





Patients' perception on the professional image in medical care: reflections for medical education

Percepção de pacientes sobre a imagem profissional na assistência médica: reflexões para a educação médica

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ABSTRACT

Introduction: Brazilian studies on non-verbal communication and its possible impact on the relationship between health professionals and patients are still incipient in the scientific literature. Most studies are from countries other than Brazil.

Objective: to identify the relationship established by people between attire styles used by physicians and different professional profiles or skills as well as to understand the way they feel about certain aspects of these professionals' appearance.

Method: this is a cross-sectional study in which 160 individuals participated in a specialized public healthcare service in the state of Paraná, Brazil. Sociodemographic data and the way in which participants perceive aspects related to physicians' appearance were collected through a structured questionnaire and analyzed using descriptive and inferential statistics.

Results: the sample mainly comprised women (70%). The participants generally demonstrated a preference for attire that included white coat, with "formal with white coat", "scrubs with white coat" and "casual with white coat" being the most recommended styles when consulted about attire to be worn by physicians. The aspects of the professional image that most generated discomfort in relation to male professionals were dirty and wrinkled clothes and Bermuda shorts. Among female physicians, participants indicated discomfort mainly with dirty and wrinkled clothes, blouses that showed the belly, shorts and short dresses.

Conclusion: attire styles that included white coat were the most preferred in general, but there are results depending on specific situations that must be considered. Dirty and wrinkled attire was the aspect that caused the most discomfort for professionals of both sexes.

Keywords: Physicians; Physical Appearance, Body; Nonverbal Communication; Physician-Patient Relations; Unified Health System.

RESUMO

Introdução: Os estudos brasileiros sobre comunicação não verbal e seu possível impacto na relação entre profissionais de saúde e pacientes ainda são incipientes na literatura científica. A maioria dos estudos é de outros países que não o Brasil.

Objetivo: Este estudo teve como objetivos identificar a relação que as pessoas estabelecem entre estilos de vestimenta utilizados por médicos e os diferentes perfis ou habilidades profissionais, assim como conhecer a maneira como se sentem em relação a determinados aspectos de aparência desses profissionais.

Método: Trata-se de um estudo com desenho transversal do qual participaram 160 indivíduos atendidos em um serviço público especializado de saúde do estado do Paraná, no Brasil. Os dados sociodemográficos e a maneira como os participantes percebem aspectos relacionados à aparência dos médicos foram coletados por meio de um questionário estruturado e analisados com recursos da estatística descritiva e inferencial.

Resultado: A amostra foi composta principalmente por mulheres (70%). Os participantes demonstraram em geral preferência por vestimentas que incluíram o jaleco branco, sendo "formal com jaleco branco", "pijama privativo com jaleco branco" e "casual com jaleco branco" os estilos mais indicados quando consultados sobre a vestimenta a ser utilizada pelo médico. Os aspectos de aparência que mais geraram incômodo com relação aos profissionais do sexo masculino foram: roupa suja e amassada, e uso de bermuda. Entre médicas mulheres, os participantes indicaram incômodo principalmente com os seguintes aspectos de aparência: roupa suja e amassada, blusa mostrando a barriga, shorts e vestido curto.

Conclusão: Os estilos de vestimenta que incluíram jaleco branco foram os mais preferidos em geral, mas há resultados conforme situações específicas que devem ser considerados. Roupa suja e amassada foi o aspecto que mais gerou incômodo para profissionais de ambos os sexos.

Palavras-chave: Médicos; Aparência Física; Comunicação Não Verbal; Relações Médico-Paciente; Sistema Único de Saúde.

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INTRODUCTION

Attire and the use of adornments in the working environment among physicians have changed over the decades¹. Currently, it is possible to observe different attire styles among professionals, which may or may not include a white coat as well as the use of adornments, tattoos and piercings, among other aspects of appearance that highlight personal affinities and preferences². According to the literature, appearance and attire are ways through which people communicate with each other, being understood as elements of non-verbal communication³. Non-verbal communication is a fundamental component in communication, as facial expressions, posture, appearance and attire validate, replace or contradict what is being said³. In interactions between people, body language, including non-verbal elements, accounts for 55% of the message, whereas the verbal (words) and vocal parts (accent and tone of voice) account for 7% and 38%, respectively⁴.

