

Patients' attitudes toward the attire of male physicians: a single-center study in Saudi Arabia

Mohammad Ali Batais

From the Department of Family and Community Medicine, King Saud University, Riyadh, Saudi Arabia

Correspondence: Dr. Mohammed Ali Batais · Family and Community Medicine, King Saud University, Riyadh 29391, Saudi Arabia · M: +966554666634 · drmohammed34@gmail.com

Ann Saudi Med 2014; 34(5): 383-389

DOI: 10.5144/0256-4947.2014.383

BACKGROUND AND OBJECTIVES: The doctor–patient relationship has been influenced by the appearance of physicians, and there is an association between a physician's physical appearance and the patients' initial perceptions of physician competence. This study aims to explore patients' preferences toward the attire of a male physician, and to examine if a physician's choice of uniform influences the degree of trust, confidence, and follow-up care among respondents.

DESIGN AND SETTINGS: A cross-sectional survey conducted among patients of the Alwazarat family medicine center in Riyadh, Saudi Arabia.

PATIENTS AND METHODS: A self-administered questionnaire was completed by 300 patients (50% were male and 83.6% had received a secondary education; the mean age was 33.4 [10.1] years) in the Alwazarat family medicine center in Riyadh. The questionnaire was also customized for the local setting with the inclusion of photos of a male doctor in Saudi Arabian national costume, and 3 other dress styles (Western dress with white coat, scrubs with white coat, and scrubs only).

RESULTS: Overall, across all questions regarding physician dress style preferences, participants significantly preferred Western dress (39.9%, $P < .001$), followed by Saudi national dress (26.3%), a scrub suit with a white coat (22.3%), and scrubs only (11.5%). Respondents reported that they were more likely to follow medical advice and would return for follow-up care if a physician wore Western dress. They were significantly more willing to share their social, sexual, and psychological problems with a physician wearing Saudi national dress ($P < .001$). The importance of a physician's appearance was ranked significantly higher by older patients ($P = .002$).

CONCLUSION: Respondents were more likely to favor a physician wearing Western attire with a white coat. However, Saudi national dress, followed by Western dress, is the preferred attire when physicians are dealing with social, sexual, and psychological problems.

The doctor–patient relationship is central to the practice of medicine and is essential for the delivery of high-quality health care in the diagnosis and treatment of disease.¹ The importance of a physician's attire 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.”¹

An association between a physician's physical appearance and the patients' initial perceptions of physician competence has been documented.^{2,3} Patients might feel more comfortable with the particular attire

of a physician, leading to improved communication, which is fundamental to high-quality care. Factors such as cultural differences in what is perceived to be appropriate attire and the place and time of the doctor–patient interaction can all affect a physician's opinion of appropriate attire.^{4,5} Furthermore, physicians in each culture often adopt their local attire; for example, Saudi Arabia has a unique national dress, very similar to that of other Gulf countries, which differs from the traditional dress throughout the world. Some Saudi physicians still wear their national dress in their daily practice.⁶ In many parts of the world, patients prefer

