ORIGINAL RESEARCH

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Dress and deportment of medical residents: Formal or informal?

Abstract

Purpose: Health care workers, including physicians, have adopted more casual dress. The appearance of a physician may influence patients' opinion of physician knowledge, competence and trustworthiness. We hypothesized that medical inpatients and outpatients would rate these attributes higher in residents who dressed and acted in a more formal manner.

Methods: Prospective cohort included both inpatients and outpatients. One hundred thirty three patients, aged 62.3 ± 16 years, 49% of whom were female, were surveyed. One of two male resident physicians approached each patient, ostensibly to obtain consent to a brief mini-mental status examination. The physician was dressed, and acted, either "formally" (F) or "informally" (I). Patients then completed a six item questionnaire, using a 5 point Likert scale, to assess their confidence in the resident. Total scores could be 6 to 30. Total scores were compared using one-way ANOVA.

Results: Patients' perceptions were high for both F and I: 25.5 ± 3.1 vs. 24.1 ± 3.0 , respectively ($p=0.013$). This difference was driven by the "labcoat" question: patients generally preferred physicians to wear a labcoat (3.9 ± 1.0 vs. 2.8 ± 1.3 , $p<0.0001$). Responses to four of the other five questions were numerically, but not statistically, higher in F. There was no difference in preference between the two residents: 24.6 ± 2.8 vs. 24.9 ± 3.5 , $p=0.56$.

Conclusion: More formal dress and demeanor by residents leads to a modest, but significant, increase in patient perception of the resident's value. Wearing a white lab coat, in particular, has a positive effect.

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FIGURE 1. Photographs of residents.

Many internal medicine training programs have dress codes for residents. Ours dictates a shirt and tie for men and a clean white lab coat for all. The origins of such codes are ancient. The earliest shamans donned distinctive gear as did physicians in Hippocrates time [1].

Several studies, using pictures, have confirmed that patients prefer a more formally dressed physician, and that such dress inspires confidence [1,2,3]. Arguments against such formal dress include comfort, and clothing including neckties, as a source of infection [4]. Indeed the United Kingdom Department of Health issued an edict banning neckties from hospitals in 2007. This has led to a backlash [5], suggesting that informal attire may actually increase infection rates while damaging the professional image of physicians.

In the past decades there has been a trend toward less formal dress for most health care professionals including physicians [6]. Indeed, when this paper's most senior author (TWW) trained in the 1960's, a shirt and tie distinguished a resident from an intern.

In our training program, several residents have questioned the value of formal dress and behaviour; therefore, we undertook to test the hypothesis that formal dress and manner are of importance to patients.

Methods

The protocol and consent form were approved by the University of Saskatchewan Behavioral Research Ethics Board.

Subjects

Stable patients, in inpatient medical wards, outpatient departments or the hemodialysis centre from a tertiary care centre and an urban community hospital were approached for the study. Patients who were unstable, whose main language was not English, or who were felt to be mentally incompetent by nursing staff were excluded from the study. The resident asked eligible patients to participate in a research study testing mental capacity and to sign a consent form. Interviews took place during normal weekday working hours.

Protocol

Two residents each interviewed 66 or 67 patients; one half in a "formal" mode; the other "informal" (Figure 1). They wore name tags for all. For the formal interview, the resident was dressed in a shirt, tie and white lab coat, called the patient by his or her surname, and introduced himself as "Dr. Reid (or Makinde); I'm a resident in internal medicine". For the informal interview, the resident was dressed in an open necked shirt, called the patient by his or her first name, and introduced himself as "Dave (or Ken), a resident". Both interviews concluded with the mini-mental status examination. The resident thanked the patient for participating, and then left. Nursing staff then asked the patient to fill out a questionnaire, consisting of six declarative statements and a 5 point-scale, from "strongly disagree" to "strongly agree". The statements were: 1) This doctor has lots of knowledge; 2) I felt comfortable talking to this doctor; 3) This doctor could help me get the help I need; 4) I trust this doctor; 5) This doctor is very professional; and, 6) I prefer a doctor who wears a white coat.

All patients were urged to assess all six statements. Following this, the patient was debriefed, the true purpose of the study was explained to them and they were assured that their mini mental status examination results would be destroyed.

Analysis

Our main outcome variable was the sum of all responses to the questions posed; therefore, the minimum score was 6 and the maximum was 30 for each patient. The standard deviation was estimated to be 6, and a clinically significant difference between groups was estimated to be 3; thus, 63 patients in each of

the formal and informal groups were needed to show a difference at $p < 0.05$ with 80% power.

Where responses to specific statements were missing, we imputed the data as the average of all completed statements.

A one way ANOVA was used to compare the two groups. Exploratory analyses included two way ANOVAs looking for interactions among the total score and patient sex, age and resident.

Results

Of 197 eligible patients approached, 133 consented to be included in the study. Their average age was 61.0 ± 16.5 years and 49% were women. Most had several medical diagnoses; the commonest being hypertension, diabetes, chronic obstructive pulmonary disease and chronic kidney disease. All completed the study.

Total scores are shown in Figure 2. Scores for residents acting and dressing more formally were higher than those acting and dressing informally: 25.5 ± 3.1 vs. 24.1 ± 3.0 , $p = 0.013$. This difference was driven by the “white coat” statement (“I prefer a doctor who wears a white coat”). Deleting that statement reduced the difference between modes to insignificance.

There was no interaction between total score and sex or age of subject. There was no difference between the scores of the two residents: 24.6 ± 2.8 and 24.9 ± 3.5 .

Discussion

These results confirm earlier studies that suggest that more formal attire and behaviour in a physician inspire greater confidence in patients. Although patients' confidence in our residents was high, acting and appearing in a more formal manner, increased it further. The wearing of a white lab coat was most important. A possible reason for this is that the white coat characterizes a physician. Being able to identify health care workers by their clothing appears to be important to patients. A Nova Scotia survey found that 84 percent of respondents stated that being able to identify a health care professional by their clothing increases their confidence in that worker [7]. The Nurses Union subsequently adopted a standard uniform for nurses.

Strengths of our study include the use of actual residents, rather than pictures of residents or physicians [1,8]. In addition, a mild ruse was used, so that patients would believe they were in a real clinical encounter, thus avoiding a Hawthorne effect [9]. Finally, a moderately large number of patients, who were either hospitalized or attending a hospital outpatient department or hemodialysis unit, were interviewed, and this

FIGURE 2. Mean scores for six questions (see Methods). Error bars are standard error. $n = 67$, informal; 66 , formal.

group of patients is representative of the type of patients seen by internal medicine residents.

Limitations include our use of only two male residents, while almost half of our cohort of residents is female. Previous studies have shown no consistent difference inpatients' perception of male and female physicians [1,8]. Our study involved only internal medicine residents; other services may differ. Boon and Wardrope, emergency physicians, found that wearing “scrubs” or shirt and tie, made no difference in perception of physicians among patients attending for minor problems [10]. Similar neutral results were found for anesthesiologists [11] and surgeons [12]. A validated questionnaire could not be found; therefore, we developed our own. It appears to successfully mirror patient preferences. Finally, our exposure of the doctors to the patients was somewhat complex, including both attire and behaviour and it is, therefore, difficult to separate these two aspects of formal/informal presentation. However, our finding that patients stated a preference for doctors to wear a white lab coat suggests that attire is important.

In summary, our dress code likely has a small but measurable benefit in increasing patient confidence in our residents. Given that previous studies have shown that good hygiene (hand washing) is likely more important than changing clothing in preventing the spread of infection [5], our training program will maintain our current, more formal dress code.

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