

Patient Perceptions of Surgeon Attire, Professionalism, and Gender Bias in Pakistani Public Hospitals

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Abstract

Objective: Surgeon attire significantly influences patient perceptions of professionalism, competence, and trust. This study aims to assess public perceptions of formal and informal surgeon attire and to analyze gender biases in these perceptions among male and female surgeons.

Methodology: A cross-sectional survey of 300 individuals aged 18 to 60 years was conducted in Lahore, Pakistan, from January to March 2024. Eligible participants, excluding healthcare professionals to avoid bias, were adults who had visited a tertiary care hospital and could understand the survey questions. Gender-balanced participants rated male and female doctors shown in photographs wearing various surgeon attires, including white coats with scrubs, business attire, fleece jackets, and casual clothing. Ratings were based on perceived professionalism, experience, and friendliness using a 5-point Likert scale. Participants also identified the doctors' likely professions and indicated their preferred gender for seeking medical assistance.

Results: Of the 300 surveys completed, respondents significantly preferred doctors wearing white coats, particularly when paired with scrubs, rating them higher in professionalism and experience. Doctors in fleece and softshell jackets were rated lower in these categories ($p < 0.001$). Gender biases were apparent, with female doctors consistently receiving lower professionalism ratings compared to their male counterparts, regardless of attire. They were also less likely to be chosen as the preferred gender for seeking assistance and were more frequently misidentified as nurses or medical technicians.

Conclusion: Both attire type and gender bias significantly shape public perceptions of a surgeon's professionalism and approachability. These findings highlight the importance of addressing gender biases in patient perceptions and developing culturally sensitive dress codes that align with expectations for both male and female surgeons to enhance trust and equity in healthcare settings.

Keywords: Gender Bias, Professionalism, Patient Perceptions, Public Hospitals, Surgeon Attire,

Introduction

The attire of healthcare professionals has long been a subject of debate, given its impact on patient perceptions of competence, professionalism, and trustworthiness. The white coat, traditionally worn by doctors, has been emblematic of medical professionalism for over a century, often viewed as a symbol of cleanliness, authority, and expertise.¹

However, as healthcare settings evolve, there is a growing trend towards more casual attire among surgeons, including scrubs with fleece jackets, softshell jackets, etc instead of traditional white coats.² These changes raise important questions about how such attire is perceived by patients, particularly in diverse cultural contexts, such as Pakistan, where traditional gender roles are prevalent.

Studies show that patients generally prefer healthcare providers in formal attire, associating it with higher professionalism and competence.³ In countries such as the United States and Japan, formal attire has consistently been linked to increased patient trust, as well as a perception of greater reliability and professionalism.^{4,5} In Pakistan, where cultural norms deeply influence social interactions, the white coat remains a strong symbol of medical authority, and deviations from this standard attire could potentially alter patient perceptions.⁶

While attire plays a critical role in shaping these perceptions, research has also highlighted the influence of gender bias on public views of healthcare professionals. Studies suggest that female surgeons often face greater scrutiny concerning their appearance and may be perceived as less authoritative than their male counterparts, regardless of attire.⁷ This bias can influence patient interactions, perceptions of competency, and even career progression for female surgeons.^{8,9} In Pakistan, where traditional gender roles are prevalent, these biases may be particularly pronounced, impacting the way patients perceive male and female surgeons based on their attire.¹⁰

This research explores patients' perceptions of surgeon attire in a tertiary care hospital of Pakistan, emphasizing gender biases and the cultural dynamics that shape these views. It evaluates how formal attire (e.g., white coats) and informal attire (e.g., jackets) influence perceptions of professionalism, competence, and friendliness.

Additionally, it examines gender-related differences in the evaluation of male and female surgeons based on their attire. There is limited research addressing the interplay between attire, professionalism, and gender biases within Pakistan's unique cultural and societal framework and understanding these

biases is crucial for ensuring equitable patient care. This study seeks to explore these dynamics in a public hospital in Lahore, Pakistan, and provide actionable insights to improve hospital policies, inform hospital dress codes, enhance patient trust, and promote gender equity in the medical profession.

