



CLINICAL RESEARCH STUDY

What to wear today? Effect of doctor's attire on the trust and confidence of patients

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KEYWORDS:

Physician attire;
Physician dress;
Patient trust

ABSTRACT

PURPOSE: There are very few studies about the impact of physicians' attire on patients' confidence and trust. The objective of this study was to determine whether the way a doctor dresses is an important factor in the degree of trust and confidence among respondents.

METHODS: A cross-sectional descriptive study using survey methodology was conducted of patients and visitors in the waiting room of an internal medicine outpatient clinic. Respondents completed a written survey after reviewing pictures of physicians in four different dress styles. Respondents were asked questions related to their preference for physician dress as well as their trust and willingness to discuss sensitive issues.

RESULTS: Four hundred respondents with a mean age of 52.4 years were enrolled; 54% were men, 58% were white, 38% were African-American, and 43% had greater than a high school diploma. On all questions regarding physician dress style preferences, respondents significantly favored the professional attire with white coat (76.3%, $P < .0001$), followed by surgical scrubs (10.2%), business dress (8.8%), and casual dress (4.7%). Their trust and confidence was significantly associated with their preference for professional dress ($P < .0001$). Respondents also reported that they were significantly more willing to share their social, sexual, and psychological problems with the physician who is professionally dressed ($P < .0001$). The importance of physician's appearance was ranked similarly between male and female respondents ($P = .54$); however, female physicians' dress appeared to be significantly more important to respondents than male physicians' dress ($P < .001$).

CONCLUSION: Respondents overwhelmingly favor physicians in professional attire with a white coat. Wearing professional dress (ie, a white coat with more formal attire) while providing patient care by physicians may favorably influence trust and confidence-building in the medical encounter.

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The patient-physician relationship is the foundation for all patient care. Research has demonstrated that a patient's

This work was supported in part by Department of Veterans Affairs Research Services.

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initial consultation plays a vital role in the development of this relationship.¹ During this consultation, a patient will develop a first impression of his or her physician² based upon the physician's verbal and nonverbal communication, as well as personal attributes like clothing, grooming, and cleanliness. This article examines respondents' preferences to their physician's attire, one component of this first impression. Sociologists and psychologists have long recognized the effect of one's appearance on important life ex-

periences such as interpersonal relationships and job-related successes.³⁻⁶ In fact, the importance of physician dress on the patient-physician relationship can be traced back to Hippocrates, who stated that the physician “must be clean in person, well dressed, and anointed with sweet-smelling unguents. . .”⁷

Even in ancient societies, the way healers dressed played an important part in rituals of healing.⁸ More recently, one can find a variety of personal opinions about the dress and appearance appropriate for physicians as reflected in editorials and letters.⁹⁻²⁷ Review of the existing literature about physicians’ dress style revealed conflicting findings. Many studies found that patients favored a more traditional dress style for physicians, yet there are studies showing that patients preferred physicians in a more casual outfit. In a pioneer study in 1987, Dunn et al reported that 65% of 200 patients wanted their physicians to wear a white coat during a consultation, and the majority believed that physicians should wear formal dress.²⁸ Many studies reported similar outcomes and the traditional items of attire such as formal dress, a name tag, and a white coat were suggested by respondents as appropriate attire for physicians.^{6,29-35} In one study, a majority preferred their doctor to wear a white coat, be free of political badges, and for men to have conventional length hair; however, most patients did not mind a male doctor with an earring, a woman in trousers, or a man without a tie.³⁵ A study performed among teenage patients actually measured patient attitudes after encounters with physicians whose dress varied from “very informal” to formal; the results were that dress style made no statistical difference in patient attitudes toward their physician.³⁶ In other studies, most of the patients claimed that the attire of the physician had no influence on their choice of family physician³⁷ or satisfaction.³⁸ The two studies that assessed the impact of dress in actual patient encounters found it to be an insignificant factor overall.^{36,38} However, very few studies have examined the impact of physician attire and appearance on the confidence and trust in physicians by patients. No studies have assessed the effect of physician attire on patient adherence to prescribed regimens. In addition, no studies have assessed patient preferences for physician attire in an internal medicine outpatient setting. The purpose of this study was to determine whether the way a doctor dresses is significantly associated with patient self-report of their trust and confidence in physicians.

