



The White Coat and the Physician; a Snapshot of the Physicians' Perspective

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Authors' contributions

This work was carried out in collaboration between all authors. Authors JMC, HAO and PM designed the study, wrote the protocol, and wrote the first draft of the manuscript. Author JMC managed the literature searches while author IO did the analyses. All authors read and approved the final manuscript.

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ABSTRACT

Background: The white coat is synonymous with medical profession and helps for easy identification by patients and colleagues.

Objectives: The objective of this study is to determine doctors' perception on mode of dressing of

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their colleagues, especially wearing of white coats and its influence on the well being of their patients.

Methods: A structured self administered questionnaire was used to collect information from the doctors of all carder in the hospital during the study period. Three photographs, a man with corporate attire and tie without ward coat and the same man with corporate attire and tie with a white coat and same man with casual dressing, were shown to the doctors, and were asked which of the three pictures they would like a doctor to dress.

Results: Majority 200 (72.5%) of the respondents had a white coat on as at the time they were filling the questionnaire while only 76 (27.5%) were not putting on lab coat. Also 202 (75.9%) of the respondents are of the opinion that a doctor should always put on shirt, tie and trouser with a white covering lab coat. Most 76 (35.68%) of those who supported the opinion suggested that the white coat protects the doctors/or their families as their reason.

Conclusion: White coats were seen as the most appropriate dress code for doctors, regardless of gender. Low ranked doctors however wear the white coat more than high ranked ones. Furthermore the type of clothing and accessories used by physicians (physician dressed on shirt, tie and trousers with a white covering lab coat) has a positive influence on physician-patient relationship.

Keywords: Doctors; white coat; dressing.

1. INTRODUCTION

The influence of clothing on people cannot be overemphasized. In fact it has been said that you are addressed the way you dress. The white coat is synonymous with medical profession since the mid-19th century when it was borrowed from laboratory workers to lend credibility to the doctors who wore them [1]. It is important to note that the white coat was initially black, then changed to grey before it became white because people attributed black with mourning and lamentation [2].

The white colour normally associates physicians with purity and cleanliness [1]. The importance of physician's 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 un-guents [3]. Even in ancient societies, the way healers dressed played an important part in rituals of healing [4].

The reasons for doctors to use a white coat are protean and diverse, being for easier identification by patients and colleagues, protection of their own clothes against liquids and secretions, and the ability to carry instruments in the pockets. Other reasons include easy recognition by patients and colleagues [5].

Over the past decades, however, the white coat has become a hotly debated topic with regard to its capacity to harbor and spread infectious agents. Evidence shows that coat sleeves and pockets can act as a reservoir for bacteria [6].

Further evidence shows that pathologic microbes, particularly resistant strains, can be isolated from these locations and suggests that coats might act as a vector for patient-to-patient transmission [7]. In addition, it is noted that the white coat in terms of recognition has lost its significance because so many people other than doctors wear white coats. Also the trust in the doctor is not secured when the white coat is worn. Interestingly trusts is even obtained from doctors who dressed casually and semi-informal [8].

Surprisingly, in one study, patients and doctors preferred male doctor to wear a conventional length hair; and not mind a male doctor with an earring, a woman in trousers, or a man without a tie [9].

Despite the technological advances and changes that medical practice has undergone in the last decade, questions related to the appearance and clothing of physicians have not yet been fully clarified. The type of clothing and accessories used by physicians has a potential to influence how the physician-patient relationship is established [1].

Majority of studies of this nature are mainly on patients perception on doctors attire, much has not been done on doctors perception on their own dressing. This study was therefore, undertaken to find out doctors perception on mode of dressing of their colleagues, especially wearing of white coats, if it has an influence on the well being of their patients.

To our knowledge, very few study of this nature has been conducted in a hospital setting in the southeast and indeed the whole of Nigeria.

