001*
Physician addresses the emotional part of the patient	*,215**	*0,026*
Physician clarifies all doubts	*,324***	*0,001*
Physician uses easy-to-understand language	*0,114*	*0,154*
Physician explains treatments and tests that prescribes	*0,155*	*0,082*
Physician lets patient ask all the important questions	*,258***	*0,010*
Physician makes sure there are no doubts about what was said and decided in consultation	*,188**	*0,045*
Physician involves patient in the therapeutic decision-making process, valuing the patient's opinion	*0,125*	*0,132*
Physician is interested in the patient and not just the disease	*,219**	*0,024*
Physician responds to contacts outside consultation hours	*,204**	*0,033*
Physician explains therapeutic indications several times	*,219*	*0,024*
As long as the patient is followed by this physician, the disease is stable	*,203**	*0,034*
Patient has no difficulty understanding the information the physician gives	*0,139*	*0,106*
Physician does not use very technical language	*-0,004*	*0,487*
The physician is not concerned about keeping the appointment time	*0,444***	*< 0,001*

Physician does not interrupt the patient and lets him finish speaking	*,209**	*0,030*
Physician is not focused on the computer during the consultation	*0,133*	*0,116*

*. The correlation is significant at the 0.05 level (1 tail).
**. The correlation is significant at the 0.01 level (1 tail).

Source: Authors

The analysis shows several statistically significant correlations between the communication variables taking into account the age of the female physician:

1) There is a statistically significant correlation between the age of female physicians and the fact that they are available to receive patients. In other words, the older female physicians are, the more they are available to receive the patient (p=0,013).

2) There is a statistically significant correlation between the age of female physicians and active listening. In other words, the older the female physician, the more active their listening (p=0,001).

3) There is a statistically significant correlation between the age of the female physician and the fact that the physician addresses the emotional part of the patient. In other words, the older the female physician, the more they address the patient's emotions (p=0,026).

4) There is a statistically significant correlation between the age of the female physician and the fact that the physician clarifies all doubts. In other words, the older the female physician, the more willing they are to answer questions (p=0,001).

5) There is a statistically significant correlation between the age of the female physician and the fact that the physician lets the patient ask all the important questions. In other words, the older the female physician, the more they let the patient ask all the important questions (p=0,010).

6) There is a statistically significant correlation between the age of the female physician and the fact that the physician makes sure there are no doubts about what has been discussed and decided in the consultation. Thus, the older the female physician, the more they make sure there is no doubt about what was said and decided in consultation (p=0,045).

7) There is a statistically significant correlation between the age of the female physician and the fact that the physician is interested in the patient and not just their illness. Thus, the older the female physician, the more they are interested in the patient and not just their illness (p=0,024).

8) There is a statistically significant correlation between the age of the female physician and the fact that the physician responds to the patient outside of consultation hours. In other words, the older the female physician, the more they responded to the patient outside consultation hours (p=0,033).

9) There is a statistically significant correlation between the age of the female physician and the fact that the physician explains several times the therapeutic indications several times. Thus, the older the female physician, the more often they explained several times the therapeutic indications (p=0,024).

10) There is a statistically significant correlation between the age of the female physician and the fact that the disease is stable. Thus, the older the female physician, the more stable the disease (p=0,034).

11) There is a statistically significant correlation between the age of female physicians and the fact that they are not concerned about keeping to appointment time. In other words, the older the female physician, the less concerned they are about keeping to the appointment time (p=< 0,001).
12) There is a statistically significant correlation between the age of the female physician and not interrupting the patient. In other words, the older the female physicians, the less they interrupt the patient (p=0,030).

Results Analisys

Once the qualitative and quantitative research has been completed, it is possible to answer the study's starting question "Can the age and gender of physicians affect their willingness to communicate with patients?".
With regard to the qualitative study, through patients' perceptions in the collective interviews, it was possible to realize that the physician's age and gender, in general, do not affect their willingness to communicate with patients. However, in the quantitative study, through the questionnaire surveys, we found that, according to patients' perceptions, the physician's gender and age affect their ability to communicate with patients.
Thus, we were able to confirm the hypothesis formulated, but only when mediated by the gender factor - H1: Older physicians are perceived to be more willing to communicate with the patients compared to younger physicians. In other words, according to our study, the older female physicians are, the more willing they are to communicate with patients.
From a general point of view, we were also able to confirm H2: Female physicians are perceived as being more willing to communicate with the patient compared to male physicians. Overall, female physicians are seen as more willing to take on board the patient's perspective and answer questions, as well as being more friendly. However, male physicians also performed well in other communication components (willingness to answer questions, explain the tests and treatments they prescribe and concern to explain therapeutic indications several times).
From the literature already consulted, the issue of gender has aroused great research interest as it is considered a factor in possible variations in the interpersonal aspects of the practice of medicine, with female physicians being more patient-centered and more open to communication[9]. With regard to age, we found that patients value the balance between experience and up-to-date clinical knowledge[8]. There are studies in which participants indicated they preferred younger physicians because they were more available and open to dialogue[10] and others in which respondents preferred older physicians because they considered them more experienced and caring[36, 37].
In the collective interviews, the participants were first asked about the age and gender of their physician in the field of atopic dermatitis, and then about the communication aspects of the interaction between the participant and the physician. Although there was no unanimity of opinion, most of the participants felt that there was no relationship between the sex/age of the physician and their predisposition to communicate with the patient: "I've been consulted by older physicians and younger ones, and they weren't all the same" (in the transcript of interview 1), or "I can't make that correlation. It seems to me that it's a question of personality" (interview transcript 2).