Methods

Subjects were administered a survey to assess the self-expressed degree of patient trust, confidence in physicians, and adherence to prescribed regimens. The study used a randomized cross-sectional design, which made use of survey methodology. Before the administration of the surveys to the study subjects, the survey’s reliability and validity were tested. Two researchers familiar with instrument de-

velopment and clinical research assessed the questionnaire’s content validity. After a slight revision, the questionnaire was then administered to the clinical staff and nurses to assess clarity and ease of use. Ten volunteers took the survey and expressed that they did not have any trouble understanding the survey questions and would not hesitate to take the survey again if needed. The questionnaire was administered to the same group again after a month to test the reliability and consistency of answers. This pilot testing produced a reliability of 90%. The study was approved by the institutional review boards of the participating Veterans Administration (VA) and the University.

After determining that the instrument was valid and reliable, a convenience sample of patients and visitors in the waiting room of internal medicine outpatient clinics at the Ralph H. Johnson VA Medical Center participated during a 6-month period in 2003, from January through June. If a patient was accompanied by one or more persons, only one of them was selected to participate. We did not record whether the subject was a patient of that clinic or an accompanying visitor. However, because we wanted to ensure that approximately half of the subjects were female, and because most of the VA clinic patients are male, it is highly conceivable that the majority (but not all) of the female subjects were not clinic patients and that the majority (but not all) of the male subjects were clinic patients. Subjects who were demented, noncommunicative, or blind were excluded from the study. Demographic information was collected on each participant. Subjects completed the questionnaire after reviewing pictures of physicians attired in a variety of styles (Figure 1). Questions were asked about their preference for physician attire within the context of several scenarios as well as their trust and willingness to discuss sensitive issues with their physician.

The prespecified sample size chosen for the study was 400 respondents to ensure high ($\geq 90\%$) statistical power to detect significant differences across groups. Respondents were randomized into 1 of the following 4 groups:

- Respondents who were shown the photographs of a “white male doctor” dressed in 4 different styles as described below (Figure 1a).
- Respondents who were shown the photographs of a “white female doctor” dressed in 4 different styles as described below (Figure 1b).
- Respondents who were shown the photographs of an “African-American male doctor” dressed in 4 different styles as described below (Figure 1c).
- Respondents who were shown the photographs of an “African-American female doctor” dressed in 4 different styles as described below (Figure 1d).

Each patient saw only one set of photographs, comprising 4 photographs of one of the above doctors (ie, the same doctor) in each of following styles of dress:

- Business attire (suit with neck tie for male physician, either tailored trouser or skirt for female physician)