2. METHODOLOGY

2.1 Study Area

This study was carried out in three teaching hospitals from two southeastern states of Nigeria, namely University of Nigeria Teaching Hospital (UNTH) Ituku-Ozalla, Enugu, Enugu State University Teaching Hospital (ESUTH) (both in Enugu State) and Federal Teaching Hospital, Abakiliki (FETHA) in Ebonyi State.

2.2 Study Population

An observational prospective study involving 227 doctors seen at the three teaching hospitals between April 2014 and June 2014 was carried out using convenient sampling method.

2.3 Study Procedure

A structured self administered questionnaire was used to collect information from doctors of all cadres in the hospitals during the study period. Three photographs of a doctor dressed differently (formal dressing with shirt and tie and a white coat, formal dressing with shirt and tie but no white coat and casual dressing with T-shirt upon jeans trousers) were shown to the doctors and they were asked to indicate which of the pictures they would prefer.

3. MATERIALS

The questionnaire used for this study was adopted from the guidelines for creating questionnaires by Eric Hultsch T [10]. In obtaining consent, the doctors were informed of the voluntariness of their participation, the anonymity of the questionnaire and that they could withdraw from the study at any point in time if they so desired without any consequences.

3.1 Ethical Consideration and Consent

Ethical clearance for the study was sought from the Research and Ethical Committee of ESUT Teaching hospital, Enugu. Only doctors who gave consent were included in the study.

3.2 Data Analysis

Data obtained was managed with the aid of a computer using SPSS statistical package. Chi-square statistical test and T test were used for categorical and continuous variables respectively.

4. RESULTS

Table 1 shows the percentage distribution of the respondents by age, sex and occupational status. Majority 184 (66.67%) of the respondents are male while the remaining 92 (33.33%) are female. Also most 102 (36.96%) of the respondents are in the age group 25-29, followed by those in the age group 30-34 (28.62%). Majority of the doctors 143(51.81%) are house officers while the least cadre of doctors are consultants 17 (6.16%).

Table 1. Percentages distribution of the respondents by age, sex and status

Sex	Frequency	Percentage
Female	92	33.33
Male	184	66.67
Total	276	100
Age		
20-24	34	12.32
25-29	102	36.96
30-34	79	28.62
35-39	34	12.32
40-44	22	7.97
45-49	3	1.09
50-54	2	0.72
Total	276	100
What is your status		
Consultant	17	6.16
Senior registrar	18	6.52
Registrar	98	35.51
House officer	143	51.81
Total	276	100

Table 2 shows the percentage distribution of the respondents by their perception towards wearing of lab coat/dressing. Majority 200 (72.5%) of the respondents were putting on lab coat as at the time they were filling the questionnaire while only 76 (27.5%) were not putting on lab coat. Also 202 (75.9%) of the respondents are of the opinion that a doctor should always put on shirt, tie and trouser with a white covering lab coat, 46(17.3%) are of the opinion that doctor should wear shirt, tie and trousers, only 18 (6.8%) claimed that doctor should only put on casual dressing with T-shirt and jeans. One hundred

and fifty seven (56.9%) of the respondents are of the opinion that the clothing of a doctor should be colour/bright, while only forty three percent are against the opinion.

Majority 213 (77.2%) of the respondent are of the opinion that doctors should wear lab coat, while only 63(22.8%) have contrary opinion as shown in Fig. 1.

Table 3 shows the percentages distribution of the respondents by their opinion on female doctors dressing code. One hundred and forty six (52.9%) of the respondents have opinion on how female doctor should dress while 130 (47%) have no idea. Majority 219 (79%) of the respondents are of the opinion that female doctors should always dress in white lab coat while only 20% claimed it is not necessary. One hundred and forty six (59%) of the respondents want female doctors to wear skirt and blouse getting below the knee, 50(20%) suggested female shirt and female tie with trousers as a dressing code for female doctors, 40(16.4%) are of the opinion that female doctor should dress casually with skirt and blouse.

Most 76 (35.7%) of those who supported the opinion gave being protective to doctors/or their families as their reason, 48(22.54%) gave being hygienic/protective to patients as the reason while they support the opinion. Among those who said no to the opinion, 39(71%) of them claimed it causes undue anxiety.