Western dress, such as a white coat and tie, for male doctors, while others prefer casual dress.^{7,8} Regardless of how physicians dress, they should maintain their professional integrity by adopting a standard of attire consistent with their cultural customs.⁶ Numerous studies have assessed the impact of a physician's attire on patients' satisfaction, confidence, trust, and belief in a doctor's professionalism, in both outpatient and inpatient settings.^{7,9-12} Patient preferences in relation to a physician's attire vary depending on a doctor's specialty and the clinical setting. For instance, studies conducted in medical outpatient clinics found that respondents overwhelmingly favored physicians in Western dress, wearing items such as a white coat,^{6,13} while those conducted in surgical outpatient clinics showed that patients revealed no preference in regard to their surgeon's attire.¹⁰ However, studies carried out in family medical settings revealed conflicting evidence: some data showed that patients seemed to favor a male doctor wearing a formal suit and tie,^{3,14} while others showed that the doctor's appearance had no effect on the choice of family physician and satisfaction.¹⁵⁻¹⁷ In an extensive, Internet-based review of published reports, we found that no local study has assessed the opinion of patients in family medicine clinics in Saudi Arabia regarding their physician's attire. There was 1 local study, conducted by Al-Ghobain et al in Saudi Arabia, which showed that 62% of patients preferred their male physicians to wear formal attire with a white coat, and only 9.7% preferred the Saudi national attire.⁶ However, this study was conducted only in medical outpatient clinics and did not evaluate the influence of a physician's varied attire on patient's compliance and follow-up care; therefore, it appeared worthwhile to conduct a local study in a different setting to address this issue. This study is the first local study to do so in a family medicine setting in Saudi Arabia. Our study is concerned with whether patients attending family medicine clinics prefer 1 style of dress, such as the Saudi national dress (thub and shmaq) compared to other styles, and also whether the physician's style of dress affects respondents' trust, confidence, and follow-up care. Our objective was to explore patients' preferences in relation to the attire of male physicians, and to examine if a physician's clothing influences the degree of confidence, compliance, and follow-up care among respondents.

PATIENTS AND METHODS

This is a descriptive cross-sectional study conducted among patients of the Alwazarat family medicine center in Riyadh. This center provides comprehensive pri-

mary care services for all age groups and both genders through its general clinics, chronic disease clinics, well-baby clinics, mental health clinics, well-women clinics, and an emergency care facility. It is staffed by more than 55 well-trained family medicine physicians of different nationalities (around 8-10 of them are Saudi). There is no fixed dress code, and patients may encounter physicians wearing different dress styles such as the Saudi national dress (thub and shmaq), Western dress (shirt and tie with white coat), scrubs with a white coat, and scrubs only. This variation makes the center an excellent place to conduct the study.

A pilot study was conducted in the Alwazarat center using an Arabic questionnaire distributed to 30 patients. The sample size was calculated based on the results obtained in the pilot study. The calculation of the total sample size was based on 80% power and a 5% significance level to detect significant differences across 4 groups. This gave us a sample of 289 respondents. Taking into account the nonresponse rate of 15% established in our pilot study, the survey questionnaire was distributed among 340 patients.

A self-administered questionnaire was distributed to male and female adult patients sitting in the waiting area. Questionnaires were completed before the time of the consultation. The waiting area in the Alwazarat center has 2 separate sections: 1 for males and another for females. This made achieving equal distribution of the questionnaires easier. Three physicians, residents of family medicine and trained in conducting research, performed the data collection. The physicians had undergone 3 months of research training during the third year of their residency program. They collected the data during the working hours of 8:00 AM to 4:00 PM, from February to March 2012.

All Saudi adult patients who attended the Alwazarat family medicine center in Riyadh were included, while those who were blind, noncommunicative due to severe illness, or severely demented were excluded from this study.

We used a valid and reliable questionnaire originally created by Rehman et al.¹³ The questionnaire has a reliability of 90%. The questionnaire was originally published in English. The author of the original questionnaire granted permission to use it. We used the translation-retranslation method to ensure accuracy. Initially, 2 certified Arab translators translated the questionnaire from English into Arabic; this was followed up by the questionnaire being translated back from Arabic into English by another 2 certified Arab translators. Two expert researchers in instrument development assessed the validity of the questionnaire

content at all phases of the translation–retranslation process. The original English version and the new, back-translated version retained the meaning in all sections with one exception: race was omitted from the demographic section because the concept of race in Saudi Arabia is different from that in the original questionnaire. The Arabic version was distributed to 10 doctors and nurses to assess clarity and ease of use. They did not report any difficulty understanding the survey questions. The reliability coefficient of the Arabic version of the questionnaire was 90.4%.