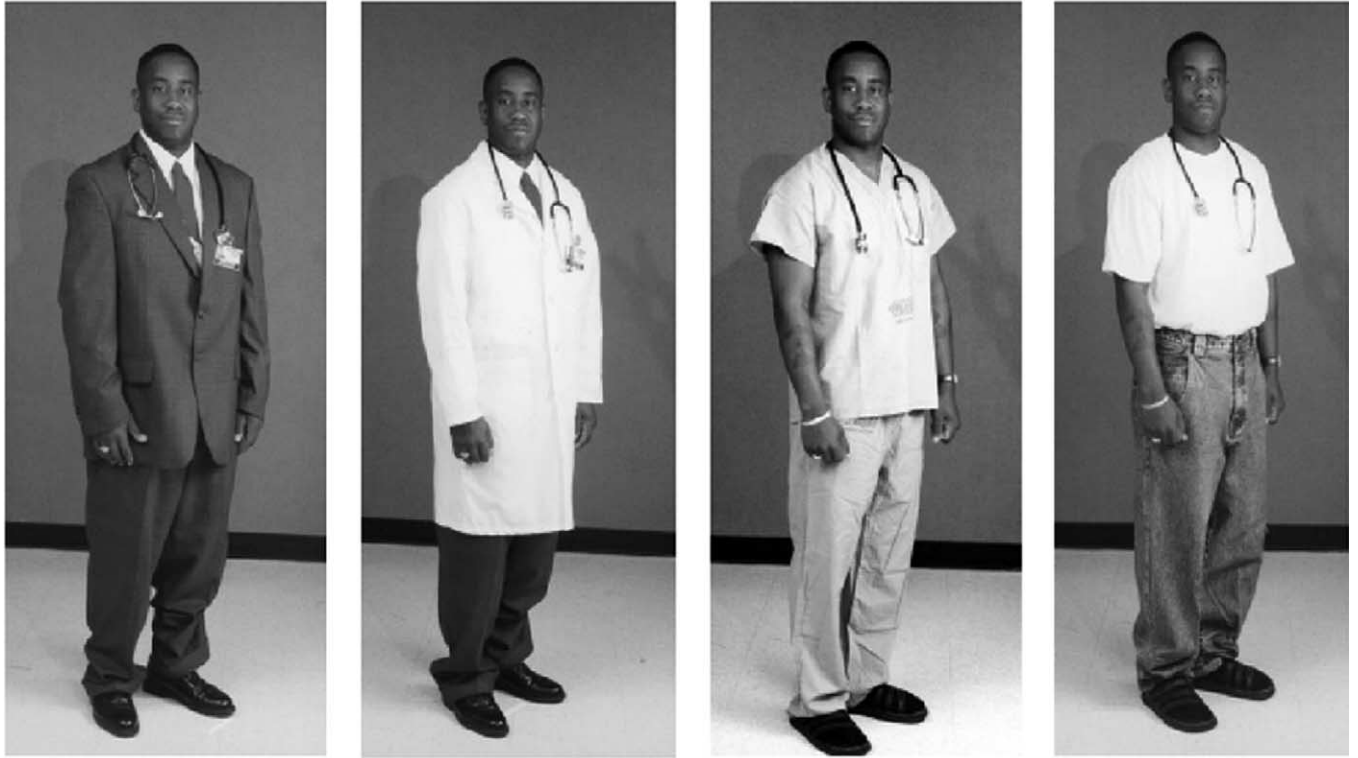
A



B



Figure 1 (a) White male doctor dressed in 4 different styles. (b) White female doctor dressed in 4 different styles. (c) African-American male doctor dressed in 4 different styles. (d) African-American female doctor dressed in 4 different styles.

C**D****Figure 1.** *Continued.*

- Professional attire (shirt, neck tie, and white coat for male, tailored trouser or skirt with white coat for female)
- Surgical scrubs for both male and female
- Casual attire (jeans and T-shirt for male, jeans or short skirt for female)

In each physician's 4 photographs, the same background was used, and the following physician characteristics were identical: hairstyle, name tag, physical appearance (except for their attire), facial expression, presence of stethoscope, and jewelry. Thus the style of

Table 1 Characteristics of study participants (n = 400)

Characteristic	Value
Age (mean ± SD)	52.4 ± 18.9
Sex (% male)	53.8
% white	57.5
% African-American	38
Education (% >high school)	42.8
Born in South Carolina (%)	59.0

dress was the only variant across each of the physician's 4 photographs.

In the questionnaire, subjects were asked to report their preferences for each of the 4 styles of dress. In addition, subjects reported on their trust, confidence and willingness to share their social, sexual, and psychological problems with the physician in each of the pictures. Subjects also rated how strongly they felt about the importance of their physician's appearance. Using chi-squared tests, responses to the questionnaire items were compared across patient age groups, race, and sex, as well as the race, sex, and dress style of the physician. Because a substantial (47.8%) proportion of participants chose professional attire for *all* questions regarding preferred style of dress, a multivariate logistic regression model incorporating patient and physician characteristics was created to determine which characteristics were independently and significantly associated with the preference for professional attire. Results of the logistic regression model were summarized using odds ratios and their respective 95% confidence intervals. Lastly, chi-squared tests were used to determine which patient factors were significantly associated with their response to the

question pertaining to the importance placed by respondents on their physician's appearance.

Results

Characteristics of study participants are listed in Table 1. Of the 400 respondents, 54% were white and 38% were African-American. Table 2 demonstrates that, in response to each of the preference questions about physician attire, there is a clear choice among respondents for professional attire. The chi-squared tests indicated that the preference patterns were all highly significantly different from an equal preference among the 4 various styles of dress. On average, across all preference questions, respondents overwhelmingly preferred professional attire (76.3%), followed by surgical scrubs (10.2%), business dress (8.8%), and casual dress (4.7%). Respondents' trust and confidence was significantly associated with preference for professional dress. Respondents also answered that they were significantly more willing to share their social, sexual, and psychological problems with the physician who is professionally dressed. The importance of physician's appearance was ranked similarly between male and female respondents ($P = .54$); however, the appearance and dress of female physicians appeared to be significantly more important than the appearance and dress of male physicians ($P < .001$). This finding was largely driven by the fact that female respondents placed more ($P < .001$) importance on female physicians' attire than male physician's attire; male respondents ranked the importance of attire relatively equally ($P = .13$) between male and female physicians.