Methodology

Study Design and setting: This cross-sectional survey was conducted between January and March 2024. A total of 300 participants (150 males and 150 females) aged 18 to 60 years were randomly selected, after some initial screening questions, from various outpatient departments of a tertiary care hospital in Lahore, Pakistan. The primary aim was to evaluate public perceptions of surgeon attire, with a focus on formal (e.g., white coats) versus informal (e.g., jackets) attire and to explore potential gender biases in these perceptions. This study was approved by the Ethical Committee of Lahore General Hospital (Department of General Surgery) with approval no. Ref:218/SU-III.

Participants: A total of 300 participants were recruited using convenience sampling.

Inclusion criteria- The eligibility criteria included adults aged 18 to 60 years who had visited tertiary care hospitals in Lahore and were literate enough to understand the survey questions.

Exclusion criteria- Exclusion criteria included healthcare professionals, to minimize biases related to prior knowledge of medical attire.

Participants were approached during their visits to outpatient departments at Lahore General Hospital, where the study was conducted. Efforts were made to ensure demographic diversity, although the sample predominantly comprised individuals with college-level education. The survey was carried out in person to ensure clarity and uniformity in responses. The sample was evenly divided between males and females to ensure gender representation in responses.

Survey Instrument: Participants were shown a series of colored photographs depicting male and female doctors dressed in various types of surgeon attire: white coats with scrubs, white coats with business attire, fleece jackets with scrubs, and softshell jackets with casual attire. The participants were informed only of their relation to medical profession without specifying the rank or specialty.

Also, the doctors' faces were obscured to focus solely on attire. Participants were asked to rate each doctor on perceived professionalism, experience, and friendliness using a 5-point Likert scale (1 = very low, 5 = very high). Additionally, participants were asked to identify the most likely profession/rank of each doctor, choosing from surgeon, family physician, nurse, medical technician, or other and their preferred gender of professional for seeking assistance.

Data Analysis: Data were analyzed using SPSS version 25. Descriptive statistics were calculated to summarize participant demographics and survey responses. Chi-square tests were used to assess differences in perceptions based on gender and attire, with a significance level set at $p < 0.05$.

Results

Demographics: The survey included 300 respondents, evenly divided between males (50%) and females (50%). The mean age of participants was 35.4 years, with a range from 18 to 60 years. The majority of participants (60%) had completed at least a college-level education (see Table 1).

Table 1: Participant Demographics.

Demographic Variable	Frequency (n = 300)	Percentage %
Gender		
Male	150	50%
Female	150	50%
Age Group		
18-29 years	75	25%
30-39 years	90	30%
40-49 years	75	25%
50-60 years	60	20%
Education level		
School	60	20%
College	180	60%
University	60	20%

Perceptions of Professionalism and Experience: Respondents rated doctors wearing white coats with scrubs as the most professional and experienced, followed by those in white coats with business attire (Table 2). Doctors dressed in fleece and softshell jackets were rated significantly lower in professionalism and experience ($p < 0.001$). The preference for white coats aligns with findings from studies conducted in the United States, Japan, and Singapore, where similar associations between formal attire and professionalism were observed.^{11,12,13}

Table 2: Professionalism and Experience Ratings using a 5-point Likert scale.