The questionnaire consists of 2 sections. The first section includes demographic data for each individual. In addition, the section includes patients' preferences for the different dress styles of doctors in several situations, as well as questions about their confidence and trust in discussing sensitive issues with physicians. The second section of the questionnaire includes questions about how important a doctor's appearance is. In the questionnaire, each patient was asked to report their preference for each of the 4 styles of dress, as well as their trust, confidence, and willingness to discuss their social, sexual, and psychological problems with the doctor in each of the photographs. Also, these patients were asked which doctor's advice they would be more likely to follow and whether they would return for follow-up care. Furthermore, subjects rated how strongly they felt about the importance of their physician's appearance.

One of the cultural issues we encountered was that we were unable to use photographs of female doctors. We also needed to include a photograph of a physician wearing the Saudi national dress. Therefore, we could not use the photos that were attached to the original questionnaire. These comprise 4 sets of photographs (white male doctor, African American male doctor, white female doctor, and African American female doctor), with each set containing 4 photos of the same doctor wearing different attire. Instead, we created new photographs. Four photographs of the same male doctor wearing different outfits were taken and included in the questionnaire. To avoid confounding, we used the same background, hairstyle, physical appearance (except for attire), facial expression, and presence of the stethoscope in all photos. Thus, the only difference between the photographs was the physician's dress style.

Each participant was exposed to 4 pictures of the same male doctor, dressed in one of the following styles (Figure 1).

1. Western dress (shirt, neck tie, and white coat)
2. Surgical scrubs with white coat
3. Surgical scrubs only
4. The Saudi national dress (thub and shmaq)

The statistical software package IBM SPSS version 22 was used to analyze the data (IBM Corporation, Armonk, NY, USA). The reliability coefficient (Cronbach's alpha) was obtained to evaluate the questionnaire's reliability. Using a chi-square test, participants' preference of a doctor's attire among 4 different styles was compared for each of the 14 preference questions. The average preference of the 14 preference questions for each of the 4 different styles was calculated and then compared using the Kruskal–Wallis test. Also, a chi-square test was used to evaluate the association between some selected questions (eg, physicians wearing a white coat and the importance of the physician's appearance) across each respondent's age group, gender, and education level. A multiple logistic regression analysis was also performed to identify patient and physician characteristics that were significantly related to the preference of Western attire. In the logistic