This knowledge applied to medical care demonstrates the importance of non-verbal communication for professional practice⁵. In addition to the technical domain and the subject that will be discussed with patients, authors highlighted the need for physicians to be aware of the emotional content involved in their care and the importance of non-verbal communication to establish a good relationship with patients⁵. Data indicate that elements of nonverbal communication build and sustain the majority of a successful physician-patient relationship⁵.

Other researchers also mention that patients can create their own impressions based on the physicians' appearance, contributing or not to the physician-patient relationship and healthcare as a whole⁶. Studies carried out in different countries, such as Brazil, Italy, Japan, Switzerland, Singapore and the United States, including different contexts of professional health practice, have demonstrated that the physicians' attire and posture can generate different impressions among patients regarding credibility, competence or trust in the professionals, influencing patient satisfaction and experience⁶⁻¹¹. In health settings, establishing a relationship of trust between the patient and the professional is key to collecting clinical history data, meeting health needs, adhering to health treatment and achieving therapeutic success¹².

Although non-verbal communication has been the focus of several studies in the last decade, most of existing results are from analyses carried out in countries other than Brazil^{8-9,13-17}. In Brazil, this topic has been little explored in the research area⁶, which makes the body of evidence on how Brazilian patients perceive physicians' appearance and its impact on the physician-patient relationship still quite limited nationally. Therefore, this study aimed to identify the relationship that people establish between attire styles used

by physicians and different professional profiles or skills as well as to understand the way they feel about certain aspects of these professionals' appearance.

METHODS

This is a cross-sectional study that included 160 people who had sought healthcare at a public healthcare service located in the western region of the state of Paraná, Brazil. This healthcare service offers public care on an outpatient basis and in different medical specialties to the population residing in 18 municipalities in the region.

Sample size was based on the number of participants in previous studies¹⁸, and the sampling scheme was non-probabilistic. The sample included people aged 18 or over who sought any type of care at the service where data were collected. People with dysarthria, visual or hearing impairments that prevented verbal communication with researchers and viewing the elements of the questionnaire as well as people who demonstrated poor general health were excluded from the research.

Data collection took place from June 23, 2023 to September 1, 2023, using a questionnaire adapted from the study by Yonekura *et al.* (2013)⁶, which was provided to participants by the researchers based on authorized use. The questionnaire was answered by each of the participants and delivered to the researchers, with assistance from the research team when there were doubts or difficulties, and included: four items on sociodemographic data (gender, age, education level and income); 14 items to assess the relationship that people establish between attire styles worn by physicians and different professional profiles or skills; and 29 items to understand the way they feel (e.g., uncomfortable, irrelevant, comfortable) in relation to certain aspects related to these professionals' appearance, such as facial piercings, earrings, loose hair and others. To answer the 14 items, an image with different styles of attire previously used in the study by Petrilli *et al.* (2018)⁹ was provided after permission was granted by the authors. Different attire styles were included in this image, such as: A) casual; B) casual and white coat; C) scrubs; D) scrubs and white coat; E) formal; F) formal and white coat; G) suit, with female and male representatives for each of the attire styles. The time required to complete the questionnaire was around 15 minutes.

Data were entered into a Microsoft Excel® database and analyzed using descriptive and inferential statistics using IBM SPSS Statistics®. The association between the qualitative variables was assessed using the chi-square test or Fisher's exact test. The significance level adopted was less than 0.05. The study was approved by the Research Ethics Committee, under Protocol CAAE number 68471823.5.0000.0102. The participants were invited to voluntarily participate in the

research, registering their agreement in the consent form. The research team ensured participant privacy and anonymity.

RESULTS

The sample consisted mostly of female participants (70.0%). The mean age was 43.9 years, ranging from 18 to 80 years (standard deviation = 15.6), with 57.5% up to 49 years. There was a predominance (65.0%) of participants with income from 1 to 3 minimum wages (between R\$ 1,212 (US\$242.40) and R\$3,636 (US\$727.20)), followed by income greater than 3 minimum wages (more than R\$ 3,636 (US\$727.20); 18.8%) and less than 1 minimum wage (income less than R\$ 1,212

(US\$242.40; 16.3%). The values were estimated considering the value of the minimum wage in 2022, and are presented using the national currency, which is in Brazilian *reais*.

As for attire styles worn by the physicians, it was possible to observe the participants' general preference for attire that included a white coat, with emphasis on formal style with white coat. On the other hand, there are specific results that must be considered, e.g., the predominance of indications for casual attire and white coat as being the most accessible attire. Table 1 describes data on the relationship established by the participants between attire styles and professional profiles or skills.