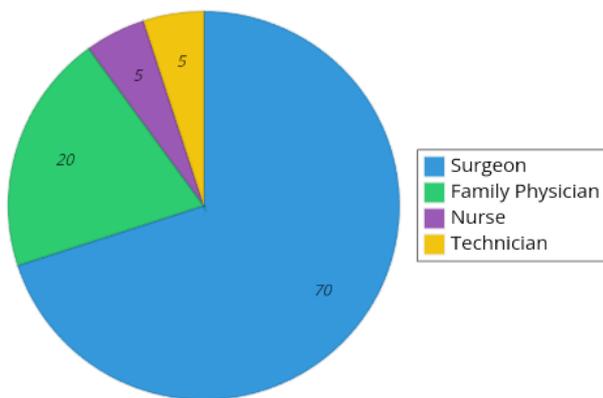
Attire Type	Professionalism Score (Mean ± SD)	Experience Score (Mean ± SD)
White Coat with Scrubs	4.7 ± 0.5	4.8 ± 0.4
White Coat with Business attire	4.4 ± 0.6	4.5 ± 0.5
Fleece Jacket with Scrubs	3.1 ± 0.8	3.2 ± 0.7
Softshell Jacket with Casual attire	2.0 ± 0.9	2.1 ± 0.8

Gender Biases: The study revealed significant gender biases in the perception of surgeon attire. Female doctors were consistently rated as less professional compared to male doctors, regardless of the attire they wore ($p < 0.01$) and were also less likely to be chosen as the preferred gender for seeking assistance (Table 3). Additionally, female doctors were more likely to be mistaken for non-physician roles such as nurses or medical technicians (Figure 1a & 1b). These findings echo previous research indicating that female surgeons often face challenges related to gender stereotypes and biases, which can impact their professional image and patient interactions.^{14,15}

Table 3: Gender Preference based on Public Perception.

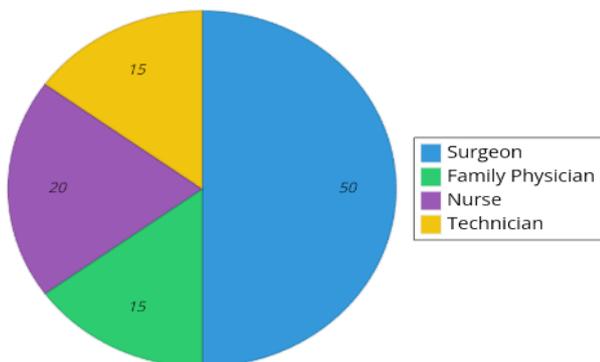
Preferred Gender	Male Respondent (n = 150)	Female Respondent (n = 150)	Total (n = 300)	Percentage (%)
Male Surgeons	105	90	195	65
Female Surgeons	45	60	105	35

Perception of Professional Roles by Gender (Male)



(1a)

Perception of Professional Roles by Gender (Female)



(1b)

Figure 1a & 1b: Perception of Professional Roles by Gender - These pie charts compare the public’s perception of professional roles for male and female doctors based on their attire. The data show that male doctors were more frequently perceived as surgeons (70% vs 50%), while female doctors were more often associated with roles such as nurses and technicians (35% vs 10%), highlighting a gender bias in professional role identification.

Discussion

This study explored how the public perceives surgeons based on their attire and gender in a tertiary care hospital setting

in Lahore, Pakistan. The goal was to understand whether formal clothing, like white coats, or informal attire, such as fleece jackets, influenced opinions about professionalism, competence, and friendliness. We also examined whether male and female surgeons were viewed differently by patients. The results showed that surgeons wearing white coats, especially with scrubs, were considered the most professional and competent. However, significant gender biases were evident, with male surgeons often being perceived as more professional than their female counterparts, regardless of attire. These findings highlight the importance of addressing such biases to ensure equal treatment and trust for all healthcare professionals.

The findings of this study offer significant insights into how the public perceives surgeon attire in tertiary care hospitals in Lahore, Pakistan. The data strongly indicate a preference for traditional white coats, particularly when paired with scrubs (Table 2), aligning with global trends that associate formal medical attire with higher professionalism, competence, and trustworthiness. This is consistent with research from various countries, including the United States, Japan, and the United Kingdom, where the white coat is viewed as a symbol of medical authority and professionalism.¹⁶⁻¹⁸ In contrast, surgeons wearing fleece or softshell jackets were rated significantly lower in professionalism and competence, likely due to the perception of informality associated with these attire types (Table 2).