Table 2 Results of physician attire questionnaire

Question	Attire of preferred physician				P value*
	Business	Professional	Surgical	Casual	
Which would you prefer					
For a routine physical examination?	4.8	81.8	11.8	1.8	<.0001
To be your family doctor?	15.3	75.8	6.8	2.3	<.0001
For an emergency (eg, heart attack)?	2.5	61.8	32.0	3.8	<.0001
To discuss intimate social and sexual problems?	12.5	71.3	7.8	8.5	<.0001
To discuss psychological problems?	16.5	68.0	6.5	9.0	<.0001
For a minor medical problem (eg, a cold)?	7.0	71.8	12.8	8.5	<.0001
Which of these doctors					
Would you trust the most?	7.0	80.5	8.3	4.3	<.0001
Would you be more likely to follow their advice?	6.5	82.3	7.8	3.5	<.0001
Would you have the most confidence in their diagnosis and treatment?	5.5	83.8	8.8	2.0	<.0001
Would you return for follow-up care?	4.8	81.0	8.8	5.5	<.0001
Which of these doctors would you expect to be					
More knowledgeable and competent?	9.8	80.7	7.8	1.8	<.0001
More caring and compassionate?	6.0	74.0	9.5	10.5	<.0001
More responsible?	9.0	79.5	8.3	3.3	<.0001
More authoritative and in control?	16.5	75.3	6.8	1.5	<.0001

*P values were derived from chi-squared tests for specified proportions.

Table 3 Results of the logistic regression model predicting whether or not the study participant preferred professional attire for all of the 14 preference questions

Characteristic	Odds ratio	95% confidence interval	P value
Patient characteristics			
Age	1.03	(1.01, 1.04)	<.0001
Female sex	0.87	(0.55, 1.39)	.566
African-American race	1.10	(0.68, 1.80)	.693
Education past high school	1.78	(1.08, 2.95)	.025
Born outside South Carolina	1.92	(1.16, 3.17)	.011
Importance of physician's appearance	1.76	(1.41, 2.19)	<.0001
Characteristics of physician in photographs			
African-American race	0.64	(0.40, 1.02)	.059
Female sex	3.11	(1.95, 4.98)	<.0001

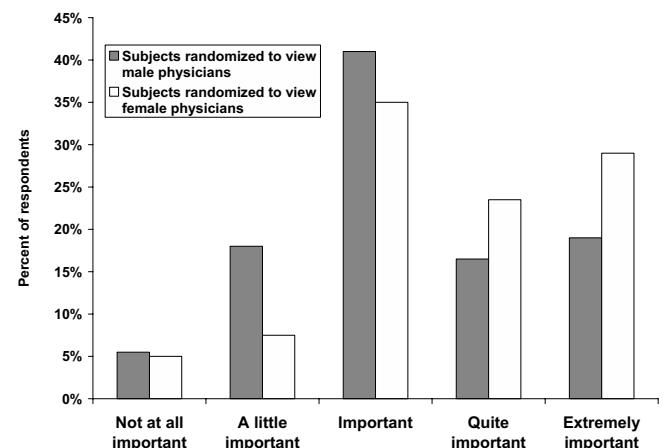
The results of the logistic regression model predicting whether or not the patient preferred professional attire in response to all 14 of the questionnaire items pertaining to attire preference are shown in Table 3. Older respondents were significantly more likely to prefer professional attire ($P < .001$). The odds of preferring professional attire was significantly greater among respondents with less than a high school education ($P = .025$), among respondents born outside of South Carolina, ($P = .011$), among respondents who feel more strongly about the importance of physician appearance ($P < .0001$), and among respondents who only viewed photographs of female physicians ($P < .0001$). No significant independent associations were noted between the professional attire preferences and patient sex or race of physician in the photographic array. However, African-American respondents placed significantly greater importance on physician appearance than did whites ($P < .0001$). Finally, respondents who viewed photographs of female physicians reported that they placed significantly greater importance on physician appearance than did respondents randomized to view photographs of male physicians ($P < .001$). A total of 82% of all subjects reported that physician appearance was important (ie, ≥ 3 on a scale from 1 [not at all important] to 5 [extremely important]) (Figure 2).

Discussion

In our study, respondents overwhelmingly favor professional attire with white coats for physicians. Our study results are similar to many other studies conducted worldwide in a variety of settings, except that none of the studies were conducted in the internal medicine outpatient setting.²⁸⁻³⁵ Our study indicated that professional attire was associated with greater patient self-reported trust and confidence. This is similar to findings reported by McNaughton-Filion and colleagues, that the style of dress is an important consideration in a patient's ability to trust a physician.³¹ However, no other study has explored the implication of physicians' appearance on respondents' readiness to discuss social, sexual, and psychological problems.

In our study, respondents felt more comfortable talking about their sexual, psychological and more personal matters with physicians who dress more professionally. Additionally, respondents expressed a greater willingness to return for follow-up to professionally dressed physicians.