Table 1. Relationship established by the participants between attire styles and physicians' professional profiles or skills (n=160).

Questions	Physician/ Gender	Attire styles n (%)						
		A) Casual	B) Casual and white coat	C) Scrubs	D) Scrubs and white coat	E) Formal	F) Formal and white coat	G) Suit
More educated and competent	Male	5(3.1)	48(30.0)	11(6.9)	32(20.0)	7(4.4)	56(35.0)	1(0.6)
	Female	5(3.1)	50(31.3)	10(6.3)	32(20.0)	7(4.4)	55(34.4)	1(0.6)
More responsible	Male	3(1.9)	29(18.1)	8(5.0)	35(21.9)	9(5.6)	57(35.6)	19(11.9)
	Female	4(2.5)	28(17.5)	11(6.9)	34(21.3)	7(4.4)	57(35.6)	19(11.9)
More concerned about patients	Male	6(3.8)	30(18.8)	29(18.1)	42(26.3)	10(6.3)	39(24.4)	4(2.5)
	Female	6(3.8)	30(18.8)	28(17.5)	42(26.3)	8(5.0)	42(26.3)	4(2.5)
More hygienic	Male	5(3.1)	23(14.4)	25(15.6)	51(31.9)	6(3.8)	40(25.0)	10(6.3)
	Female	6(3.8)	21(13.1)	25(15.6)	50(31.3)	6(3.8)	43(26.9)	9(5.6)
More experienced	Male	9(5.6)	23(14.4)	10(6.3)	26(16.3)	12(7.5)	60(37.5)	20(12.5)
	Female	9(5.6)	23(14.4)	11(6.9)	25(15.6)	10(6.3)	63(39.4)	19(11.9)
More affordable	Male	21(13.1)	43(26.9)	30(18.8)	30(18.8)	6(3.8)	26(16.3)	4(2.5)
	Female	21(13.1)	45(28.1)	28(17.5)	28(17.5)	7(4.4)	27(16.9)	4(2.5)
More reliable	Male	7(4.4)	27(16.9)	13(8.1)	43(26.9)	5(3.1)	59(36.9)	6(3.8)
	Female	7(4.4)	26(16.3)	12(7.5)	44(27.5)	5(3.1)	60(37.5)	6(3.8)
More confidence in the diagnosis and treatment	Male	4(2.5)	26(16.3)	7(4.4)	38(23.8)	3(1.9)	74(46.3)	8(5.0)
	Female	4(2.5)	25(15.6)	6(3.8)	41(25.6)	3(1.9)	72(45.0)	9(5.6)
Routine consultation	Male	10(6.3)	48(30.0)	12(7.5)	29(18.1)	3(1.9)	57(35.6)	1(0.6)
	Female	11(6.9)	49(30.6)	11(6.9)	29(18.1)	3(1.9)	56(35.0)	1(0.6)
Urgent consultation	Male	8(5.0)	29(18.1)	45(28.1)	47(29.4)	2(1.3)	26(16.3)	3(1.9)
	Female	9(5.6)	27(16.9)	45(28.1)	47(29.4)	2(1.3)	27(16.9)	3(1.9)
Talking about psychological problems	Male	20(12.5)	31(19.4)	9(5.6)	12(7.5)	20(12.5)	56(35.0)	12(7.5)
	Female	20(12.5)	32(20.0)	9(5.6)	12(7.5)	20(12.5)	54(33.8)	13(8.1)
Talking about sexual problems	Male	13(8.1)	36(22.5)	13(8.1)	26(16.3)	10(6.3)	58(36.3)	4(2.5)
	Female	14(8.8)	36(22.5)	13(8.1)	26(16.3)	10(6.3)	58(36.3)	3(1.9)
Freedom to express needs and doubts	Male	16(10.0)	44(27.5)	10(6.3)	22(13.8)	11(6.9)	53(33.1)	4(2.5)
	Female	16(10.0)	44(27.5)	10(6.3)	23(14.4)	11(6.9)	52(32.5)	4(2.5)
Clothes physicians should wear	Male	4(2.5)	34(21.3)	9(5.6)	44(27.5)	0(0.0)	68(42.5)	1(0.6)
	Female	4(2.5)	33(20.6)	9(5.6)	44(27.5)	0(0.0)	68(42.5)	2(1.3)

Source: research data (2023).