Of the 19 participants in the collective interviews, only five considered that the gender of the physician had an influence. According to these five participants, there is greater identification with female physicians, and female physicians, for example, are more sensitive to aesthetic issues. The rest of the participants felt that there was no influence. The majority pointed to the physician's personality as the factor that determines the physician's predisposition to communicate more or less with patients.

As for the age of the physician, seven participants said that there are differences between younger and older physicians. These participants felt that an older physician may not have as much patience as a younger physician and that younger physicians tend to suggest other non-pharmacological therapeutic approaches, such as yoga, Pilates and healthy eating, as a way of improving emotional and physical well-being. The rest of the participants felt that age has no influence on physicians' willingness to communicate with patients, or that they had no opinion on the matter.

However, through the quantitative study, we were able to find significant correlations between the physician's age and gender and the communication variables under study, namely the willingness to receive the patient, to listen actively, to address emotional issues, to be open to questions, to use easy-to-understand language, to respond to contacts outside consultation hours, to explain the treatments he prescribes, to involve the patient in the therapeutic decision, and to make eye contact during the consultation. These communication variables support the perception of the physician's predisposition to communicate with the patient according to the latter's perception.

When we analyze in general, we see that in relation to the correlations between the physician's age and the communication variables studied, which contribute to the perception of the physician's availability to communicate with the patient, the older the physician, the less concerned they are about the appointment time, while there are no correlations between the physicians' age and the other communication variables studied. However, when mediated by the physician's gender, statistically significant correlations were found between the physician's age and the communication variables studied. According to the results, the older the female physician, the more willing they are to communicate with the patient. However, in their review of the literature, authors such as Barnsley et al. (1999) or Shah and Ogden (2006) suggest that younger physicians seem to be more willing and open to taking on board the interests of patients, and that there is greater satisfaction in consultations. Therefore, our results do not confirm the literature consulted.

As far as gender is concerned, female physicians are generally perceived to be more open to the patient's doubts and more willing to accept the patient's perspective, as well as being more sympathetic.

When analyzed in more detail, there were several statistically significant correlations between the communication variables under study, taking into account the age of the female physician. In other words, through the surveys, the participants consider that the older the female physician, the more they are available to see the patient, the more actively they listen, the more they address the patient's emotions, the more they are available to answer questions, they let the patient ask all the questions, they make sure there are no doubts about what has been discussed and decided in the consultation, they respond more to the patient outside of consultation hours and the more the disease is stable. What's more, they are less concerned about keeping to the appointment time, less likely to interrupt the patient and more likely to explain the tests they are prescribing.

From a review of the literature, Shah and Ogden (2006) showed in a study that female physicians had better interpersonal skills, better technical skills, with a greater ability to address the emotional side of the patient

and empower them about their health. Agostinho et al. (2010) also suggest that the majority of patients feel more satisfied when they are consulted by a female physician. However, many authors believe that there is still not enough information to make this connection. There is still a long way to go in the search for knowledge about the age and gender of physicians and their professional performance in terms of relationships with patients and health outcomes.

Conclusion

The aim of the study was to find out how patients of healthcare services perceive whether the age and gender of physicians (and the combination of both) affect their willingness to communicate with them.

Although the literature consulted is not definitive, studies point to the existence of a relationship between the physician's gender and age and their willingness to communicate with the patient. Our qualitative study did not allow us to corroborate these conclusions, but the quantitative study did provide us with information that points to the existence of differences in the physician's predisposition to communicate with the patient, taking gender and age into account.

With this study, we realized that it is indeed essential for physicians to be motivated and guided from the start of their medical training to develop the so-called 'soft skills' or social competences, which include communication. This training and capacity-building in the area of communication makes it possible to establish and maintain positive and productive relationships not only with patients, but also with team members, making it easier to influence patients to adhere to therapy and/or adopt healthier and preventative lifestyles.

In addition, the results of this study could be an important contribution to the preparation of physician-patient communication training programs in both academic and healthcare contexts. The results of this research could also be used as a tool for adapting communication courses, taking into account physicians' gender and age, adapting the discipline and discourses to these characteristics. We thus hope to contribute to this being a source of reflection for all health professionals in relation to their predisposition to communicate with patient and adapt their behavior to meet the communication needs of each person.

Given our research question and the fact that the questionnaire was not applied equally to all regions of the country, there is a major limitation to this study and it cannot be considered representative of the sample studied, so we cannot generalize its results and conclusions on a national scale. We can, however, consider it a contribution and a starting point for a more in-depth study of the factors that influence physicians' willingness to communicate with patients.

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