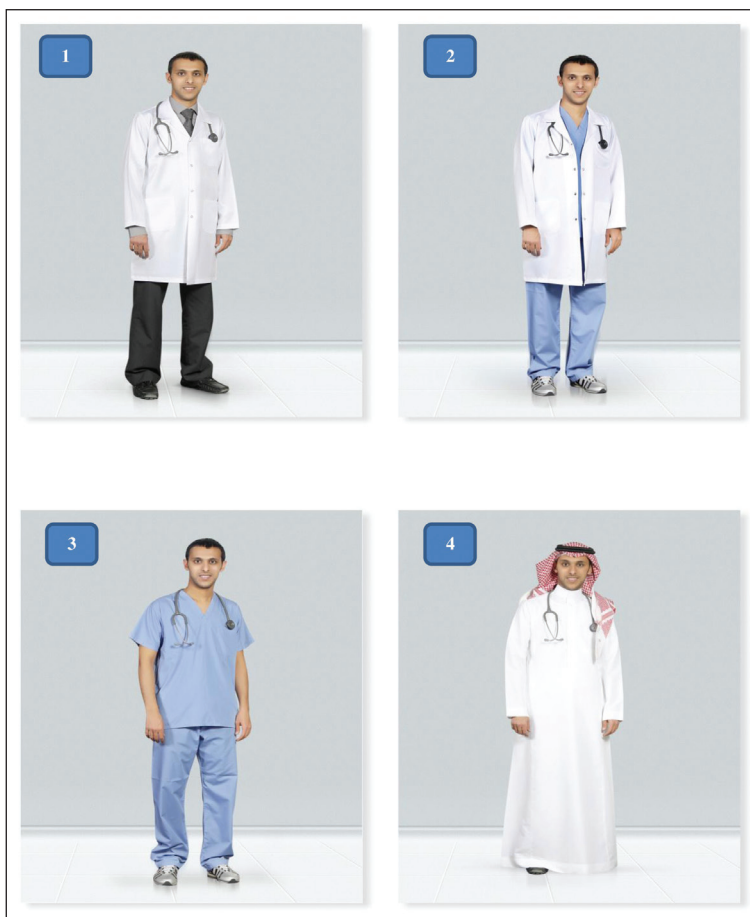


Figure 1. Photos of a male physician included in the questionnaire in the following 4 styles of dress show: (1) Western dress (shirt, neck tie and white coat); (2) Surgical scrubs with white coat; (3) Surgical scrubs only; (4) Saudi traditional dress (thub and shmaq).

regression model, age and importance of the physician's appearance were analyzed as continuous and ordinal variables, respectively. The results of the logistic regression analysis were presented as odds ratios (OR) and their respective 95% confidence intervals (CI). All statistical tests were considered significant at $P \leq .05$. The research committee at Alwazarat family medicine center approved the study. The ethical review board at the center was also contacted, and agreement and approval were given. Verbal consent to take part in the study was obtained from all participants, and they were assured about the confidentiality of the data.

RESULTS

A total of 340 questionnaires were distributed from February-March 2012, with 311 patients agreeing to participate in the study (response rate: 91.4%). Of the 311 patients who participated, complete questionnaire responses were returned by 300 patients, and these were subsequently used in the analysis. Of the

patients who returned a survey, 150 (50%) were male patients. The overall questionnaire reliability coefficient (Cronbach's alpha) was 90.4%. The patients' ages ranged between 15 and 79 years, with a mean age of 33.4 (standard deviation 10.1) years. Most of the participants had at least received a secondary education (83.6%).

Table 1 presents the responses from each of the preference questions about the doctors' attire. On average, across all 14 preference questions, 39.9% of the respondents preferred Western dress, followed by Saudi national dress (26.3%), scrubs with a white coat (22.3%), and scrubs only (11.5%) ($P < .001$). In the context of physical examination, Western dress was the preferred style for 121 patients (40.3%), followed by scrubs with a white coat in 100 patients (33.3%), scrubs only in 51 patients (17%), and Saudi national dress in 28 patients (9.3%) ($P < .001$). Although "scrubs only" was the least favored attire in general, this was not the case in emergencies: 122 respondents (40.7%) preferred that a phy-

Table 1. Comparison of patient preferences in relation to a doctor's attire.

Item	Preferred attire				P value
	Photo 1 N (%)	Photo 2 N (%)	Photo 3 N (%)	Photo 4 N (%)	
Average percentage for all of 14 items	39.9	22.3	11.5	26.3	<.001
Which would you prefer:					
For a routine physical examination?	121 (40.3)	100 (33.3)	51 (17)	28 (9.3)	<.001
To be your family doctor?	127 (42.3)	67 (22.3)	19 (6.3)	87 (29)	<.001
For an emergency (eg, heart attack)?	82 (27.3)	72 (24)	122 (40.7)	24 (8)	<.001
To discuss intimate social and sexual problems?	100 (33.3)	52 (17.3)	20 (6.7)	128 (42.7)	<.001
To discuss psychological problems?	94 (31.3)	49 (16.3)	15 (5)	142 (47.3)	<.001
For a minor medical problem (eg, a cold)?	117 (39)	91 (30.3)	39 (13)	53 (17.7)	<.001
Which of these doctors:					
Would you trust the most?	125 (41.7)	67 (22.3)	23 (7.7)	85 (28.3)	<.001
Would you be more likely to follow their advice?	129 (43)	64 (21.3)	20 (6.7)	87 (29)	<.001
Would you have the most confidence in regarding their diagnosis and treatment?	140 (46.7)	62 (20.7)	23 (7.7)	75 (25)	<.001
Would you return to for follow-up care?	136 (45.3)	65 (21.7)	22 (7.3)	77 (25.7)	<.001
Which of these doctors would you expect to be:					
More knowledgeable and compliant?	143 (47.7)	64 (21.3)	17 (5.7)	76 (25.3)	<.001
More caring and compassionate?	111 (46.3)	64 (21.3)	37 (12.3)	88 (29.3)	<.001
More responsible?	139 (46.3)	54 (18)	27 (9)	80 (26.7)	<.001
More authoritative and in control?	113 (37.7)	66 (22)	46 (15.3)	75 (25)	<.001