The participants were also asked how they would feel if the physicians’ appearance included certain aspects, such as facial piercings, rings, shorts and others. Dirty, wrinkled clothes and Bermuda shorts were the aspects that caused the most discomfort regarding male professionals. The appearance items that elicited the most annoyance citations in relation to female physicians were dirty and wrinkled clothes, blouses that showed the belly, shorts and short dresses (Table 2).

It was possible to observe that certain sociodemographic characteristics were associated with the participants’ perceptions, e.g., the data indicate that wearing facial piercing tends to generate more discomfort among older patients. Table 3 provides further details.

Table 2. How participants feel (uncomfortable, irrelevant, or comfortable) about different appearance items that can be worn by physicians (n=160).

Physicians’ appearance aspects	Participants’ feelings n (%)		
	Uncomfortable	Irrelevant	Comfortable
<i>Male professionals</i>			
Dirty or wrinkled clothes	148(92.5)	8(5.0)	4(2.5)
Bermuda shorts	127(79.4)	24(15.0)	9(5.6)
Hair dyed a fancy color (e.g., red or green)	76(47.5)	52(32.5)	32(20.0)
Facial piercing	65(40.6)	55(34.4)	40(25.0)
Long hair	52(32.5)	77(48.1)	31(19.4)
Visible tattoo	47(29.4)	70(43.8)	43(26.9)
Earrings	46(28.7)	71(44.4)	43(26.9)
T-shirt	42(26.3)	68(42.5)	50(31.3)
Rings	40(25.0)	65(40.6)	55(34.4)
Beard	29(18.1)	93(58.1)	38(23.8)
Social clothes and tie	25(15.6)	67(41.9)	68(42.5)
Mustache	22(13.8)	101(63.1)	37(23.1)
Jeans	13(8.1)	88(55.0)	59(36.9)
Sneakers	11(6.9)	84(52.5)	65(40.6)
<i>Female professionals</i>			
Dirty and wrinkled clothes	147(91.9)	7(4.4)	6(3.8)
Blouse that showed the belly	137(85.6)	16(10.0)	7(4.4)
Shorts	125(78.1)	22(13.8)	13(8.1)
Short dress	122(76.3)	34(21.3)	4(2.5)
Heavy makeup	79(49.4)	58(36.3)	23(14.4)
Hair dyed a fancy color (e.g., red or green)	71(44.4)	57(35.6)	32(20.0)
Many rings	68(42.5)	64(40.0)	28(17.5)
Facial piercing	64(40.0)	58(36.3)	38(23.8)
Shirts without sleeves	57(35.6)	68(42.5)	35(21.9)
Big earrings	53(33.1)	77(48.1)	30(18.8)
Visible tattoo	41(25.6)	81(50.6)	38(23.8)
Open sandals	38(23.8)	93(58.1)	29(18.1)
Loose hair	28(17.5)	78(48.8)	54(33.8)
Long dress	12(7.5)	79(49.4)	69(43.1)
Social clothes	7(4.4)	63(39.4)	90(56.3)

Source: research data (2023).

Table 3. Association analysis between sociodemographic characteristics of the participants and appearance items that can be worn by the physicians (n=160).