Fig. 2 shows the percentage distribution of the respondents by their perception on the relationship between dressing of physicians and their intelligence. Most 240 (87%) of the respondents are of the opinion that wearing of white coat does not influence their intelligence.

Table 2. Percentages distribution of the respondents by their perception towards wearing of lab coat/dressing

Were you dressed in white (lab) coats	Frequency	Percentage
No	76	27.54
Yes	200	72.46
Total	276	100
How will you want a doctor to dress with below pictures		
Casual dressing with T-shirt and jeans	18	6.77
Shirt, tie and trouser	46	17.29
Shirt, tie and trouser with a white covering lab coat	202	75.94
Total	266	100
Do you think that the clothing of a doctor should be colour/bright		
No	119	43.12
Yes	157	56.88
Total	276	100

Table 3. Percentages distribution of the respondents by their opinion on female doctors dressing code

Do you have any opinion about how female doctors should be dressed	Frequency	Percentage
No	130	47.1
Yes	146	52.9
Total	276	100
Do you think a female doctor should dress in white coat		
No	57	20.65
Yes	219	79.35
Total	276	100
How do you want a female doctor to dress		
Casual dressing with skirt and blouse	40	16.39
Female shirt and female tie with trouser	8	3.28
Female shirt and female tie with trouser	50	20.49
Skirt and blouse getting below the knee	146	59.84
Total	244	100

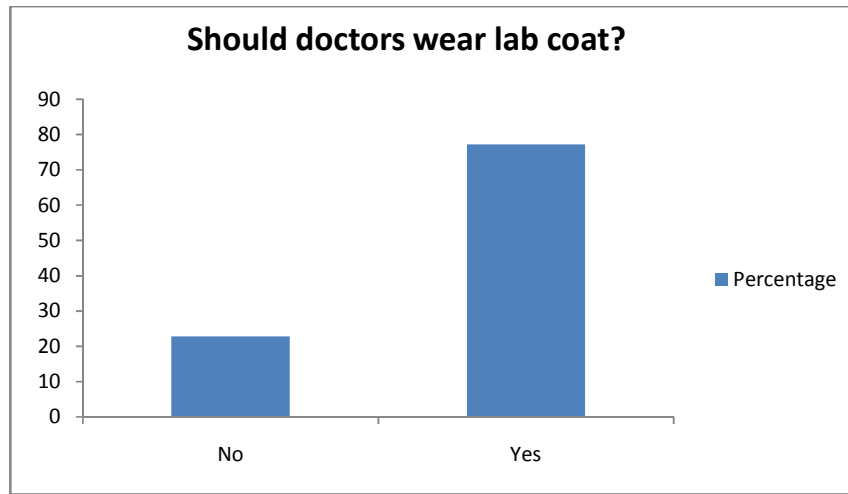


Fig. 1. Percentage Distribution of the respondents by their perception towards wearing of lab coat and reason for their opinion

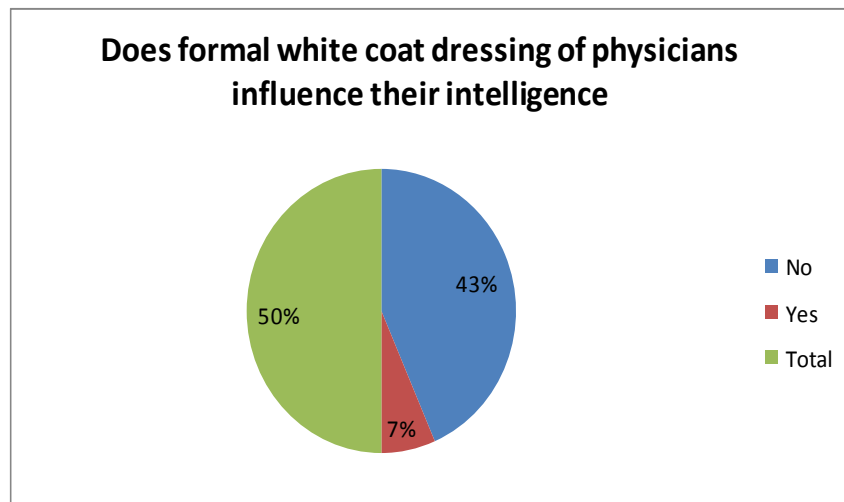


Fig. 2. Percentage distribution of the respondents by their perception on the relationship between dressing of physicians and their intelligence