Notes: See Figure 1 for photos used. Abbreviation: N: number.

sician wear only scrubs when managing an emergency situation.

The respondents stated that those who wore Western or Saudi national attire are more knowledgeable, competent, caring, responsible, and authoritative. Among respondents, 127 patients (42.3%) preferred their family doctor to wear Western dress, followed by Saudi national attire in 87 patients (29%), surgical scrubs with a white coat in 67 patients (22.3%), and surgical scrubs only in 19 patients (6.3%) ($P < .001$). In the contrary, participants were significantly more willing to share their social, sexual, and psychological problems with a physician wearing Saudi national dress (thub and shmaq) as opposed to Western dress (social and sexual: $P < .001$, psychological: $P < .001$). However, there was no gender difference in terms of preference when talking about social, sexual, and psychological problems, or between the average preferences of the 14 questions ($P = .30$). Trust and confidence, however, were significantly associated with a preference for Western dress, followed by Saudi national attire. When attended by a physician in Western dress, 129 patients (43%) would be more likely to follow medical advice and 136 patients (45.3%) would return for follow-up care ($P < .001$).

Table 2 presents the analysis of associations between physicians wearing a white coat and the gender, age group, and education level of respondents. The results show that none of these variables are significant. The analysis results for an association between the importance of a physician's appearance and the respondent's gender, age, and education level were also presented in **Table 3**. The importance of physician appearance was found to be significantly associated with age ($P = .002$), but no significant association was found with gender ($P = .145$) or education level ($P = .171$).

Table 4 presents the results of the multiple logistic regression analysis, which predicts whether a patient preferred Western dress in response to all 14 of the survey items. Older respondents were significantly more likely to prefer Western dress (OR=1.066, 95% CI: 1.01–1.12; $P = .02$). The odds of preferring Western dress was significantly higher among respondents who felt more strongly about the importance of physician appearance (OR=2.914, 95% CI: 1.14–7.44; $P = .03$). No significant associations were found between Western dress and patient gender (OR: 1.069, 95% CI: 0.43–2.65; $P = .89$) or education level (OR=1.722, 95% CI: 0.56–5.33; $P = .35$).

DISCUSSION

In this study, respondents strongly preferred a physician

Table 2. The association between patient demographics (gender, age, education level) and responses toward physicians wearing a white coat.

Respondent's demographic	Preference of wearing white coat			P value
	Strongly agree	Agree	Does not matter/disagree/strongly disagree	
Gender				
Male	81 (54%)	44 (29.3%)	25 (16.7%)	.438
Female	92 (61.3%)	37 (24.7%)	21 (14%)	
Age (years)				
<30	59 (53.2%)	31 (27.9%)	21 (18.9%)	.134
30 to <50	99 (58.2%)	49 (28.8%)	22 (12.9%)	
50 and above	15 (78.9%)	1 (5.3%)	3 (15.8%)	
Education				
Secondary or below	91 (57.6%)	42 (26.6%)	25 (15.8%)	.964
Postsecondary	82 (57.7%)	39 (27.5%)	21 (14.8%)	

in Western dress with a white coat, and they were more likely to trust, follow advice, comply with recommendations, and return for follow-up care when associating with these physicians. Our patients believe that style of dress is an important consideration in a patient's ability to trust a physician. Interestingly, when discussing their psychosocial and sexual issues, our patients preferred a physician in the Saudi national dress, followed by a physician wearing Western dress. Moreover, we found that patients in older age groups were more likely to prefer Western dress.