Participant sociodemographic characteristics	Perception about possible appearance aspects			p-value
	Uncomfortable	Irrelevant	Comfortable	
Age group (years)	Facial piercing (worn by male physicians)			< 0.0001*
18 to 29	12(30.8%)	14(35.9%)	13(33.3%)	
30 to 49	11(20.8%)	26(49.1%)	16(30.2%)	
50 to 69	35(57.4%)	15(24.6%)	11(18.0%)	
70 to 89	7(100.0)	0(0.0%)	0(0.0%)	
Age group (years)	Earrings (worn by male physicians)			0.0427*
18 to 29	6(15.4%)	20(51.3%)	13(33.3%)	
30 to 49	11(20.8%)	25(47.2%)	17(32.1%)	
50 to 69	26(42.6%)	24(39.3%)	11(18.0%)	
70 to 89	3(42.9%)	2(28.6%)	2(28.6%)	
Age group (years)	Long hair (worn by male physicians)			0.0003*
18 to 29	10(25.6%)	18(46.2%)	11(28.2%)	
30 to 49	7(13.2%)	35(66.0%)	11(20.8%)	
50 to 69	31(50.8%)	21(34.4%)	9(14.8%)	
70 to 89	4(57.1%)	3(42.9%)	0(0.0%)	
Age group (years)	Beard (worn by male physicians)			0.0001*
18 to 29	3(7.7%)	19(48.7%)	17(43.6%)	
30 to 49	5(9.4%)	39(73.6%)	9(17.0%)	
50 to 69	16(26.2%)	33(54.1%)	12(19.7%)	
70 to 89	5(71.4%)	2(28.6%)	0(0.0%)	
Age group (years)	Mustache (worn by male physicians)			0.0012*
18 to 29	4(10.3%)	19(48.7%)	16(41.0%)	
30 to 49	2(3.8%)	42(79.2%)	9(17.0%)	
50 to 69	13(21.3%)	37(60.7%)	11(18.0%)	
70 to 89	3(42.9%)	3(42.9%)	1(14.3%)	
Age group (years)	Visible tattoo (worn by male physicians)			< 0.0001*
18 to 29	4(10.3%)	17(43.6%)	18(46.2%)	
30 to 49	6(11.3%)	30(56.6%)	17(32.1%)	
50 to 69	30(49.2%)	23(37.7%)	8(13.1%)	
70 to 89	7(100.0%)	0(0.0%)	0(0.0%)	
Age group (years)	Facial piercing (worn by female physicians)			< 0.0001*
18 to 29	10(25.6%)	15(38.5%)	14(35.9%)	
30 to 49	12(22.6%)	27(50.9%)	14(26.4%)	
50 to 69	35(57.4%)	16(26.2%)	10(16.4%)	
70 to 89	7(100.0%)	0(0.0%)	0(0.0%)	
Age group (years)	Open sandals (worn by female physicians)			0.0496*
18 to 29	13(33.3%)	22(56.4%)	4(10.3%)	
30 to 49	11(20.8%)	36(67.9%)	6(11.3%)	
50 to 69	11(18.0%)	33(54.1%)	17(27.9%)	
70 to 89	3(42.9%)	2(28.6%)	2(28.6%)	

Continue...

Table 3. Continuation.

Participant sociodemographic characteristics	Perception about possible appearance aspects			p-value
	Uncomfortable	Irrelevant	Comfortable	
<i>Age group (years)</i>	<i>Visible tattoo (worn by female physicians)</i>			< 0.0001*
18 to 29	4(10.3%)	21(53.8%)	14(35.9%)	
30 to 49	2(3.8%)	36(67.9%)	15(28.3%)	
50 to 69	30(49.2%)	23(37.7%)	8(13.1%)	
70 to 89	5(71.4%)	1(14.3%)	1(14.3%)	
<i>Sex</i>	<i>Long dress (worn by female physicians)</i>			0.0349**
Male	6(12.5%)	28(58.3%)	14(29.2%)	
Female	6(5.4%)	51(45.5%)	55(49.1%)	
<i>Sex</i>	<i>Bermuda shorts (worn by female physicians)</i>			0.0334**
Male	35(72.9%)	5(10.4%)	8(16.7%)	
Female	90(80.4%)	17(15.2%)	5(4.5%)	
<i>Income</i>	<i>Long hair (worn by male physicians)</i>			0.0253*
Less than 1 minimum wage	12(46.2%)	9(34.6%)	5(19.2%)	
1 to 3 minimum wages	37(35.6%)	48(46.2%)	19(18.3%)	
Greater than 3 minimum wages	3(10.0%)	20(66.7%)	7(23.3%)	
<i>Income</i>	<i>Beard (worn by male physicians)</i>			0.0217*
Less than 1 minimum wage	7(26.9%)	13(50.0%)	6(23.1%)	
1 to 3 minimum wages	22(21.2%)	59(56.7%)	23(22.1%)	
Greater than 3 minimum wages	0(0.0%)	21(70.0%)	9(30.0%)	
<i>Income</i>	<i>Mustache (worn by male physicians)</i>			0.0189*
Less than 1 minimum wage	8(30.8%)	13(50.0%)	5(19.2%)	
1 to 3 minimum wages	14(13.5%)	66(63.5%)	24(23.1%)	
Greater than 3 minimum wages	0(0.0%)	22(73.3%)	8(26.7%)	

Source: research data (2023). *Fisher's exact test. **Chi-square test.