Previous studies have not assessed the impact of perception of doctors' dress on patient adherence and willingness to come back for follow-up. Our data suggest that physicians dressed professionally are positively associated with respondent commitment to adhere to prescribed therapy and an expressed desire to return for follow-up visits. There were some interesting findings pertaining to the subjects' race and physicians' sex in our study. African-American respondents placed significantly greater importance on physician appearance than did whites. To a greater degree than whites, African-Americans seem to feel more trusting of well-dressed physicians than physicians who are not as well dressed. In addition, subjects who were randomized to view photographs of female physicians placed greater importance on physicians' appearance than did those who were randomized to view photographs of male physicians. One possible explanation for this finding could be that because men have traditionally been more likely than women to become physicians, respondents may feel that women physicians

**Figure 2** Respondents' ratings of importance of physician attire by sex of physician in photograph.

need to make an extra effort to appear professional, so that they are not confused with nurses, dietitians, social workers, etc (ie, professional groups that have traditionally been predominantly female). Other studies have reported similar results regarding this tendency among subjects to hold a different standard of dress for females than males.^{31,33}

It is interesting to note that for medical emergencies, most people chose professionally dressed physicians as in all other scenarios, but the second best doctor in their opinion was the one in scrubs. We don't know if this response is due to their personal past experience or due to the effects of television media portraying scrubs-clad physicians in an emergency hospital setting. Another interesting finding is that when identifying their preference for caring and compassionate physicians, respondents chose doctors in casual attire for the second rank (10.5%), after professionally dressed physicians (74%). It was believed that in certain specialties, eg, psychiatry, not wearing a white coat reflects a more compassionate rather than authoritative image of physicians to patients;³⁹ however, Gledhill et al studied inpatient psychiatric patients and reported a positive effect of white coats.³⁹

In this study, older respondents were significantly more likely to prefer professional attire ($P < .001$), which is similar to studies conducted elsewhere.^{6,28,29} We did not collect physicians' own opinions about doctor dress. In other studies when physicians were asked to note their own preferences, it was reported that doctors mostly favored the traditional dress style compared with casual items, and this difference was more marked in the older age group of physicians.^{6,28}

The limitations of our study are that it is a single-center study conducted at one VA medical center, and veterans and visitors may have chosen the professional attire due to their previous comfort level with the military uniform. Also, age of physicians may have been a confounding factor. That is, photographs in our study were showing younger-looking physicians; it is unclear whether respondents will give the same importance to the white coat if the photographs showed older physicians. The study was conducted in South Carolina, and it is possible that people in the south like more traditional attire for their physicians, and that those who live in other regions of the United States might have different preferences. We did not have enough respondents from other areas of the country and were thus not able to make meaningful regional comparisons.

This study found that when presented with a photograph of an unknown physician, before the development of a relationship or the initiation of an interpersonal interaction, respondents prefer professional attire. The survey of subjects in a waiting room looking at pictures assesses patient preferences and does not account for many other factors involved in communication in a doctor-patient encounter, such as physician demeanor, charisma, empathy, tone and volume of voice, etc. Therefore, it is uncertain that the study's findings of respondents' opinions can be extrapo-

lated to face-to-face encounters evolving in real time. Additionally, self-report data do not provide an overall gauge of adherence or behavioral change, but an intention to comply. Future longitudinal studies might address whether first impressions might lead to a change in a long-term physician-patient relationship and whether behavior follows intentions. Observing behaviors over a longer period of time would be one way to address that issue, and part of the behavior observed could include assessing whether respondents were more likely to follow their physician's advice based on their attire. The question of regional differences could be addressed by conducting surveys in different parts of the nation and among different types of patients.

Nevertheless, in this study, respondents have indicated a strong preference for physicians in professional attire with a white coat, and have shown a strong intention to trust, to comply with their recommendations, and to return for follow-up to these physicians ($P < .0001$). Respondents also expressed the most confidence in physicians wearing professional attire with a white coat ($P < .0001$).

Conclusion

Patients and visitors to an internal medicine clinic in this study were overwhelmingly in favor of doctors wearing professional dress, ie, more formal attire with a white coat. We recommend that general internists consider wearing more formal attire with a white coat during patient care encounters, because it may favorably influence trust and confidence-building in the medical encounter. This is particularly important if this attire results in better adherence and thus positive health outcomes. Further study to assess the generalizability of these findings is suggested. These studies could include conducting a multicenter study and measuring adherence behaviors and stated attitudes toward physicians wearing different attire.

Acknowledgment

We thank Scott Stewart, MD; Sarah Melissa Mahoney, MD; Jerome Simmons, and Erica Hanesworth, Pharm D for modeling for photographs. We thank Mary Nashed, MB, and M. Hadi Ali Baig, MBBS, for assistance with logistics of the study. We are also thankful to John C. Baroody of Medical Media of Ralph H. Johnson V.A. Medical Center for his help in photographing our models.

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