Our findings are in agreement with different studies conducted in many clinical settings worldwide.^{3,6,7,12-14} Moreover, our results align with studies conducted in family medical settings. The earliest study, carried out by McKinstry et al³ in a general practice setting, found that a majority of 475 patients seemed to favor a male doctor wearing a formal suit and tie. A study by Keenum et al¹⁴ in a family practice setting, comprising 496 patients, found that the overall study population favored a formal (shirt and tie) over a casual appearance for a family physician.

The relationship between a physician's attire and patients' willingness to discuss social, sexual, and psychological problems was only explored by Rehman et al.¹³ In this study, 400 patients surveyed in the waiting room of an internal medicine outpatient clinic revealed that the respondents felt more comfortable talking about their sexual, social, and psychological issues with doc-

Table 3. The relationship between patients' demographics (gender, age, education level) and the importance of their physician's appearance.

Respondent's demographic	Importance of physician's appearance			P value
	Extremely important	Quite important/important	Little importance/not at all important	
Gender				
Male	83 (55.3%)	50 (33.3%)	17 (11.3%)	.145
Female	66 (44%)	62 (41.3%)	22 (14.7%)	
Age (y)				
<30	47 (42.3%)	40 (36%)	24 (21.6%)	.002
30 to <50	87 (51.2%)	68 (40%)	15 (8.8%)	
50 and older	15 (78.9%)	4 (21.1%)	0 (0.0%)	
Education				
Secondary or below	75 (47.5%)	57 (36.1%)	26 (16.4%)	.171
Postsecondary	74 (52.1%)	55 (38.7%)	13 (9.2%)	

Table 4. Multiple logistic regression analysis for predicting whether the study participants preferred Western attire for all of the 14 preference items in the survey.

Patient characteristics	Odds ratio	95% confidence interval	P value
Age ^a	1.066	1.01–1.12	.02
Gender			
Male (ref)	–	–	–
Female	1.069	0.43–2.65	.89
Education			
Secondary or below (ref)	–	–	–
Postsecondary	1.722	0.56–5.33	.35
Importance of physician's appearance ^a	2.914	1.14–7.44	.03

^aThese variables were considered as continuous and ordinal, respectively, in the multiple logistic regression analysis.

Abbreviation: ref: Reference (for categorical covariate in logistic regression analysis, one of the categories is considered as reference category. Then the odds ratio [OR] calculated for each of the other categories with respect to the reference category).

tors in Western dress. However, our results showed that Saudi patients preferred their male physicians to wear the Saudi national attire when they discussed their psychosocial issues, followed by a physician in Western dress. One possible explanation for this finding can be attributed to the cultural background of respondents,

and also to the wide distribution of images in the media of psychiatrists and psychologists wearing the Saudi national dress.

Saudi local attire has been addressed by only 1 study, conducted in medical outpatient clinics, which showed that a majority of Saudi patients preferred a Saudi physician to wear formal attire, and only 9.7% of patients preferred Saudi national attire.⁶ Our results are similar; however, the Saudi national attire was more popular in a family medicine setting (26.3%). This could explain how a patient's preference for particular attire varies according to the specialty and clinical setting.¹⁷ For instance, in a study in an outpatient obstetrics and gynecology setting, a physician's dress did not influence patients' comfort levels, and patients preferred the white coat with surgical scrubs, as this exemplified a physician's competence.¹⁸ In another study conducted in outpatient surgical clinics, surgeons' clothing choice did not significantly influence respondents' opinions of the care they received, and the respondents had no preferences for white coats or more traditional surgical attire.¹⁰ Likewise, a majority of Scottish patients preferred that their ear, nose, and throat surgeons did not wear a tie.¹⁹ Also, several other studies reported that patients may not prefer their physician to wear a particular attire.^{20,21} In contrast to these results, some previous studies found that the style of dress was an important consideration in a patient's ability to trust a physician.^{4,5,13}