DISCUSSION

The present study is part of an incipient set of Brazilian studies that analyzes patients' perception of physicians' appearance and how they feel about this. In general, the results of this study indicate the participants' preference for medical attire that includes white coat for both male and female professionals. In recent decades, white coat has been a common garment during medical training and in medical practice, and it is an aspect often associated with the medical profession or with working in healthcare areas in our society⁶.

In a Brazilian survey with 259 patients who were waiting for a routine outpatient appointment or who were admitted to a hospital in the state of São Paulo, it was also possible to observe individuals' preferences for white attire, which includes a white coat⁶. Other studies carried out in countries such as the United States and Japan, also highlight the participants' preference for wearing a white coat in the office^{9,19-20}, indicating that adopting professional uniforms by physicians can contribute to the feeling of trust and improve the physician-patient relationship⁶.

In addition, the results of our study demonstrate that the participants' perceptions can vary considering specific situations. Casual attire without a white coat were less associated by participants with more experienced professionals in this and in another study¹⁰. Meanwhile, formal attire with a white coat was the style most often associated by interviewees with the "more experienced" characteristic. On the other hand, a formal attire with a white coat was not among the top styles associated with more approachable physicians. Therefore, our study suggests that results on attire preferences should be analyzed considering clinical practice settings and the main objectives of physician-patient interactions⁸.

Researchers demonstrate that older patients may perceive wearing more casual attire as less professional²¹. Furthermore, wearing some items that influence appearance can generate feelings of discomfort in patients, damaging patient satisfaction and their relationship with physicians²¹.

In our study, in general, e.g., dirty or wrinkled clothes and Bermuda shorts were the main items highlighted as causing

possible discomfort if worn by male physicians. Meanwhile, for female physicians, the items were dirty or wrinkled clothes, a blouse that showed the belly, shorts and a short dress. Furthermore, the relationship between sociodemographic characteristics and the participants' feelings regarding certain aspects of physicians' appearance was assessed. The data indicate that older individuals tend to feel more uncomfortable with facial piercings, earrings, long hair, beards, mustaches and visible tattoo worn by male physicians than younger patients, and the same applies to facial piercings and visible tattoo among female physicians.

Additionally, the association between the interviewees' gender and their perception regarding wearing shorts and long dresses among female physicians was observed, as well as the relationship between the participants' income and their perception regarding wearing long hair, beard and mustache by male physicians.

These data reveal that the patients' age, sex and income are factors that can influence their expectations regarding the physicians' appearance and interfere with satisfaction with care. It is not likely that there will be a definition of a universal approach that meets all patients' expectations, but it is possible to seek for a personalized approach that considers the geographic region, medical care context, demographic data and professionals' personal preferences⁸.

The study has limitations. The study was carried out with individuals who sought care at a public healthcare service on an outpatient basis and belonging to a specific geographic region. Therefore, the data may not represent the perception of patients from other regions of Brazil. On the other hand, it is worth highlighting that the sample included participants from different municipalities in the region. Another limitation includes the fact that the participants indicate their preferences based on the choice of images, whereas in a real consultation, other aspects may be considered by the patients. Finally, it was not possible to evaluate in our study the social representations associated with the preference for attire that include a white coat. Other studies may seek to qualitatively understand this attire preference, as well as assess the patients' perception of the use of medical attire in other health contexts, such as in Primary Health Care.

CONCLUSION

The participants generally demonstrated a preference for medical attire that includes a white coat, but there are results, depending on specific situations, which must be considered. The aspects of appearance that caused the most discomfort in relation to male professionals were dirty and wrinkled clothes and wearing shorts. Among female physicians, the participants

indicated discomfort mainly with dirty and wrinkled clothes, blouses that showed the belly, shorts and short dresses. The patients' age, sex and income are factors that can influence the patients' expectations about the physicians' appearance and interfere with the relationship between patient and physician.

AUTHORS' CONTRIBUTIONS

Juliane Toffoli da Silva: conception and design of the study; data collection and database organization; analysis and/or interpretation of data; writing the manuscript and approval of the version to be published. Angélica de Fátima Marcussi: conception and design of the study; data collection and database organization; analysis and/or interpretation of data; writing the manuscript and approval of the version to be published. Naura Tonin Angonese: conception and design of the study; analysis and/or interpretation of data; critical review and approval of the version to be published. Maiara Bordignon: conception and design of the study; analysis and/or interpretation of data; critical review and approval of the version to be published.

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CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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