5. DISCUSSION

Review of physicians' dress style revealed diverging findings. The findings in this study, however, are not different from many others that favored a more traditional dress style for physicians. Majority of the respondents were putting on lab coat as at the time they were filling the questionnaire and are of the opinion that a doctor should always put on shirt, tie and trousers with a white covering lab coat. The reason adduced for this is that it "increases the respect and confidence of a doctor and it is hygienic, protective and denotes purity". This

finding is in keeping with studies elsewhere where it is noted that many doctors appreciate the utility of coats for keeping their clothes clean and for carrying innumerable items; additionally, both doctors and patients say the most important role of white coats is to identify physicians in the busy clinical environment [11]. It is important at is this juncture to 'quote' an aphorism by Prof James.

In the 1930s, I saw that at University College Hospital the students wore short white coats in the wards and thought how hygienic and how much better they looked for attending patients than the students at my hospital, the Royal

Victoria Infirmary, Newcastle. When in 1939, I was appointed Clinical Sub-Dean at the Royal Victoria Infirmary, Newcastle, I immediately ruled that students doing surgical dressing and medical clerking must wear white coats [12].

In the present study, only 6% of participants considered a semiformal style as appropriate. Semiformal dressing is a norm in Japanese hospitals. The preference for semiformal dressing has varied in some countries. [13-15] For instance, Lill et al. [16] reported that the semiformal was the favorite style in New Zealand, but Yamada et al. [13] found that patients do not like this style of clothing most of the time.

It is interesting to point out from this study, that most of the doctors that put on white coat are low cadre doctors (house officers) and the least are consultants. Consultants had been in the habit of wearing white coat ever since they graduated as doctors and are soon getting weary and tired of putting the white coat while the house officers just graduated from medical school and are being overwhelmed with the joy, respect and purity they will gather when wearing a flowing, glistening white garment.

Unfortunately though, doctors in a white coat wearing a tie is seen by patients to be in a higher position and as more trustworthy and qualified. This is buttressed in a study where majority mistook doctors in white coat to be in the highest position with the highest qualification [16].

It is pertinent to point here that a subpopulation of doctors, probably paediatricians, noted that it is not appropriate to wear white coats. This they claim frightens the children and causes anxiety to them. This is however true in a study where 58% of children aged 3, 4 and 5 years preferred the picture of a clinician wearing colorful attire and further showed that the traditional white uniform was said to be frightening and scarring [17]. Apart from fright, whether can also be a hindrance to wearing of ward coat, for instance, in Pakistan they don't wear the white coat in summer but may do it in winter as the summer is extremely warm.

We noted no association between wearing of white coat, intelligence and mastery of the profession. Yoon-Hee Kwon in his work on impact of white clothing on attributes such as intelligence, competence, knowledgeability, honesty, and reliability, noted no relationship

between these virtues and wearing of white coat [18].

Majority of the respondents are of the opinion that female doctors should always dress in white lab coat and should wear skirt and blouse getting below the knee. It is a common saying that "After navigating medical school, residency, overnight shifts and other medical field challenges, the last thing a young female physician needs is to unwittingly wear a wardrobe that discredits her professionalism" [19].

6. CONCLUSION

White coats were seen as the most appropriate dress code for doctors, regardless of gender. Low ranked doctors however wear the white coat more than high ranked ones. Furthermore the type of clothing and accessories used by physicians (physician dressed on shirt, tie and trouser with a white covering lab coat) has a positive influence on physician-patient relationship.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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