The variability of these results highlights the difficulty in generalizing findings from 1 health care setting or specialty to another. Our findings were similar to a study by Rehman et al, in which respondents were more likely to follow advice, were more committed to adhere to prescribed therapy, and were more likely to return for follow-up care when their physicians were professionally dressed in Western attire with a white coat.¹³ Additionally, respondents' trust and confidence regarding diagnosis and treatment were higher when they were the patient of a Western-dressed physician.¹³ This can be explained by the idea that Western attire reflects medical professionalism and that such attire is necessary to earn patients' trust and confidence. Moreover, we noted that most graduate doctors (residents, registrars, and consultants) wear this dress during their daily practice, in contrast with medical students, giving patients the notion that Western attire is associated with expertise and knowledge.

This study had some limitations. First, it was a single-center study conducted at 1 family medical practice in Riyadh. It is possible that patients were comfortable with Western attire and therefore found it preferable due to their previous experience with physicians at

the medical practice who tend to wear Western dress rather than other attire. Thus, further studies in different settings and regional areas are recommended. Additionally, the age of the person whose photograph was included in the questionnaire might be a confounding factor. The photograph in the questionnaire showed a young-looking doctor. We are not sure whether the respondents' preferences would have been the same if the photographs had shown an older doctor. In most of the previous studies conducted worldwide, the results showed a tendency among respondents to hold males and females to a different standard of dress; these studies included photographs of both male and female physicians.^{13,22,23} We did not include photographs of female doctors because of cultural issues. The surveys were completed in the waiting area, and for all respondents, the photographs presented an unknown physician with whom they had not developed any doctor-patient relationship. The subjects looked at the photographs to assess their preferred dress without considering other factors involved in doctor-patient encounters, such as a physician's language, charisma, use of verbal and non-verbal communication skills, and empathy. However, it still remains unclear whether these factors could have affected our findings. Future studies are recommended to observe the effect of other factors in doctor-patient relationships, and whether a respondent's preference in

terms of a physician's attire would change if such factors were included. In addition, the responses might have been different if the color of the surgical scrub displayed in the photograph was green instead of blue.

In conclusion, a male family physician should consider wearing Western dress with a white coat during daily practice because this has been shown to positively influence trust and confidence in patients and to promote follow-up care. This, in turn, can also positively affect the overall doctor-patient relationship. We recommend that family physicians who work in settings that focus on psychosocial problems consider wearing the Saudi national dress, followed by the Western attire. Our results might be transferable to other family medicine settings in Saudi Arabia. However, they might not be generalizable to other medical specialties within Saudi Arabia or to cultural settings outside Saudi Arabia.

Acknowledgments

I would like to thank Dr Lubna Al-Ansary for her assistance and guidance in this research project. Furthermore, I would like to express my gratitude to Dr Rehman SU who provided us with the tool for data collection, and Dr Baki Billa (Monash University, Australia) for his statistical expertise. This project was supported by the College of Medicine Research Centre, Deanship of Scientific Research, King Saud University, Riyadh, Saudi Arabia.