However, this study also highlights pervasive gender biases in the perception of surgeon attire. Female doctors, irrespective of their attire, were consistently rated as less professional compared to their male counterparts. This finding mirrors those from studies in other regions, such as Canada and Sweden, where female physicians often face challenges due to gender stereotypes and biases, impacting their professional image and patient interactions.^{19,20} The data demonstrates that male doctors were more frequently perceived as surgeons, whereas female doctors were more commonly associated with roles such as nurses or technicians, reflecting a clear gender bias in professional role identification (Figures 1a and 1b). These biases are deeply rooted in societal norms and cultural expectations, which can be particularly pronounced in countries like Pakistan, where traditional gender roles are still strongly upheld.

Public preferences for gender in seeking medical assistance further highlight these biases. As the data suggests (see Table 3), 65% of respondents preferred male surgeons, while only 35% chose female surgeons. This disparity reflects deep-rooted cultural stereotypes regarding gender roles and professional capabilities in healthcare. The implications of these biases are profound, not only for individual female surgeons but also for the broader medical profession in Pakistan. If patients consistently perceive female surgeons as less professional or competent, this could lead to a range of negative outcomes, including reduced patient satisfaction, lower levels of trust, and potentially poorer clinical outcomes due to weakened patient-provider relationships. Furthermore, these biases could discourage women from pursuing careers in surgery, perpetuating the gender imbalance in this already male-dominated field.²¹

To address these challenges, healthcare institutions must consider implementing standardized dress codes or color codes that emphasize professionalism while being sensitive to gender

and cultural dynamics. Policies that encourage the wearing of white coats or other formal attire, regardless of gender, could help mitigate the impact of these biases by creating a uniform standard of professionalism that is recognized and respected by patients. Additionally, interventions such as gender sensitivity training, public awareness campaigns, and the promotion of female role doctors in surgery could help shift societal perceptions and reduce the impact of gender biases on female surgeons.^{22,23}

The cultural context is also crucial in shaping these perceptions. In Pakistan, where traditional values and cultural expectations heavily influence public views, the white coat is not just a symbol of medical authority but also an embodiment of societal norms regarding what a doctor should look like. Therefore, healthcare policies must be culturally sensitive and take into account the expectations and preferences of the local population. This cultural sensitivity is essential for ensuring that dress codes and other professional standards resonate with patients and contribute to better healthcare outcomes.²⁴

Limitations

While this study provides valuable insights into public perceptions of surgeon attire, professionalism and potential gender bias, certain limitations warrant consideration. First, the sample was limited to a single urban center, potentially restricting the generalizability of the findings to other regions or cultures. Second, the study relied on static photographs without context, which may not fully capture real-world dynamics in professional settings.

Furthermore, the study did not explore the impact of demographic factors such as respondents' age, education level, or socioeconomic status, which could have provided deeper insights into variations in perception. Lastly, the cross-sectional design limits the ability to draw causal inferences about the observed trends. These limitations provide avenues for future research to validate and expand upon our findings across diverse settings and methodologies.

Conclusion

Understanding public perceptions of surgeon attire in Lahore's tertiary care hospitals is essential for enhancing the professional image of healthcare providers and improving patient trust and satisfaction. This study has highlighted a strong preference for traditional white coats, particularly when paired with scrubs, and has also revealed significant gender biases that disadvantage female surgeons. These findings underscore the need for healthcare institutions to adopt standardized, culturally sensitive dress codes and to implement strategies to address gender biases in the medical profession.

Promoting gender equity in medicine is not only a matter of fairness but also a critical factor in ensuring that all healthcare providers are respected and trusted by their patients, regardless of gender. By addressing these issues, hospitals can create a more supportive and inclusive environment for female surgeons, ultimately leading to better patient care and outcomes.

Future research should continue to explore these dynamics in different regions of Pakistan and in other cultural contexts. Additionally, studies that investigate the impact of surgeon

attire on specific patient outcomes, such as compliance with medical advice and overall satisfaction, would provide valuable insights into the broader implications of these findings for healthcare practice.

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