REFERENCES

- Jones WHS (trans). Hippocrates, Volume II. Cambridge, Massachusetts: Harvard University Press. 1923; 311-312.
- Chung H, Lee H, Chang DS, et al. Doctor's attire influences perceived empathy in the patient-doctor relationship. *Patient Educ Couns*. 2012;89(3):387-391.
- McKinstry B, Wang JX. Putting on the style: what patients think of the way their doctor dresses. *Br J Gen Pract*. 1991;41(348):270, 275-270, 278.
- Maruani A, Léger J, Giraudeau B, et al. Effect of physician dress style on patient confidence. *J Eur Acad Dermatol Venereol*. 2013;27(3):e333-e337.
- Kurihara H, Maeno T, Maeno T. Importance of physicians' attire: factors influencing the impression it makes on patients, a cross-sectional study. *Asia Pac Fam Med*. 2014;13(1):2.
- Al-Ghobain MO, Al-Drees TM, Alarifi MS, Al-Marzoug HM, Al-Humaid WA, Asiry AM. Patients' preferences for physicians' attire in Saudi Arabia. *Saudi Med J*. 2012;33(7):763-767.
- Sotgiu G, Nieddu P, Mameli L, et al. Evidence for preferences of Italian patients for physician attire. *Patient Prefer Adherence*. 2012;6:361-367.
- Lill MM, Wilkinson TJ. Judging a book by its cover: descriptive survey of patients' preferences for doctors' appearance and mode of address. *BMJ*. 2005;331(7531):1524-1527.
- Khanfar NM, Zapantis A, Alkhateeb FM, Clauson KA, Beckey C. Patient attitudes toward community pharmacist attire. *J Pharm Pract*. 2013;26(4):442-447.
- Edwards RD, Saladyga AT, Schriver JP, Davis KG. Patient attitudes to surgeons' attire in an outpatient clinic setting: substance over style. *Am J Surg*. 2012;204(5):663-665.
- Gooden BR, Smith MJ, Tattersall SJ, Stockler MR. Hospitalised patients' views on doctors and white coats. *Med J Aust*. 2001;175(4):219-222.
- Kanzler MH, Gorsulowsky DC. Patients' attitudes regarding physical characteristics of medical care providers in dermatologic practices. *Arch Dermatol*. 2002;138(4):463-466.
- Rehman SU, Nietert PJ, Cope DW, Kilpatrick AO. What to wear today? Effect of doctor's attire on the trust and confidence of patients. *Am J Med*. 2005;118(11):1279-1286.
- Keenum AJ, Wallace LS, Stevens AR. Patients' attitudes regarding physical characteristics of family practice physicians. *South Med J*. 2003;96(12):1190-1194.
- Anvik T. Doctors in a white coat—what do patients think and what do doctors do? *Scand J Prim Health Care*. 1990;8(2):91-94.
- Menahem S, Shvartzman P. Is our appearance important to our patients? *Fam Pract*. 1998;15(5):391-397.
- Hueston WJ, Carek SM. Patients' preference for physician attire: a survey of patients in family medicine training practices. *Fam Med*. 2011;43(9):643-647.
- Cha A, Hecht BR, Nelson K, Hopkins MP. Resident physician attire: does it make a difference to our patients? *Am J Obstet Gynecol*. 2004;190(5):1484-1488.
- Hathorn IF, Ross SK, Cain AJ. Ties and white coats, to wear or not to wear? Patients' attitude to doctors' appearance in the otolaryngology outpatient clinic. *Clin Otolaryngol*. 2008;33(5):505-506.
- Niederhauser A, Turner MD, Chauhan SP, Magann EF, Morrison JC. Physician attire in the military setting: does it make a difference to our patients? *Mil Med*. 2009;174(8):817-820.
- Toquero L, Aboumarzouk O, Owers C, Chiang R, Thiagarajah S, Amin S. Bare below the elbows—the patient's perspective. *WebmedCentral Quality and Patient Safety* 2011;2(4):WMC001401.
- Gjerdingen DK, Thorpe W, List-Holt P. The physician's appearance and professionalism. *Resid Staff Physician*. 1990;36(11):65-66, 71.
- McNaughton-Filion L, Chen J, Norton PG. The physician's appearance. *Fam Med*. 1991;23(3):208-211.